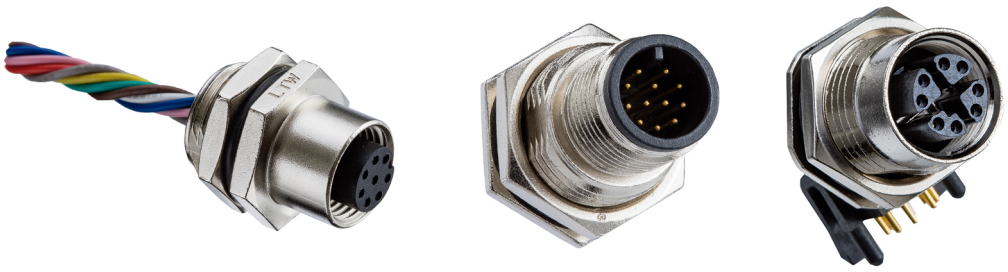
Amphenol LTW®
Unrivaled InterConnects for Harsh Environments

M12 Receptacle

Product Catalogue



(V011323)

Amphenol
INDUSTRIAL PRODUCTS GROUP

IP67
68 / 69K

UL 94-V0

Data
Transsmission

IEC
Standard

Fully
Shielded

UV
Resistant

UL 1977
UL 2238
UL 1863

Space
Saving

Push Pull
Mechanism

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Product Selection Guide

Circular (Ceres, X-Lok, M)

	Mating Style						Materials	No. of Contacs	Contacts		Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	High Speed		Salt Spray (Connector, Mated)
	2 Points Lock	3 Points Lock	Push Lock	Push Pull	Screw Thread	Others			Gold Plated	Silver Plated					Cat. 5e	Cat. 6A	
Ceres Series																	
Mini	•				•		B	2-6	•		250V	2A-5A	26-24	2,000			500h
Standard	•				•		B	2-12	•		250-600V	2A-10A 5A+2A 10A+5A	26-20	2,000			500h
Middle	•	•			•		P	2-18	•	•	250-600V	2A-20A 5A+2A 10A+2A 10A+5A	24-14	2,000			500h
Large	•				•		B	2-22	•	•	250-600V	2A-20A 20A+2A 20A+5A	26-16	2,000			500h
Macro	•						P	31	•		200V	5A	26	2,000			500h
PLD			•				P	2-4	•		250V	5A	26-20	2,000			500h
MAB	•						P	4	•		250V	10A	20	2,000			500h
GBD		•					P	8	•		250V	10A+5A	20-24	2,000			500h
X-LOK Series																	
Mini / LED			•				B	2-33	•		30-630V	0.5A-16A	32-14	1,000	•	•	1000h
Standard			•				P	2-8	•		300-600V	5A-10A 10A+5A	26-16	1,000			1000h
Middle			•				P	2-12	•	•	300-600V	5A-20A 10A+5A	26-12	1,000			1000h
Large			•				B	2-100	•	•	60V (0.5A) 300-600V	0.5A-20A 20A+5A 50A 50A+5A	32-6	1,000			1000h
Macro			•				P	4-31	•	•	300-600V	5A 50A+5A 80A+5A	22-2	1,000			1000h
M Series																	
M5					•		M	3-6	•		60V	1A	28-26	1,000			48h
Guided M8 / LED					•	Snap-in	B	2-6	•		30-60V	2A-4A 3A+1.5A	24-22	1,000			48h
M8 / LED					•	Snap-in	B	3-13	•		30-60V	0.5A-4A	32-22	1,000			48h
M10.5					•		M	2-5	•		30V	2A	24	1,000			48h
M12 A / LED				•	•		B	3-28	•		30-250V	0.5A-4A	30-22	1,000	•		48h
M12 B / LED				•	•		B	5	•		60V	4A	26-22	1,000			48h
M12 D / LED				•	•		B	4	•		250V	4A	26-22	1,000	•		48h
M12 I				•	•		B	5	•		60V	4A	22	1,000			48h
M12 K / LED				•	•		B	3-5	•		630V	12A, 16A	14	1,000			48h
M12 L / LED				•	•		B	2-5	•		63V	16A	14	1,000			48h
M12 M / LED				•	•		B	3-6	•		630V	8A	16	1,000			48h
M12 S / LED				•	•		B	3-4	•		630V	12A	16	1,000			48h
M12 T / LED				•	•		B	2-4	•		63V	12A	16	1,000			48h
M12 X				•	•		M	8	•		30-60V	0.5A	26	1,000		•	48h
M12 Y				•	•		B	8	•		60V	0.5A / 6A	20, 26	1,000			48h
M23					•		M	6	•		600V	28A	14-12	1,000			48h

Remarks:
Materials: **P** (Plastic), **M** (Metal), **B** (Both)

Product Selection Guide

	(R0) Receptacle							(FI) Field Installable													
	Solder	Crimp	SMT	PCB 180	PCB 90	RW	RC	Solder	Crimp	Screw In	Push In	IDC	OC	UV Resistant	UL 94V-0	Vibration	EMI Option	ROHS 2.0 & REACH	Standard / Compliant	Certifications	Operating Temperature & IP Rating
Ceres Series																					
Mini	•			•			•	•					•	•	•	(2)	•	•			
Standard	•			•	•		•	•	•				•	•	•	(2)	•	•		UL1977	◦ **R0**: -40°C - 105°C, IP67 (Unmated)
Middle	•			•			•	•	•				•	•	•	(2)		•		UL1977	◦ **RW**: -20°C - 85°C, IP67 (Unmated)
Large	•			•				•	•	•			•	•	•	(2)	•	•		UL1977	◦ **OC**: -20°C - 85°C, IP67 (Mated)
Macro	•			•									•	•	•	(2)		•		UL1977	◦ **FI**: -40°C - 105°C, IP67 (Mated)
PLD	•							•						•	•	(2)		•			
MAB													•	•	•	(2)		•			
GBD													•	•	•	(2)		•			
X-LOK Series																					
Mini / LED	•			•	•			•	•	•	•		•	•	•	(2)	•	•			
Standard	•			•				•	•	•	•		•	•	•	(2)	•	•			
Middle	•			•				•	•	•	•		•	•	•	(2)		•		CSA, UL1977, UL2238, UL50e	◦ **R0** & **RW**: -40°C - 105°C, IP68 (Unmated)
Large	•			•				•	•	•	•		•	•	•	(2)	•	•			◦ **OC** & **FI**: -40°C ~ 105°C, IP68 (Mated)
Macro	•	•		•					•	•			•	•	•	(2)		•			
M Series																					
M5	•			•	•	•							•	•	•	(1)		•	IEC 61076-2-105		
Guided M8 / LED	•		•	•	•	•		•	•	•		•	•	•	•	(1)	•	•			
M8 / LED	•		•	•	•	•		•	•	•		•	•	•	•	(1)	•	•	IEC 61076-2-104	UL1977, UL2238	
M10.5	•					•							•	•	94-HB	(1)		•			
M12 A / LED	•		•	•	•	•		•	•	•	•	•	•	•	•	(1)	•	•	IEC 61076-2-101	UL1977, UL2238, UL1863	◦ **R0**: -40°C ~ 105°C, IP67 (Mated / Unmated), IP68 (Unmated), IP69K (Mated)
M12 B / LED	•		•	•	•	•		•	•	•	•	•	•	•	•	(1)	•	•	IEC 61076-2-101	UL1977, UL2238	
M12 D / LED	•		•	•	•	•		•	•	•	•	•	•	•	•	(1)	•	•	IEC 61076-2-101	UL1977, UL2238, UL1863	◦ **RW**: -20°C ~ 85°C, IP67 (Mated / Unmated), IP68 (Unmated), IP69K (Mated)
M12 I	•			•				•					•	•	94-HB	(1)		•			
M12 K / LED	•		•	•	•	•		•	•	•			•	•	•	(1)		•	IEC 61076-2-111	UL1977, UL2237	
M12 L / LED	•		•	•	•	•		•	•	•			•	•	•	(1)		•	IEC 61076-2-111	UL1977, UL2238	◦ **OC**: -20°C ~ 85°C, IP67 / IP68 (Mated)
M12 M / LED	•		•	•	•	•		•	•	•			•	•	•	(1)	•	•	IEC 61076-2-111		
M12 S / LED	•		•	•	•	•		•	•	•			•	•	•	(1)		•	IEC 61076-2-111	UL1977, UL2237	◦ **FI**: -40°C ~ 105°C, IP67 / IP68 (Mated)
M12 T / LED	•		•	•	•	•		•	•	•			•	•	•	(1)		•	IEC 61076-2-111	UL1977, UL2238	
M12 X			•	•	•	•		•	•			•	•	•	•	(1)	•	•	IEC 61076-2-109	UL1863	
M12 Y				•	•	•		•					•	•	•	(1)	•	•	IEC 61076-2-109	UL1863	
M23		•							•				•	•	•	(1)	•	•			

Remarks:
Assemble Style: **R0** (Receptacle), **RW** (Receptacle With Wires), **RC** (Receptacle With Overmolded Cable), **OC** (Overmolded With Cables), **FI** (Field Installable)
Vibration: **(1)** 10-500 Hz @Amplitude 0.35mm; **(2)** 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: **R0** (Receptacle), **RW** (Receptacle With Wires), **OC** (Overmolded With Cables), **FI** (Field Installable)

Product Selection Guide

Circular (FLOS, Power, RBL)

	Mating Style						Materials	No. of Contacs	Contacts		Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	Salt Spray (Connector, Mated)	(R0) Receptacle		
	2 Points Lock	3 Points Lock	Push Lock	Push Pull	Screw Thread	Others			Gold Plated	Silver Plated						Solder	Crimp	Screw In
FLOS Series																		
B				•			M	2-32	•		160-700V	1.5A-25A	28-16	5,000	144h	•		
K				•			M	2-32	•		160-700V	1.5A-25A	28-16	5,000	144h	•		
K (FLOS+)				•			M	2-32	•		160-700V	1.5A-25A	28-16	5,000	1000h	•		
C				•			M	2-19	•		160-700V	1.5A-20A	28-16	3,000	144h	•		
S				•			M	1	•		260-1000V	15A	28-16	3,000	144h	•		
Y				•		Break Away	M	2-26	•		260-1000V	5A-14A	28-16	5,000	96h	•		
P				•			P	2-14	•		200-400V	2A-10A	28-16	2,000		•		
N				•			M	2-19	•		200-800V	5A-22A	28-16	3,000	144h	•		
Power Series																		
PWE					•		P	5-7	•		277V	8A	20-17	500	500h	•		
PWF					•		P	2-4	•		277V	12A	18-15	500	500h	•		
PWG					•		P	4	•		277V	16A	18-14	500	500h			•
PWC	•	•					P	3	•		277V	20A	14-12	500	500h	•		
PWCU	•	•					P	4 & 12	•		277V	20A+2A	14-12, 24-22	500	500h	•		
PWH		•			•		P	3, 5	•		660V (AC) 1000V (DC)	25A	12	500	500h		•	•
PWL		•					P	3	•		300V	30A	14-8	500	500h			•
PWM		•					P	2	•		600V	50A	9-8	500	720h	•		
PWMU		•					P	2+2, 2+4	•		600V	50A+2A	9-8, 22-20	500	720h	•		
PWN		•					P	2	•		600V	70A	8-6	500	720h	•		
PWNU		•					P	2+2, 2+4	•		600V	70A + 2A	8-6, 22-20	500	720h	•		
PWP		•					P	2 & 3	•		600V	80A	4	500	720h		•	
PWPD		•					P	2+2, 2+4, 3+2, 3+4	•		600V	80A+5A	4, 20	500	720h		•	
PWX		•					P	9 (30A) 14 (30A+5A) 5 (50A) 12 (50A+5A) 4 (80A) 7 (80A+5A)		•	300-600V	30A, 30A+5A 50A, 50A+5A 80A, 80A+5A	22-20, 14-8, 9-8, 4	500	720h		•	
RBL Series																		
Middle			With Latch				P	2-9	•		300V	5A-10A 10A+5A	20-16	250	48h			
Large			With Latch				P	2-18	•		300V	5A-20A 20A+5A	24-12	250	48h			

Remarks:
Materials: **P** (Plastic), **M** (Metal)
Assemble Style: **R0** (Receptacle)

Product Selection Guide

	(R0) Receptacle		RW	(FI) Field Installable			OC	UV Resistant	UL 94V-0	Vibration	EMI Option	ROHS 2.0 & REACH	Certifications	IP Rating	Operating Temperature
	PCB 180	PCB 90		Solder	Crimp	Screw In									
FLOS Series															
B	•	•		•	•		•		•	(2)	•	•		IP50 (Mated)	◦ **R0**: -40°C - 125°C ◦ **OC**: -20°C - 85°C ◦ **FI**: -40°C - 125°C
K	•	•		•	•		•		•	(2)	•	•		IP68 (Mated)	
K (FLOS+)	•	•		•	•		•		•	(2)	•	•		**R0:** IP68 (Unmated) **OC:** IP68 (Mated) **FI:** IP68 (Mated)	
C	•	•		•	•		•		•	(2)	•	•		IP68 (Mated)	
S	•	•		•	•		•		•	(2)	•	•		IP50 (Mated)	
Y	•	•		•	•		•		•	(2)	•	•		IP68 (Mated)	
P	•	•		•	•		•	•	•	(2)		•		IP50 / IP66 (Mated)	
N	•	•		•	•		•		•	(2)	•	•		IP68 (Mated)	
Power Series															
PWE				•			•		94-HB	(2)		•	UL1977	IP67 / IP68	◦ **R0**: -40°C - 105°C ◦ **OC**: -20°C ~ 80°C ◦ **FI**: -40°C ~ 105°C
PWF				•			•		94-HB	(2)		•	UL1977, TUV	IP67 / IP68	
PWG						•	•		•	(2)		•	UL1977	IP67 / IP68	
PWC				•		•	•	•	•	(2)		•	UL1977, TUV/UL2238	IP67 / IP68	
PWCU				•			•	•	•	(2)		•	UL1977, TUV	IP67 / IP68	
PWH					•	•	•	•	•	(2)		•	UL1977, UL6703A, TUV	IP67 / IP68	
PWL				•		•		•	•	(2)		•	UL2238/UL1977	IP67 / IP68	
PWM						•		•	•	(2)		•	UL1977	IP67 (Mated)	
PWMU						•		•	•	(2)		•	UL1977	IP67 (Mated)	
PWN						•	•	•	•	(2)		•	UL1977	IP67 (Mated)	
PWNU						•	•	•	•	(2)		•	UL1977	IP67 (Mated)	
PWP					•			•	•	(2)		•	UL1977	IP67 (Mated)	
PWPD					•			•	•	(2)		•	UL1977	IP67 (Mated)	
PWX					•			•	•			•	UL1977	IP69K (Mated)	
RBL Series															
Middle			•		•		•	•	•	(2)		•	UL1977	**RW:** IP68 (Unmated) **OC:** IP68 (Mated) **FI:** IP67 (Mated)	◦ **RW**: -40°C ~ 105°C ◦ **OC**: -20°C ~ 80°C, Data: -20°C ~ 80°C Power: -20°C ~ 105°C Hybrid: -40°C ~ 105°C ◦ **FI**: -40°C ~ 105°C
Large			•		•		•	•	•	(2)		•			

Remarks:
Assemble Style: **R0** (Receptacle), **RW** (Receptacle With Wires), **OC** (Overmolded With Cables), **FI** (Field Installable)
Vibration: **(2)** 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: **R0** (Receptacle), **RW** (Receptacle With Wires), **OC** (Overmolded With Cables), **FI** (Field Installable)

Product Selection Guide

Circular (HS-Lok, NMEA 2000, Mini, Heavy Duty Shielded)

	Mating Style		Materials	No. of Contacs	Contacts Gold Plated	Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	Salt Spray (Connector, Mated)	(R0) Receptacle			RW
	Push Pull	Screw Thread									Solder	PCB 180	PCB 90	
HS-Lok Series														
Q8	•		B	2-6	•	100V (DC), 300V, 300V (AC) + 100V (DC)	2A 5A 5A+2A	24-20	2,000	500h	•			
NMEA 2000														
Lite (Micro)	•	•	B	5	•	60V	4A	16*1P+20*1P 18*1P+22*1P 22*1P+24*1P	Push Pull 500, Screw Thread 1,000	Metal: 48h Plastic: 1,000h	•	•	•	•
Heavy (Mini)		•	M	4-5	•	600V	8A	15*1P+18*1P 16*1P+18*1P	1,000		•	•		
7/8" Mini														
7/8" Mini		•	M	2, 2+PE, 4, 4+PE, 6	•	600V	8A-13A	16	1,000	48h	•	•		•
Heavy Duty Shielded														
Heavy Duty Shielded		*	M	2-14	•	50-300V	5A-40A	22-8	1,000	48h / 500h	•			

Remarks:
Materials: **M** (Metal), **B** (Both)
Assemble Style: **R0** (Receptacle), **RW** (Receptacle With Wires)

Product Selection Guide

	(FI) Field Installable				OC	UV Resistant	UL 94V-0	Vibration	EMI Option	ROHS 2.0 & REACH	Certifications	IP Rating	Operating Temperature
	Solder	Crimp	Screw In	Push In									
HS-Lok Series													
Q8	•				•	•	•	(2)		•	UL2238, UL50e	**R0:** IP68 (Unmated) **OC:** IP68 (Mated) **FI:** IP68 (Mated)	◦ **R0:** -40°C - 105°C ◦ **OC:** -40°C - 105°C ◦ **FI:** -40°C - 105°C
NMEA 2000													
Lite (Micro)			•	•	•		•	(1)	•	•	NMEA 2000	**R0:** IP68 (Unmated) **RW:** IP68 (Unmated) **OC:** IP68 (Mated) **FI:** IP67 (Mated)	◦ **R0:** -40°C - 105°C ◦ **RW:** -20°C - 85°C ◦ **OC:** -20°C - 85°C ◦ **FI:** -40°C - 105°C
Heavy (Mini)			•	•	•		94-HB	(1)	•	•	NMEA 2000		
7/8" Mini													
7/8" Mini	•	•	•		•		•	(1)		•		**R0:** IP68 (Unmated) **RW:** IP68 (Unmated) **OC:** IP68 (Mated) **FI:** IP67 (Mated)	◦ **R0:** -40°C - 105°C ◦ **OC:** -40°C - 105°C ◦ **FI:** -40°C - 105°C
Heavy Duty Shielded													
Heavy Duty Shielded	•				•	•	94-HB	(1)	•	•		**R0:** IP68 (Unmated) **OC:** IP68 (Mated) **FI:** IP68 (Mated)	◦ **R0**: -40°C - 105°C ◦ **RW:** -20°C - 85°C ◦ **OC:** -20°C - 85°C ◦ **FI:** -40°C - 105°C

Remarks:
Assemble Style: **OC** (Overmolded With Cables), **FI** (Field Installable)
Vibration: **(1)** 10-500 Hz @Amplitude 0.35mm; **(2)** 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: **R0** (Receptacle), **RW** (Receptacle With Wires), **OC** (Overmolded With Cables), **FI** (Field Installable)

Product Selection Guide

Other IO (RJ45, USB, D-Sub, SSL, HDMI, DVI)

	Mating Style					Materials	No. of Contacs	Gold Plated	Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	High Speed		
	2 Points Lock	3 Points Lock	Push Lock	Screw Thread	Others								Cat. 5e	Cat. 6A	USB 2.0
RJ45 Series															
Middle		•		•		B	8		44-57V (DC)	Max. 1.5A	Cat. 6A: 26 / Cat. 5e: 24	750	•	•	
Large / I-Adaptor	•	•		•		P	8		44-57V (DC)	Max. 1.5A	24	750	•		
ODVA	•					B	8		44-57V (DC)	Max. 1.5A	Cat. 6A: 26 / Cat. 5e: 24	750	•	•	
Self-Closing Cover						P	8		44-57V (DC)	Max. 1.5A		750	•	•	
USB Series															
Mini USB Type B				•		P		•	30V	1.5A	28*1P + 28*3C	5,000			•
Type A	•			•		B		•	30V	USB 2.0: 1.5A USB 3.2 Gen1: 1A	28*1P + 24*2C	1,500			•
Type B	•			•		B		•	30V	USB 2.0: 1.5A	28*1P + 24*2C	1,500			•
Micro USB Swift						M		•	30V (AC) 5V (DC)	1 & 5 Pin: 1.8A 2, 3 & 4 Pin: 1A		10,000			•
Micro USB Swift-MU					Snap-in	P		•	30V (AC) 5V (DC)	1 & 5 Pin: 1.8A 2, 3 & 4 Pin: 1A	28	10,000			•
Type C Swift-LP						M		•	30V (DC)	Up To 5A	32*1P + 24*1C + 28*1D	10,000			
Type C Swift-LA					Snap-in	P		•	30V (DC)	Up To 3A	32*1P + 24*1C + 28*1D	10,000			•
Type C Swift-GG				•		B		•	30V (DC)	Up To 5A	32*1P + 24*1C + 28*1D	10,000			
Type C Swift-XL			•			P		•	30V (DC)	Up To 3A	32*1P + 24*1C + 28*1D	10,000			
D-SUB Series															
Standard				•	Automated Latch	M	9, 15, 25, 37, 50*	•	125V (DC)	5A	24	500			
High Density				•	Automated Latch	M	15, 26, 44, 62*, 78*	•	125V (DC)	2A	26	500			
SSL Series															
SSL1.1			•			P	2-6	•	100V	3A	22	100			
SSL1.2			•			P	2-4	•	Wire: 250V Flat Cable: 300V	5A	22-18	Wire: 30 Flat Cable: 100			
HDMI Series															
Circular				•		P	19	•	30V (AC)	0.5A	26	500			
Rectangular			•		With Latch	P	19	•	30V (AC)	0.5A	26	500			
Mini-HDMI				•		P	19	•	30V (AC)	0.5A	30	500			
DVI Series															
DDD						M	25	•	40V (AC)	1.5A	28	100			
DDS						M	19	•	40V (AC)	1.5A	28	100			
DID						M	29	•	40V (AC)	1.5A	28	100			
DIS						M	23	•	40V (AC)	1.5A	28	100			

Remarks:
Materials: **P** (Plastic), **M** (Metal), **B** (Both)

Product Selection Guide

	High Speed USB 3.2 Gen1	High Speed USB 3.2 Gen2	Salt Spray (Connector, Mated)	R0	RW	RP	OC	FI	UV Resistant	UL 94V-0	Vibration	EMI Option	ROHS 2.0 & REACH	Standard / Compliant / Certifications	Operating Temperature & IP Rating
RJ45 Series															
Middle			48h	PCB 90 & 180, Jack 90 & 180		•	•	•	•	•	(2)	•	•	TIA/EIA-568, IEC 60603-7	◦ **R0:** -40°C - 105°C, IP67 (Unmated & Mated) ◦ **RP:** -20°C - 85°C, IP67 (Unmated & Mated) ◦ **OC:** -20°C - 85°C, IP67 (Mated) ◦ **FI:** -40°C - 105°C, IP67 (Mated)
Large / I-Adaptor			48h	PCB180, Jack 90 & 180		•	•	•	•	•	(2)	•	•	TIA/EIA-568, IEC 60603-7	
ODVA			48h	Jack 180		•	•	•	•	•	(2)	•	•	TIA/EIA-568, IEC 60603-7	
Self-Closing Cover			48h	•					•	•	(2)	•	•	TIA/EIA-568, IEC 60603-7	-40°C - 105°C, IP67 (Unmated)
USB Series															
Mini USB Type B			48h	•	•		•	•		94V-HB	(2)	•	•		◦ **R0:** -40°C - 105°C, IP67 (Unmated) ◦ **RW:** -20°C - 85°C, IP67 (Unmated) ◦ **OC:** -20°C - 85°C, IP67P (Mated) ◦ **FI:** -40°C - 105°C, IP67 (Mated)
Type A	•		48h	Type 1 & 2, Jack, PCB 180	•		•	Solder		•	(2)	•	•		
Type B	•		48h	Type 1 & 2, Jack, PCB 180	•		•	Solder		•	(2)	•	•		
Micro USB Swift			48h	•						•	(2)	•	•		-30°C - 80°C, IP67/IP68 (Unmated)
Micro USB Swift-MU			48h				•			•	(2)	•	•		-40°C - 80°C, IP67 (Mated)
Type C Swift-LP		•	48h	•						•	(2)	•	•		-40°C - 85°C, IP67 (Unmated)
Type C Swift-LA	•		48h	•			•			•	(2)	•	•		◦ **R0:** -40°C - 85°C, IP68 (Unmated) ◦ **OC:** -20°C - 85°C, IP67 (Mated)
Type C Swift-GG	•	•	48h	•			•			•	(2)	•	•		◦ **R0:** -40°C - 85°C, IP67 (Unmated) ◦ **OC:** -20°C - 85°C, IP67 (Mated)
Type C Swift-XL	•		48h				•			•	(2)	•	•		◦ **OC:** -20°C - 85°C, IP68 (Mated)
D-SUB Series															
Standard			8h	Solder, PCB 90& 180			•	Solder, Crimp			(2)	•	•		◦ **R0:** -40°C - 105°C, IP68 (Unmated) ◦ **OC:** -20°C - 85°C, IP67P (Mated) ◦ **FI:** -40°C - 105°C, IP67 (Mated)
High Density			8h	Solder, PCB 90& 180			•	Solder, Crimp			(2)	•	•		
SSL Series															
SSL1.1				•			•			•	(2)		•	CSA C22.2, UL1977	-40°C - 105°C, Non-IP
SSL1.2				•			•	•	•	•	(2)		•	CSA C22.2, UL1977, cUL UL2238+UL50e	-40°C - 105°C, IP68 (Mated)
HDMI Series															
Circular			48h	•			•			94V-HB	(2)	•	•		◦ **R0:** -20°C - 85°C, IP67 (Unmated) ◦ **OC:** -20°C - 85°C, IP67P (Mated)
Rectangular			48h	•			•			94V-1	(2)	•	•		
Mini-HDMI			48h	•			•			•	(2)	•	•		
DVI Series															
DDD			8h	•			•				(2)		•		◦ **R0:** -40°C - 105°C, IP68 (Unmated) ◦ **OC:** -20°C - 85°C, IP67P (Mated)
DDS			8h	•			•				(2)		•		
DID			8h	•			•				(2)		•		
DIS			8h	•			•				(2)		•		

Remarks:
Assemble Style: **R0** (Receptacle), **RW** (Receptacle With Wires), **RP** (Receptacle With Pigtail), **OC** (Overmolded With Cables), **FI** (Field Installable)
Vibration: **(2)** 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: **R0** (Receptacle), **RW** (Receptacle With Wires), **RP** (Receptacle With Pigtail), **OC** (Overmolded With Cables), **FI** (Field Installable)

Product Selection Guide

Other IO (Fiber, RF)

	Mating Style		Materials	No. of Contacs	Gold Plated	Operating Voltage (AC/DC)	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	Salt Spray (Connector, Mated)	R0
	3 Points Lock	Screw Thread								
Fiber Optic Series										
LC	•								48h	•
SC	•								48h	•
RF Series										
SMA Type		•	M	1	•	335 Volts RMS At Sea Level	1.13mm, 1.32mm, 1.37mm, RG178	500	48h	•
N Type		•	M	1	•	1,000 Volts RMS At Sea Level	1.13mm, 1.32mm, 1.37mm, RG142, RG178, G58 A/U	500	48h	•

Other (ZConnect, Cable Joiner, Cable Gland, Pressure Relief Vent, LED)

	Mating Style			Materials	No. of Contacs	Contacts				Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Salt Spray (Connector, Mated)
	Push Lock With Latch	Screw Thread	Others			Gold Plated	Nickel Plated	Thermo plastic	SUS316L				
ZConnect Series													
FPC / FFC / WTB			Quick Plug	B	46, 36, 20, 18, 12	•				120V	1A		48h
Cable Joiner Series													
M20		•		P	None, 4	•					10A	22-16	
M32	•			P	None, 4	•					15A-30A	16-10	
FICX I Tube (11)		•		P	2-5		•			450V (Non-UL) 600V (UL)	16A-30A	20-12	
FICX I Tube (12)		•		P	2-5		•			450V (Non-UL) 600V (UL)	8A-20A	18-12	
FICX XI Tube (13)		•		P	2-5		•			450V (Non-UL) 600V (UL)	8A-20A	18-12	
FICX T Tube (T2)		•		P	2-5		•			450V (Non-UL) 600V (UL)	10A-20A	20-12	
Cable Gland Series													
Cable Gland		•		B									
Pressure Relief Vent													
M6 Plastic		•		P				•					1,000h
M12 Snap-in		•		P				•					1,000h
M12 Stainless		•		M					•				1,000h
M12 Plastic		•		P				•					1,000h
M12 Metal		•		M			•						48h
LED Light Guide													
Ø3mm				B				•		4V			
Ø5mm				M				•		4V			

Remarks:
Materials: **P** (Plastic), **M** (Metal), **B** (Both)
Assemble Style: **R0** (Receptacle)

Product Selection Guide

	FI	UV Resistant	UL 94V-0	EMI Option	ROHS 2.0 & REACH	Standard / Compliant / Certifications	Operating Temperature & IP Rating
Fiber Optic Series							
LC	•	•	•		•		-40°C - 105°C, IP67 (Mated)
SC	•	•	•		•		-40°C - 105°C, IP67 (Mated)
RF Series							
SMA Type				•	•	MIL-C-39012	-40°C - 105°C, IP68 (Unmated)
N Type				•	•	MIL-C-39012	-40°C - 105°C, IP68 (Unmated)

	Receptacle	Field Installable	UV Resistant	UL 94V-0	Vibration	ROHS 2.0 & REACH	Certifications	IP Rating	Operating Temperature
ZConnect Series									
FPC / FFC / WTB				•		•			-40°C - 110°C, Non-IP
Cable Joiner Series									
M20		•	•	94V-2		•		IP67	-40°C - 105°C
M32		•	•	•		•	UL6703A	IP67	-40°C - 105°C
FICX I Tube (11)		•	•	•		•	CSA, UL2238	IP68 (Mated)	-40°C - 105°C
FICX I Tube (12)		•	•	•		•	CSA, UL2238	IP68 (Mated)	-40°C - 105°C
FICX XI Tube (13)		•	•	•		•	CSA, UL2238	IP68 (Mated)	-40°C - 105°C
FICX T Tube (T2)		•	•	•		•	CSA, UL2238	IP68 (Mated)	-40°C - 105°C
Cable Gland Series									
Cable Gland	•	•		94V-0 94V-2	(2)	•		IP67 (Mated) IP68 (Mated)	∘ **R0:** -20°C - 105°C ∘ **FI:** -20°C - 105°C
Pressure Relief Vent									
M6 Plastic	•		•	•		•		IP66, IP68	-40°C - 125°C
M12 Snap-in	•		•	•		•		IP68, IP69K	-40°C - 125°C
M12 Stainless	•		•	•		•		IP68, IP69K	-40°C - 125°C
M12 Plastic	•		•	•		•		IP68, IP69K	-40°C - 125°C
M12 Metal	•		•	•		•		IP68, IP69K	-40°C - 125°C
LED Light Guide									
Ø3mm	•							IP67	◦ **Red & Green:** -30°C - 80°C ◦ **Others:** -40°C - 80°C
Ø5mm	•							IP67	◦ **Red & Green:** -30°C - 80°C ◦ **Others:** -40°C - 80°C

Remarks:
Assemble Style: **FI** (Field Installable)
Vibration: **(2)** 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: **R0** (Receptacle), **FI** (Field Installable)

Served Markets & Applications

Applications	Ceres	X-Lok	M series	FLOS & FLOS+	Power	RBL	HS-Lok	NMEA 2000	7/8" Mini	Heavy Duty Shielded	RJ45	USB	SSL	HDMI	DVI	Fiber Optics	Zconnect	RF	Cable Joiner	Cable Gland	Vent	LED Light Guide	D-Sub
LED Lighting																							
Architectural Lighting	•	•	•		•	•	•		•		•		•				•		•	•	•		
Outdoor LED Displays	•	•	•	•	•	•			•		•		•				•		•	•	•		
Outdoor Signage	•	•			•	•			•		•		•				•		•	•	•		
Entertainment Lighting & Systems	•	•			•	•	•		•		•		•				•		•	•	•		
Smart City, Street Lighting	•	•			•	•			•		•		•				•		•	•	•		
Tunnel Lighting	•	•	•		•	•			•		•		•				•		•	•	•		
Parking Lighting	•	•			•	•	•		•		•		•				•		•	•	•		
Cruise & Shipyards Lighting	•	•	•		•	•	•	•	•		•		•				•		•	•	•		
High Speed Train & EV Bus	•	•			•	•	•		•	•	•		•				•			•	•		
Commercial Lighting	•	•	•		•	•	•		•		•		•				•		•	•	•		
Refrigeration Lighting	•	•	•		•	•	•		•		•		•				•			•	•		
Horticulture Lighting	•	•	•		•	•			•		•		•				•		•	•	•		
Warehouse Lighting	•	•			•	•			•		•		•				•		•	•	•		
Emergency Lighting	•	•	•		•	•	•		•		•		•				•		•	•	•		
UV and Sanitary Lighting	•	•	•		•	•	•		•		•		•				•		•	•	•		
Li-Fi	•	•			•	•					•		•				•	•	•	•	•		
Hospital Surgical Lighting & Room	•	•	•		•	•	•		•		•		•				•		•	•	•		
ATEX Lighting	•	•			•	•	•						•				•						
Underwater / Submerged Lighting	•	•			•	•							•				•				•		
Marine																							
Multi-FunctionDisplay	•	•	•	•	•	•		•	•	•	•	•		•	•		•	•			•	•	•
Outboard Motors	•	•	•		•	•		•	•	•							•			•			
Bilge Pump	•	•	•		•	•		•	•	•							•			•			
Heater	•	•	•		•	•	•	•	•	•	•						•		•	•	•		
HVAC (Heating Ventilation Air Conditioning)	•	•	•		•	•	•	•	•	•	•						•		•	•	•		
Fridge	•	•	•		•	•	•	•	•	•							•						
Docking System	•	•	•		•	•		•	•	•							•			•			
Windlass	•	•	•		•	•		•	•	•							•			•			
Sensors	•	•	•		•	•		•	•	•							•						
RADAR	•	•	•		•	•	•	•	•	•	•	•					•	•					
Antenna			•				•	•	•	•							•	•					
USB Charger	•	•	•		•	•	•	•	•	•		•					•		•				
Audio System	•	•	•		•	•	•	•	•	•	•	•		•			•		•	•	•		
Lighting System	•	•	•		•	•	•	•	•	•	•	•	•	•			•		•	•	•		•
CCTV	•	•	•		•	•	•	•	•	•	•	•		•	•		•						
Power Controller	•	•	•		•	•		•	•	•							•		•	•	•		•
Autopilot System	•	•	•		•	•		•	•	•				•	•		•	•			•		•
Automatic Identification System	•	•	•		•	•	•	•	•	•	•			•	•		•	•			•		•
GPS, Beacon & Lifebuoy	•	•	•		•	•	•	•	•	•	•	•					•	•					
Sonar / Transducer	•	•	•					•	•								•						
Fish-Finders	•	•	•					•	•	•	•	•					•						
Chartplotter	•	•	•				•	•	•	•	•	•		•	•		•						•
Sailing Instruments	•	•	•					•	•	•	•	•		•	•		•				•		•
Shipyards & Cruise	•	•	•				•	•	•	•	•	•		•	•		•				•		•
Broadband Wireless Access																							
General Small Cells	•	•	•		•	•	•		•	•	•	•				•	•	•	•	•	•	•	•
RRH (Remote Radio Head)	•	•	•		•	•	•		•	•	•	•				•	•	•	•	•	•		
Wireless Mobile Backhaul	•	•	•		•	•	•		•	•	•	•				•	•	•	•	•	•		
High Capacity Mobile Subscriber Unit	•	•	•		•	•	•		•	•	•	•				•	•	•	•	•	•	•	
Outdoor Base Station Unit	•	•	•		•	•	•		•	•	•	•				•	•	•	•	•	•	•	
Outdoor LTE	•	•			•	•	•		•	•	•						•	•	•	•	•	•	
Outdoor AP	•	•	•		•	•	•		•	•	•	•				•	•	•	•	•	•		•
Subscriber Station	•	•			•	•	•		•	•	•					•	•	•	•	•	•	•	
Outdoor Wireless Mesh Router	•	•	•		•	•	•		•	•	•	•				•	•	•	•	•	•		
Base Station Power Supply	•	•		•	•	•	•		•	•							•	•	•	•	•	•	
Communication System														•			•						

Served Markets & Applications

Applications	Ceres	X-Lok	M series	FLOS & FLOS+	Power	RBL	HS-Lok	7/8" Mini	Heavy Duty Shielded	RJ45	USB	SSL	HDMI	DVI	Fiber Optics	Zconnect	RF	Cable Joiner	Cable Gland	Vent	LED Light Guide	D-Sub
Industrial Automation																						
Robotic Arm			•	•			•	•	•							•						
Industrial Server / Network	•	•	•	•	•		•	•	•	•	•		•	•	•	•	•			•	•	•
Industrial Forklifts (Truck)	•	•	•	•	•	•	•	•	•	•	•		•	•		•			•	•		•
AVI (Automatic visual inspection)	•	•	•	•			•	•	•							•						
Data Communication System	•	•	•	•	•		•	•	•	•	•		•	•		•	•			•	•	•
Industrial Control Center	•	•	•	•	•		•	•	•	•	•		•	•		•				•	•	•
Packaging Center	•	•	•	•			•	•	•							•						
Conveyors	•	•	•	•			•	•	•							•						
Sensors			•					•	•							•						
Power Distribution	•	•	•	•	•			•	•							•						
Actuators	•	•	•					•	•							•						
Motor Drives	•	•	•		•	•		•	•							•						
Industrial PC & Displays	•	•	•	•	•		•	•	•	•	•		•	•		•	•			•	•	•
Machine Tools	•	•	•	•	•			•	•							•						
Switches		•	•					•	•	•	•					•						•
Production Equipment	•	•	•	•	•	•	•	•	•	•	•					•				•	•	•
Renewable Energy																						
PV / DC Inverter	•	•	•		•	•		•	•	•						•		•	•	•	•	
Micro Inverter						•										•			•	•	•	
CSP & CPV	•	•	•		•	•		•	•							•			•	•	•	
Heliostat	•	•	•		•	•		•	•							•			•	•	•	
PV Trackers	•	•	•		•	•		•	•							•			•	•	•	
PV ICS (Integrated Control Systems)					•	•		•	•	•						•			•		•	
Portable Energy	•	•	•		•	•	•	•	•	•	•					•						
Communication System	•	•	•	•	•	•		•	•	•	•		•	•	•	•	•		•	•	•	•
PDC (Power Distribution Control)	•	•	•	•	•	•		•	•	•						•	•		•	•	•	•
Wind Turbine	•	•	•	•	•	•		•	•	•						•			•	•	•	•
Energy Storage System	•	•	•		•	•		•	•	•						•			•	•	•	
Tidal Power Generation System	•	•	•	•	•	•		•		•						•			•	•		•
Heavy Equipment																						
Electronic Toll System	•	•	•	•	•	•	•	•	•	•	•		•	•		•	•		•	•		•
Automotive Diagnotics	•	•	•	•	•		•	•	•	•	•	•	•	•		•	•				•	•
Agriculture Electronic Equipment	•	•	•	•	•	•	•	•	•	•	•		•	•		•	•		•	•		•
Lidar & Radar	•	•	•	•				•	•	•	•		•	•		•						
ADAS (Advanced Driver Assistance Systems)	•	•	•	•	•	•	•	•	•	•	•		•	•		•	•		•	•		•
Telematics & Tracking	•	•	•		•	•	•	•	•	•	•		•	•		•	•	•	•	•	•	•
Camera & Monitoring	•	•	•	•	•	•	•	•	•	•	•		•	•		•	•		•	•		•
Control System	•	•	•	•	•	•	•	•	•	•	•		•	•		•	•		•	•		•
Display	•	•	•	•	•	•	•	•	•	•	•		•	•		•	•		•	•		•
GPS System	•	•	•	•	•	•	•	•	•	•	•					•	•		•	•		
Lighting	•	•	•		•	•		•	•			•				•		•	•			
Measurement Systems	•	•	•	•	•	•	•	•	•	•	•		•	•		•	•		•	•		•
Sensors		•	•	•			•	•	•							•						
Automated Meter Reading																						
Water Meter	•	•	•	•			•			•	•					•	•		•	•	•	
Electricity Meter	•	•	•	•			•			•	•					•	•		•	•	•	
Gas Meter	•	•	•	•			•			•	•					•	•		•	•	•	
Alarm System	•	•	•	•			•			•	•					•	•		•	•	•	
Military Drone	•	•	•	•			•									•	•		•	•	•	
Vehicle Tracking	•	•	•	•			•			•	•					•	•		•	•	•	
Telemetry	•	•	•	•			•			•	•					•	•		•	•	•	
Sewage	•	•	•	•	•	•	•			•	•					•	•		•	•	•	
Rugged IT																						
Telemetry		•	•	•			•			•						•	•		•	•		
Rugged & Military VR and AR		•	•	•			•				•					•	•		•			
Rugged Notebook				•						•	•		•	•		•	•					•
Night Vision Goggles			•	•			•				•					•						
Miniature Camera											•					•	•					
Rugged Tablet											•		•	•		•	•					
Communication Devices				•						•	•		•	•		•	•				•	•

Served Markets & Applications

Applications	Ceres	X-Lok	M series	FLOS & FLOS+	Power	RBL	HS-Lok	7/8" Mini	Heavy Duty Shielded	RJ45	USB	SSL	HDMI	DVI	Zconnect	RF	Cable Gland	Vent	LED Light Guide	D-Sub
Test Equipments																				
Air Flow Measurement	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Gas Detectors	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Precision Surveying	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•		•
Earthquake Monitoring	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Humidity Measurement	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Leak Detectors	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Light Measuring	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Sound Measuring	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Water Measurement	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Weighing Devices	•	•	•	•	•	•	•	•	•	•	•				•	•	•	•		
Weigh Modules	•	•	•	•	•	•	•	•	•	•	•				•	•	•	•		
Heavy-duty Scales	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•		•
Floor Scales	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•		•
Wet Area Weighing	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Dosing Systems	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
In-Motion Weighing	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Borescope	•	•	•	•			•	•	•	•	•				•	•		•		
Image Measurement	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Timers / Timer Display	•	•	•	•			•	•	•	•	•				•	•		•		
Laser Marking System	•	•	•	•	•	•	•	•	•	•	•				•	•		•		
Digital Microscopes	•	•	•	•			•	•	•	•	•				•	•		•		
Hybrid Electric Vehicles																				
Electric Wheelchair	•	•	•	•	•	•	•	•	•						•					
Electrical and Electronic Speed Control	•	•	•	•	•	•	•	•	•						•					
Electrical and Electronic Brake System	•	•	•	•	•	•	•	•	•						•					
Throttle Controller	•	•	•	•	•	•	•	•	•						•					
Battery Module	•	•	•		•			•	•	•	•	•			•		•	•		
Motor Module	•	•	•	•				•	•	•	•	•			•		•	•		
Gear Shift Module	•	•	•					•	•	•	•	•			•			•		
Controller Unit	•	•	•	•				•	•	•	•	•			•			•		
Charge Plug / Inlet	•	•			•			•	•	•	•	•			•			•		
Charging Station	•	•			•			•	•	•	•	•			•			•		
Home Charge Platform	•	•			•			•	•	•	•	•			•			•		
Hoverboard	•	•	•	•	•			•	•	•	•	•			•			•		
Electric Scooter	•	•	•	•	•	•	•	•	•						•		•			
Railway Mass Transit																				
Infotainment Systems	•	•	•	•	•	•	•	•	•	•	•		•	•	•		•	•	•	•
In-Vehicle Information System	•	•	•	•	•		•	•	•	•	•		•	•	•		•	•	•	•
Indication Display	•	•	•	•	•		•	•	•	•	•		•	•	•			•		•
Navigation/GPS	•	•	•				•	•	•	•	•		•	•	•	•				•
HVAC (Heating Ventilation Air Conditioning)	•	•	•	•	•		•	•	•	•					•					
Fuel Leakage Detector	•	•	•	•	•	•	•	•	•	•	•				•					
Broadcasting System	•	•	•	•	•		•	•	•	•	•				•		•			
Vehicle Monitoring	•	•	•	•	•		•	•	•	•	•		•	•	•			•		•
Cleaning Control	•	•	•	•		•	•	•	•	•	•				•					
Speedometer	•	•	•	•			•	•	•						•					
Interior Lighting	•	•	•	•	•		•	•	•	•	•	•			•			•		
Mobile Devices																				
DRC (Drone Remote Controller)	•	•	•	•			•				•				•	•				
Altimeter	•	•	•	•			•				•				•	•				
Barcode Reader	•	•	•	•			•				•				•					
GPS Safety Guard		•					•				•				•	•				
Portable Lamp	•	•					•				•				•					
Gesture Measurement	•	•					•				•				•					
Wearables											•				•	•				

Served Markets & Applications

Applications	Ceres	X-Lok	M series	FLOS & FLOS+	Power	RBL	HS-Lok	7/8" Mini	Heavy Duty Shielded	RJ45	USB	SSL	HDMI	DVI	Zconnect	RF	Cable Joiner	Cable Gland	Vent	LED Light Guide	D-Sub
Transportation																					
Vehicle Camera	•	•	•	•		•	•				•		•		•			•	•		
Switch			•							•	•				•						•
Dome Vehicle Camera	•	•	•			•									•						
RFID Reader															•	•					
Bus GPS	•	•	•	•		•	•			•	•		•	•	•	•					
Displayer	•	•	•	•		•									•						
Outdoor Speaker	•	•	•	•		•									•						
Automotive Winches															•						
Vehicle Charger	•	•	•			•									•						
Wifi Router										•					•						
Fleet Management	•	•	•	•		•									•						
Digital Video Surveillance System	•	•	•	•	•	•		•	•	•					•					•	
Medical Equipment																					
Medical Displays				•	•					•	•		•	•	•				•		•
Mobile Nursing Carts	•	•			•	•	•	•	•						•			•	•		
Non-invasive Devices	•	•		•	•	•	•	•	•	•	•		•	•	•			•	•		•
Electrical Beds	•	•	•		•	•		•	•						•			•	•		
Charges	•	•			•	•		•	•						•			•	•		
Wheelchair Lift	•	•			•	•		•	•						•			•	•		
Wheelchair Stair Lift	•	•			•	•		•	•						•			•	•		
Rehabilitation System	•	•			•	•		•	•						•			•	•		
Automotive Diagnostics																					
Auto Crash Notification	•	•	•	•	•	•	•	•	•	•	•				•	•					•
Vehicle Tracking	•	•	•		•	•	•	•	•		•				•	•			•		
Vehicle Health Alert & Roadside Assistance	•	•	•	•	•	•	•	•	•	•	•				•	•					•
Remote Vehicle Diagnostics	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			•	•	•
UAV																					
Commercial Drone	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•
Military Drone	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•
Consumer Drone	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•		•	•	•	•
Lifts & Materials Handling																					
Forklift	•	•	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•
Industrial Lift	•	•	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•
Materials Handling	•	•	•	•	•	•	•	•	•	•	•		•	•	•			•	•	•	•
Remote Video Response Center																					
Encoders	•	•	•	•	•		•	•	•	•	•		•	•	•	•			•	•	•
Monitoring Station	•	•	•		•	•		•	•	•	•		•	•	•			•			•
CCTV/Dome/IP Camera	•	•	•	•	•		•	•	•	•	•		•	•	•	•	•	•	•	•	•
Remote Control	•	•			•		•			•	•				•			•			
Junction Box	•	•			•					•	•		•	•	•			•	•		•
Automatic LPRS (License Plate Recognition System)	•	•	•	•	•		•	•	•	•	•		•	•	•	•	•	•	•	•	•
Fingerprint ID											•				•						
Alarm System	•	•	•	•	•		•			•	•		•	•	•	•	•	•	•	•	•
Sensor			•												•						
Autonomous																					
GPS	•	•	•	•			•	•	•	•	•		•	•	•	•					
Lidar	•	•	•	•			•	•	•	•	•		•		•			•	•		
Radar Sensors	•	•	•	•			•	•	•						•	•					
Video Cameras	•	•	•	•			•	•	•		•		•		•			•	•		
Central Computer	•	•	•	•			•	•	•	•	•		•		•						
Inertial Measurement Unit	•	•	•	•			•	•	•						•			•			
Inertial Navigation Systems	•	•	•	•			•	•	•						•	•		•			
Commercial Military																					
Tank				•																	
Aircraft				•																	
Warship				•																	
Dismounted Soldier				•																	
Software Defined Radios				•																	
Commercial Military				•											•						

We Are Amphenol LTW

Founded in 1993, Amphenol LTW is a leader in rugged and harsh environment interconnects with the largest array of I/O and products ranging from IP65 to IP69K. The company continually provides innovative interconnect solutions for ever-demanding environments and is proactively committed to contributing to a safer and greener environment. Amphenol LTW features interconnects for technologically advanced products with environmentally friendly results.

Amphenol LTW Technology & CNC Plant

- Headquarters: Taipei, Taiwan
- 150 Employees

Kunshan Amphenol Zhengri Electronics

- Kunshan, China
- 400 Employees

110+
Amphenol Divisions

75+
Distribution Channels

30+
Market Applications

80,000+
Products

Visit our website for more information

Scan here

Our Capabilities

Both factories located in Taiwan and China are ISO9001:2015, ISO14001:2015, and UL certified. Our Test Laboratory is certified by TAF and is a member of UL WTDP reliable partner. Wherever required, most of our products are TUV/VDE, UL/CSA certified. Thanks to our strict standards, we are able to contribute to your projects and design exactly what you need. From standard to customized products, Amphenol LTW has the right solutions for your applications.

Test Laboratory Accreditations **Quality Assurance** **International Certifications**

Automated Production Line

Capability: Contacts, Parts, and Shells

Number of Automatic Machines: 11
Production Capacity : 125,000 pins per day (24 hours)

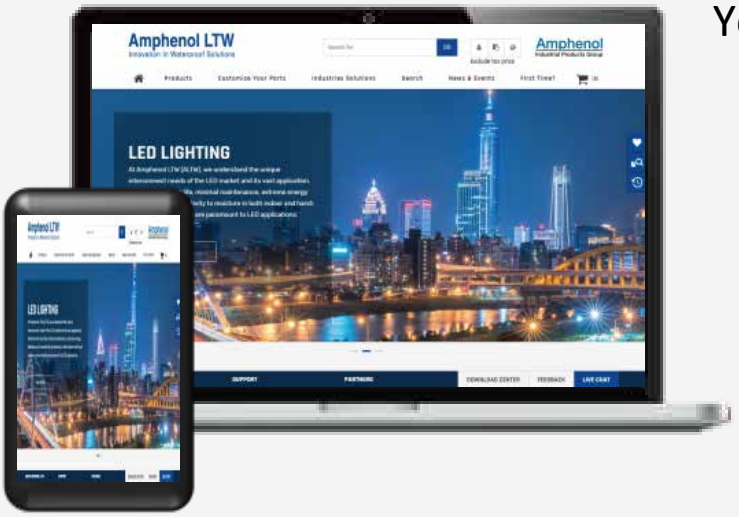
Number of CNC Machines: 33
Production Capacity : 125,000 pins per day (24 hours)

Kunshan Factory – Horizontal Injection Workshop

Molding Machines
Number of Machines: 17

Production Capacity : 3,400pcs/hr

Online Resources



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- ✓ Easy & quick customization
- ✓ Real time order tracking
- ✓ Online assistance (Live Chat)
- ✓ Instant drawing release
- ✓ Instant quote
- ✓ Order online

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NEW 3³ Single Pair Ethernet

Freedom of Choices and Budgets

3 Mechanical interfaces IP67 and above for industrial and ruggedized applications

3dom of choices for your needs and requirements

3 Budgets, pay for what you need

Features

» ALTW's proprietary SPE interface integrated in **M8 (G8) / M12 / FLOS+ / X-Lok**

» Providing low power & simply networking on end-point sensors

» Cost-effective, smaller & lighter than standard 4 pairs ethernet cable

» Compatible 10/100/1000 base-T1 data rates as existing technologies **

» Receptacle IP67 ***UNMATED*** waterproof, also available in double ended and field installable

» Vibration resistance 20g (10 ~ 2,000 Hz)

» Supports PoDL (Power Over Data Lines)

** 24~26 AWG Standard Length 15m

Part Number

X-Lok

A Size	AD-02BFFM-QL8P⑩ (Cable)
	AD-02BMMM-QL8P⑩ (Cable)
	AD-02PMMP-QC8001 (Receptacle)
	AD-02PMMS-QC8001 (Receptacle)

FLOS+

K Series	SLKC-S02FMMM-GCP-C⑩ (Cable)
	SLKC-S02EEFP-GCP-001 (Receptacle)

M Series

M8	M8-02BFFM-SL7C⑩* (Cable)
	M8-02BMMM-SL7C⑩* (Cable)
	M8-02PFFP-SF7001* (Receptacle)
	M8-02PMMP-SF7001* (Receptacle)
	M8-02PFFS-SF7001* (Receptacle)
	M8-02PMMS-SF7001* (Receptacle)
G8	8A-02BFFM-SL7C⑩* (Cable)
	8A-02BMMM-SL7C⑩* (Cable)
	8A-02PFFP-SF7001* (Receptacle)
	8A-02PFFS-SF7001* (Receptacle)
	8A-02MMP-SF7001 (Receptacle)
	8A-02PMMS-SF7001 (Receptacle)

M12	M12A-02BFFM-SL8C⑩ (Cable)
	M12A-02BMMM-SL8C⑩ (Cable)
	M12A-02PFFP-SF8001(Receptacle)
	M12A-02PMMP-SF8001(Receptacle)

SPE

* Upon Request

⑩Cable Length: (**01**) 1M ~ (**15**) 15M.

Technical Support

Assistance

AIPG WeChat (ID: AIPG2020)
安费诺工业展品集团
微信公众号: AIPG2020

88677416888

Information

FAQ

Find answers to frequently asked questions at
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M12 Markets / Applications

Marine

- AIS
- Antenna
- Audio System
- Autopilot System
- Bilge Pump
- Heater
- RADAR
- Windlass
- Outboard & Trolling Motors
- Chartplotter
- Docking System
- Fish-Finders
- Fridge & Refrigeration
- GPS, Beacon & Lifebuoy
- Lighting System
- Power Controller
- IP and Infrared CCTV & Cameras
- Sensors
- Shipyards & Cruise
- Sonar / Transducer
- USB Charger
- HVAC (Heating Ventilation Air Conditioning)
- Multi-Function Display
- Sailing Instruments

Broadband Wireless Access

- Outdoor AP
- Outdoor Base Station Unit
- Outdoor Repeater
- Outdoor Wireless Mesh Router
- RRU (Remote Radio Unit)
- General Small Cells
- Wireless Mobile Backhaul
- High Capacity Mobile Subscriber Unit

Renewable Energy

- Portable Energy
- PV Inverter
- PV Trackers
- Tidal Power Generation System
- Wind Turbine
- Communication System
- CSP & CPV
- DC Inverter
- Energy Storage System
- Heliostat
- PDC (Power Distribution Control)

Railway Mass Transit

- Interior Lighting
- In-Vehicle Information
- Navigation / GPS
- Speedometer
- Vehicle Monitoring
- Broadcasting System
- Cleaning Control
- Fuel Leakage Detector
- HVAC (Heating Ventilation Air Conditioning)
- Infortainment Systems
- Indication Display

Remote Video Response Center

- Alarm System
- Sensor
- CCTV / Dome / IP Camera
- Encoders
- Monitoring Station
- Automatic LPRS (License Plate Recognition System)

Autonomous

- Central Computer
- GPS
- Inertial Measurement Unit
- Inertial Navigation Systems
- Lidar
- Radar Sensors
- Video Cameras

Heavy Equipment

- Lidar & Radar
- Lighting
- Measurement Systems
- Sensors
- Telematics & Tracking
- Automotive Diagnostics
- Camera & Monitoring
- Control System
- Display
- Electronic Toll System
- ADAS (Advanced Driver Assistance Systems)
- Agriculture Electronic Equipment
- Gps System

Hybrid Electric Vehicles

- Battery Module
- Controller Unit
- Electric Scooter
- Electric Wheelchair
- Hoverboard
- Motor Module
- Throttle Controller
- Gear Shift Module
- Electrical and Electronic Brake System
- Electrical and Electronic Speed Control

M12 Markets / Applications

Industrial Automation

- Machine Tools
- Motor Drives
- Packaging
- Power
- Sensors
- Switches
- Actuators
- Conveyors
- Industrial Network
- Industrial PC & Displays
- Industrial Control
- Industrial Forklifts
- Industrial Robots
- AVI (Automatic Visual Inspection)
- Communication System

Automotive Diagnostics

- Auto Crash Notification
- Remote Vehicle Diagnostics
- Vehicle Health Alert & Roadside Assistance
- Vehicle Tracking

Test Equipment

- Sound Measuring
- Timers / Timer Display
- Water Measurement
- Weigh Modules
- Weighing Devices
- Leak Detectors
- Laser Marking System
- Borescope
- Digital Microscopes
- Dosing Systems
- Earthquake monitoring
- Floor Scales
- Light Measuring
- Wet Area Weighing
- Gas Detectors
- Heavy-duty Scales
- Humidity Measurement
- Image Measurement
- In-Motion Weighing
- Precision Surveying
- Air Flow Measurement

LED

- Architectural Lighting
- Commercial Lighting
- Cruise & Shipyards Lighting
- Emergency Lighting
- Horticulture Lighting
- Hospital Surgical Lighting & Room
- Outdoor LED Displays
- Refrigeration Lighting
- Tunnel Lighting
- UV and Sanitary Lighting

Transportation

- Vehicle Camera
- Fleet Management
- Bus GPS
- Displayer
- Outdoor Speaker
- Switch
- Vehicle Charger
- Dome Vehicle Camera
- Digital Video Surveillance System

UAV

- Commercial Drone
- Consumer Drone
- Military Drone

Medical

- Electrical beds

Rugged IT

- Night Vision Goggles
- Rugged & Military VR and AR
- Telemetry

Mobile Devices

- Altimeter
- Barcode Reader
- DRC (Drone Remote Controller)

Lifts & Materials Handling

- Forklift
- Industrial Lift
- Materials Handling

Automated Meter Reading

- Electricity Meter
- Gas Meter
- Sewage
- Telemetry
- Water Meter
- Alarm System
- Military Drone
- Vehicle Tracking

Product Range Overview

Sub-Series Name	M5	Guided M8 / LED	M8 /LED	M10.5	M12 A / LED	M12 B / LED	M12 D / LED	M12 I
Mating Style	Screw Thread	Screw Thread Snap-in	Screw Thread & Snap-in	Screw Thread	Screw Thread & Push Pull	Screw Thread & Push Pull	Screw Thread & Push Pull	Screw Thread & Push Pull
Plastic Version	-	✓	✓	-	✓	✓	✓	✓
Metal Version	✓	✓	✓	✓	✓	✓	✓	✓
No. of Contacts	3 ~ 6	2 ~ 6	3 ~ 13	2 ~ 5	3 ~ 28	5	4	5
Plating of Contacts	Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated
Transmission Rate	-	-	-	-	Cat. 5e (8 Pin To RJ45)	-	Cat. 5e (4 Pin To RJ45)	-
Operating Voltage (AC/DC)	60V	30V ~ 60V	30V ~ 60V	30V	30V ~ 250V	60V	250V	60V
Nominal Current	1A	2A ~ 4A 3A+1.5A	0.5A ~ 4A	2A	0.5A ~ 4A	4A	4A	4A
Operating Temperature	● Receptacle: -40°C ~ 105°C ● Receptacle With Wires: -20°C ~ 85°C ● Overmolded With Cable: (1) PVC: -20°C~85°C (2) PUR: -20°C~85°C ● Field Serviceable/Installable: -40°C ~ 105°C							
Fasten Style of Nut	Front & Rear	Front & Rear	Front & Rear	Rear	Front & Rear	Front & Rear	Front & Rear	Front & Rear
Receptacle	✓	✓	✓	✓	✓	✓	✓	✓
Receptacle With Cable/Wire	✓	✓	✓	✓	✓	✓	✓	-
Overmolded With Cable	✓	✓	✓	✓	✓	✓	✓	✓
Field Serviceable/Installable	-	✓	✓	✓	✓	✓	✓	-
Accessories	-	✓	✓	✓	✓	✓	✓	✓
Applicable Wire Gauge	28 ~ 26AWG (0.09 ~ 0.14mm^2)	24 ~ 22AWG (0.25 ~ 0.34mm^2)	32AWG (0.03mm^2)	24AWG (0.25mm^2)	30 ~ 22AWG (0.05 ~ 0.34mm^2)	26 ~ 22AWG (0.14 ~ 0.34mm^2)	26 ~ 22AWG (0.14 ~ 0.34mm^2)	22AWG (0.34mm^2)
Mating Cycles (Pin Contact)	1,000 Cycles (IEC 100 Cycles)							
IP Rating	● Receptacle, Receptacle With Wires: (1) IP67 (Mated / Unmated) (2) IP68 (Unmated, 1M / 24h) (3) IP69K (Mated) ● Overmolded With Cable, Field Serviceable/Installable: IP67 / IP68 (Mated, 1M / 24h)							
Salt Spray (Connector, Mated)	48h	48h	48h	48h	48h	48h	48h	48h
UV Resistant	✓	✓	✓	✓	✓	✓	✓	✓
Flammability Rating	UL94V-0	UL94V-0	UL 94V-0	UL 94HB	UL 94V-0	UL 94V-0	UL 94V-0	UL 94HB
Vibration	Frequency Range 10~500Hz / Amplitude 0.35mm							
EMI Option	-	✓	✓	-	✓	✓	✓	-
RoHS 2.0 Compliant	✓	✓	✓	✓	✓	✓	✓	✓
REACH Compliant	✓	✓	✓	✓	✓	✓	✓	✓
Certificates	-	-	UL1977 UL2238	-	UL1977, UL2238, UL1863	UL1977 UL2238	UL1977, UL2238, UL1863	-
Standard / Compliance	IEC 61076-2-105	-	IEC 61076-2-104	-	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	-

Product Range Overview

Sub-Series Name	M12 K / LED	M12 L / LED	M12 M / LED	M12 S / LED	M12 T / LED	M12 X	M12 Y	M23
Mating Style	Screw Thread & Push Pull	Screw Thread & Push Pull	Screw Thread & Push Pull	Screw Thread & Push Pull	Screw Thread & Push Pull	Screw Thread & Push Pull	Screw Thread & Push Pull	Screw Thread
Plastic Version	✓	✓	✓	✓	✓	-	✓	-
Metal Version	✓	✓	✓	✓	✓	✓	✓	✓
No. of Contacts	3 ~ 5	2 ~ 5	3 ~ 6	3 ~ 4	2 ~ 4	8	8	6
Plating of Contacts	Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated
Transmission Rate	-	-	-	-	-	Cat.6A	-	-
Operating Voltage (AC/DC)	630V	63V	630V	630V	63V	30 ~ 60V	60V	600V
Nominal Current	12A / 16A	16A	8A	12A	12A	0.5A	0.5A / 6A	28A
Operating Temperature	● Receptacle: -40°C ~ 105°C ● Receptacle With Wires: -20°C ~ 85°C ● Overmolded With Cable: (1) PVC: -20°C~85°C (2) PUR: -20°C~85°C ● Field Serviceable/Installable: -40°C ~ 105°C							
Fasten Style of Nut	Front	Front	Front	Front & Rear	Front & Rear	Front & Rear	Front & Rear	Front
Receptacle	✓	✓	✓	✓	✓	✓	✓	✓
Receptacle With Cable/Wire	✓	✓	✓	✓	✓	✓	✓	-
Overmolded With Cable	✓	✓	✓	✓	✓	✓	✓	✓
Field Serviceable/Installable	✓	✓	✓	✓	✓	✓	✓	✓
Accessories	✓	✓	✓	✓	✓	✓	-	-
Applicable Wire Gauge	14AWG ($2.5mm^2$)	14AWG ($2.5mm^2$)	16AWG ($1.5mm^2$)	16AWG ($1.5mm^2$)	16AWG ($1.5mm^2$)	26AWG ($0.14mm^2$)	20 AWG ($0.50mm^2$) 26 AWG ($0.14mm^2$)	14 ~ 12AWG ($2.50 \sim 4.00mm^2$)
Mating Cycles (Pin Contact)	1,000 Cycles (IEC 100 Cycles)							
IP Rating	● Receptacle, Receptacle With Wires: (1) IP67 (Mated / Unmated) (2) IP68 (Unmated, 1M / 24h) (3) IP69K (Mated) ● Overmolded With Cable, Field Serviceable/Installable: IP67 / IP68 (Mated, 1M / 24h)							
Salt Spray (Connector, Mated)	48h	48h	48h	48h	48h	48h	48h	48h
UV Resistant	✓	✓	✓	✓	✓	✓	✓	✓
Flammability Rating	UL 94V-0	UL 94V-0	UL 94V-0	UL 94V-0	UL 94V-0	UL 94V-0	UL 94V-0	UL 94V-0
Vibration	Frequency Range 10~500Hz / Amplitude 0.35mm							
EMI Option	-	-	✓	-	-	✓	✓	✓
RoHS 2.0 Compliant	✓	✓	✓	✓	✓	✓	✓	✓
REACH Compliant	✓	✓	✓	✓	✓	✓	✓	✓
Certificates	UL1977 UL2237	UL1977 UL2238	-	UL1977 UL2237	UL1977 UL2238	UL1863	UL1863	-
Standard / Compliance	IEC 61076-2-111	IEC 61076-2-111	IEC 61076-2-111	IEC 61076-2-111	IEC 61076-2-111	IEC 61076-2-109	IEC 61076-2-109	-

Contact Configuration

	M5	G8 A Code / LED		G8 H Code	M8 A Code / LED				M8 B Code / LED	M8 D Code / LED	M10.5	M12 A Code / LED	
	1A	2A	4A	3A + 1.5A	0.5A	1A	1.5A	4A	3A	4A	2A	0.5A	1.5A
2 Pin			R C F								R C F		
3 Pin	R C		R C F					R C F			R C F		
4 Pin	R C		R C F					R C F		MM FF R C F	R C F		
5 Pin		R C F		R C F					R C F		R C F		
6 Pin	R C	R C F					R C F						
8 Pin							R C F						
10 Pin													R C F
12 Pin						R C F							R C F
13 Pin					R C F								
17 Pin													R C F
18 Pin												R C F	
24 Pin												R C F	
28 Pin												R C F	

R: Receptacle C: Overmolded with Cable F: Field Serviceable/Installable

Contact Configuration

	M12 A Code / LED		M12 B Code / LED	M12 D Code / LED	M12 I Code	M12 K Code / LED	M12 L Code / LED
	2A	4A	4A	4A	4A	12A / 16 A	16A
2 Pin							R C F
3 Pin		R C F				R C F	R C F
4 Pin		R C F		R C F		R C F	R C F
5 Pin		R C F	R C F		R C F	R C F	R C F
6 Pin	R C F						
8 Pin	R C F						

	M12 M Code / LED	M12 S Code / LED	M12 T Code / LED	M12 X Code	M12 Y Code	M23
	8A	12A	12A	0.5A	0.5A / 6A	28A
2 Pin			R C F			
3 Pin	R C F	R C F	R C F			
4 Pin	R C F	R C F	R C F			
5 Pin	R C F					
6 Pin	R C F					R C F
8 Pin				R C F	R C F	

R: Receptacle C: Overmolded with Cable F: Field Serviceable/Installable

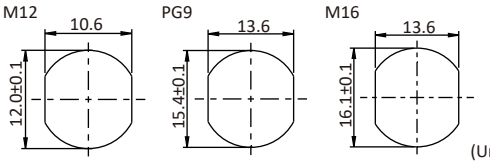
M12 Series

- M12 Data Group Supports Up To Cat. 6A (10Gpbs)
- M12 Power Group Supports Up To 16A
- Patented Universal Push Pull Quick Mating Design

M12 A-Code

Bulkhead / Receptacle, Hexagonal Flange, Front Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

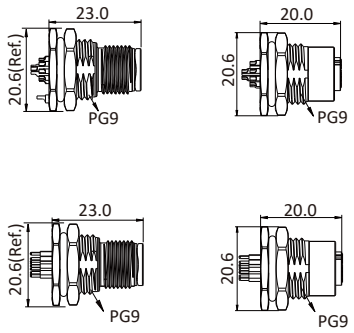
Number of Contacts	3
Coding	A
Rated Voltage (AC/DC)	250V
Nominal current	4A
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact	MM / FF

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

PG9

(Metal/Shielded/Stainless)

(MM) (FF)

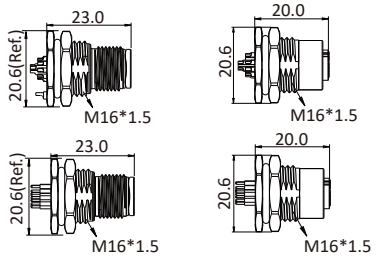


Plastic	Solder Pins	MSAP-03PMMS-SF8001*	MSAP-03PFFS-SF8001*
	Straight PCB	MSAP-03PMMP-SF8001*	MSAP-03PFFP-SF8001*
	Right Angle PCB	MSAP-03PMMR-SF8001*	MSAP-03PFFR-SF8001*
Metal Nut	Solder Pins	M12A-03PMMS-SF8001	M12A-03PFFS-SF8001
	Straight PCB	M12A-03PMMP-SF8001	M12A-03PFFP-SF8001
	Right Angle PCB	M12A-03PMMR-SF8001	M12A-03PFFR-SF8001
Shielded	Solder Pins	MSAS-03PMMS-SF8001	MSAS-03PFFS-SF8001
	Straight PCB	MSAS-03PMMP-SF8001	MSAS-03PFFP-SF8001
	Right Angle PCB	MSAS-03PMMR-SF8001*	MSAS-03PFFR-SF8001*
Stainless	Solder Pins	SM12A-03PMMS-SF8001*	SM12A-03PFFS-SF8001*
	Straight PCB	SM12A-03PMMP-SF8001*	SM12A-03PFFP-SF8001*
	Right Angle PCB	SM12A-03PMMR-SF8001	SM12A-03PFFR-SF8001*
Stainless Shielded	Solder Pins	SMSAS-03PMMS-SF8001*	SMSAS-03PFFS-SF8001*
	Straight PCB	SMSAS-03PMMP-SF8001*	SMSAS-03PFFP-SF8001*
	Right Angle PCB	SMSAS-03PMMR-SF8001*	SMSAS-03PFFR-SF8001*

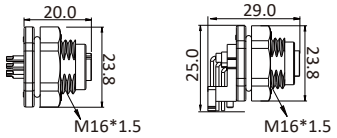
M16 x 1.5

(Metal/Shielded/Stainless)

(MM) (FF)



(Plastic, FF)

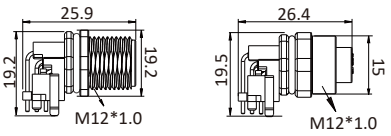


Plastic	Solder Pins	MSAP-03PMMS-SF8002*	MSAP-03PFFS-SF8002
	Straight PCB	MSAP-03PMMP-SF8002*	MSAP-03PFFP-SF8002
	Right Angle PCB	MSAP-03PMMR-SF8002*	MSAP-03PFFR-SF8002
Metal Nut	Solder Pins	M12A-03PMMS-SF8002	M12A-03PFFS-SF8002
	Straight PCB	M12A-03PMMP-SF8002	M12A-03PFFP-SF8002
	Right Angle PCB	M12A-03PMMR-SF8002	M12A-03PFFR-SF8002
Shielded	Solder Pins	MSAS-03PMMS-SF8002	MSAS-03PFFS-SF8002
	Straight PCB	MSAS-03PMMP-SF8002	MSAS-03PFFP-SF8002
	Right Angle PCB	MSAS-03PMMR-SF8002*	MSAS-03PFFR-SF8002*
Stainless	Solder Pins	SM12A-03PMMS-SF8002*	SM12A-03PFFS-SF8002*
	Straight PCB	SM12A-03PMMP-SF8002*	SM12A-03PFFP-SF8002*
	Right Angle PCB	SM12A-03PMMR-SF8002*	SM12A-03PFFR-SF8002*
Stainless Shielded	Solder Pins	SMSAS-03PMMS-SF8002*	SMSAS-03PFFS-SF8002*
	Straight PCB	SMSAS-03PMMP-SF8002*	SMSAS-03PFFP-SF8002*
	Right Angle PCB	SMSAS-03PMMR-SF8002*	SMSAS-03PFFR-SF8002*

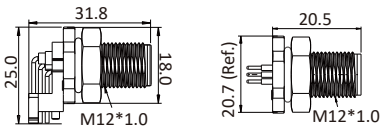
M12 x 1.0

(Metal/Shielded/Stainless)

(MM) (FF)



(Plastic, MM)



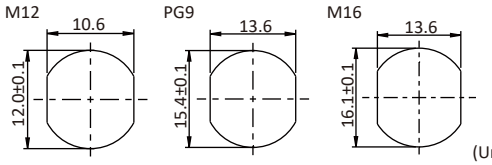
Plastic	Solder Pins	MSAP-03PMMS-SF8003*	MSAP-03PFFS-SF8003*
	Straight PCB	MSAP-03PMMP-SF8003*	MSAP-03PFFP-SF8003*
	Right Angle PCB	MSAP-03PMMR-SF8003	MSAP-03PFFR-SF8003*
Metal Nut	Solder Pins	M12A-03PMMS-SF8003*	M12A-03PFFS-SF8003*
	Straight PCB	M12A-03PMMP-SF8003*	M12A-03PFFP-SF8003*
	Right Angle PCB	M12A-03PMMR-SF7003*	M12A-03PFFR-SF7003*
Shielded	Solder Pins	MSAS-03PMMS-SF8003*	MSAS-03PFFS-SF8003*
	Straight PCB	MSAS-03PMMP-SF8003*	MSAS-03PFFP-SF8003*
	Right Angle PCB	MSAS-03PMMR-SF8003*	MSAS-03PFFR-SF8003*
Stainless	Solder Pins	SM12A-03PMMS-SF8003*	SM12A-03PFFS-SF8003*
	Straight PCB	SM12A-03PMMP-SF8003*	SM12A-03PFFP-SF8003*
	Right Angle PCB	SM12A-03PMMR-SF8003*	SM12A-03PFFR-SF8003*
Stainless Shielded	Solder Pins	SMSAS-03PMMS-SF8003*	SMSAS-03PFFS-SF8003*
	Straight PCB	SMSAS-03PMMP-SF8003*	SMSAS-03PFFP-SF8003*
	Right Angle PCB	SMSAS-03PMMR-SF8003*	SMSAS-03PFFR-SF8003*

* Upon Request

M12 A-Code

Bulkhead / Receptacle, Hexagonal Flange, Front Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

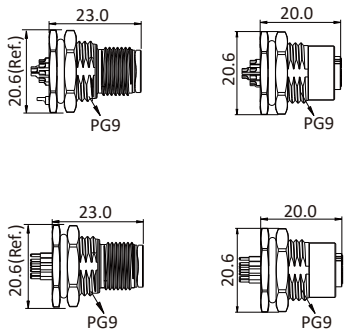
Number of Contacts	4
Coding	A
Rated Voltage (AC/DC)	250V
Nominal current	4A
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact	MM | FF

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

PG9

(Metal/Shielded/Stainless)

(MM) (FF)

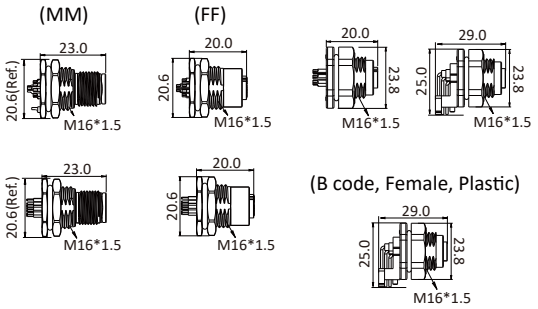


Plastic	Solder Pins	MSAP-04P**MMS**-SF8001*	MSAP-04P**FFS**-SF8001*
	Straight PCB	MSAP-04P**MMP**-SF8001*	MSAP-04P**FFP**-SF8001*
	Right Angle PCB	MSAP-04P**MMR**-SF8001*	MSAP-04P**FFR**-SF8001*
Metal Nut	Solder Pins	M12A-04P**MMS**-SF8001	M12A-04P**FFS**-SF8001
	Straight PCB	M12A-04P**MMP**-SF8001	M12A-04P**FFP**-SF8001
	Right Angle PCB	M12A-04P**MMR**-SF8001	M12A-04P**FFR**-SF8001
Shielded	Solder Pins	MSAS-04P**MMS**-SF8001	MSAS-04P**FFS**-SF8001
	Straight PCB	MSAS-04P**MMP**-SF8001	MSAS-04P**FFP**-SF8001
	Right Angle PCB	MSAS-04P**MMR**-SF8001*	MSAS-04P**FFR**-SF8001*
Stainless	Solder Pins	SM12A-04P**MMS**-SF8001*	SM12A-04P**FFS**-SF8001*
	Straight PCB	SM12A-04P**MMP**-SF8001*	SM12A-04P**FFP**-SF8001*
	Right Angle PCB	SM12A-04P**MMR**-SF8001*	SM12A-04P**FFR**-SF8001*
Stainless Shielded	Solder Pins	SMSAS-04P**MMS**-SF8001*	SMSAS-04P**FFS**-SF8001*
	Straight PCB	SMSAS-04P**MMP**-SF8001*	SMSAS-04P**FFP**-SF8001*
	Right Angle PCB	SMSAS-04P**MMR**-SF8001*	SMSAS-04P**FFR**-SF8001*

M16 x 1.5

(Metal/Shielded/Stainless) (A code, Pastic, FF)

(MM) (FF)



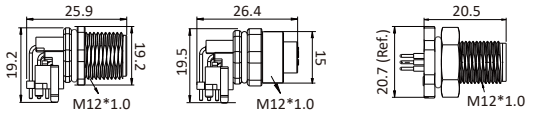
(B code, Female, Plastic)

Plastic	Solder Pins	MSAP-04P**MMS**-SF8002*	MSAP-04P**FFS**-SF8002
	Straight PCB	MSAP-04P**MMP**-SF8002*	MSAP-04P**FFP**-SF8002
	Right Angle PCB	MSAP-04P**MMR**-SF8002*	MSAP-04P**FFR**-SF8002
Metal Nut	Solder Pins	M12A-04P**MMS**-SF8002	M12A-04P**FFS**-SF8002
	Straight PCB	M12A-04P**MMP**-SF8002	M12A-04P**FFP**-SF8002
	Right Angle PCB	M12A-04P**MMR**-SF8002	M12A-04P**FFR**-SF8002
Shielded	Solder Pins	MSAS-04P**MMS**-SF8002	MSAS-04P**FFS**-SF8002
	Straight PCB	MSAS-04P**MMP**-SF8002	MSAS-04P**FFP**-SF8002
	Right Angle PCB	MSAS-04P**MMR**-SF8002*	MSAS-04P**FFR**-SF8002*
Stainless	Solder Pins	SM12A-04P**MMS**-SF8002*	SM12A-04P**FFS**-SF8002*
	Straight PCB	SM12A-04P**MMP**-SF8002*	SM12A-04P**FFP**-SF8002*
	Right Angle PCB	SM12A-04P**MMR**-SF8002*	SM12A-04P**FFR**-SF8002*
Stainless Shielded	Solder Pins	SMSAS-04P**MMS**-SF8002*	SMSAS-04P**FFS**-SF8002*
	Straight PCB	SMSAS-04P**MMP**-SF8002*	SMSAS-04P**FFP**-SF8002*
	Right Angle PCB	SMSAS-04P**MMR**-SF8002*	SMSAS-04P**FFR**-SF8002*

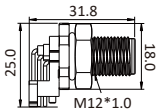
M12 x 1.0

(Metal/Shielded/Stainless) (A code, Plastic)

(MM) (FF) (MM)



(Plastic, MM)



Plastic	Solder Pins	MSAP-04P**MMS**-SF8003*	MSAP-04P**FFS**-SF8003*
	Straight PCB	MSAP-04P**MMP**-SF8003*	MSAP-04P**FFP**-SF8003*
	Right Angle PCB	MSAP-04P**MMR**-SF8003	MSAP-04P**FFR**-SF8003*
Metal Nut	Solder Pins	M12A-04P**MMS**-SF8003*	M12A-04P**FFS**-SF8003*
	Straight PCB	M12A-04P**MMP**-SF8003*	M12A-04P**FFP**-SF8003*
	Right Angle PCB	M12A-04P**MMR**-SF7003	M12A-04P**FFR**-SF7003
Shielded	Solder Pins	MSAS-04P**MMS**-SF8003*	MSAS-04P**FFS**-SF8003*
	Straight PCB	MSAS-04P**MMP**-SF8003*	MSAS-04P**FFP**-SF8003*
	Right Angle PCB	MSAS-04P**MMR**-SF8003*	MSAS-04P**FFR**-SF8003*
Stainless	Solder Pins	SM12A-04P**MMS**-SF8003*	SM12A-04P**FFS**-SF8003*
	Straight PCB	SM12A-04P**MMP**-SF8003*	SM12A-04P**FFP**-SF8003*
	Right Angle PCB	SM12A-04P**MMR**-SF8003*	SM12A-04P**FFR**-SF8003*
Stainless Shielded	Solder Pins	SMSAS-04P**MMS**-SF8003*	SMSAS-04P**FFS**-SF8003*
	Straight PCB	SMSAS-04P**MMP**-SF8003*	SMSAS-04P**FFP**-SF8003*
	Right Angle PCB	SMSAS-04P**MMR**-SF8003*	SMSAS-04P**FFR**-SF8003*

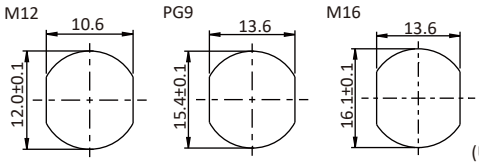
* Upon Request

4		5		5	
D		A		B	
250V		60V		60V	
4A		4A		4A	
MM	FF	MM	FF	MM	FF
MSDP-04PMMS-SF8001*	MSDP-04PFFS-SF8001*	MSAP-05PMMS-SF8001*	MSAP-05PFFS-SF8001*	MSBP-05PMMS-SF8001*	MSBP-05PFFS-SF8001*
MSDP-04PMMP-SF8001*	MSDP-04PFFP-SF8001*	MSAP-05PMMP-SF8001*	MSAP-05PFFP-SF8001*	MSBP-05PMMP-SF8001*	MSBP-05PFFP-SF8001*
MSDP-04PMMR-SF8001*	MSDP-04PFFR-SF8001*	MSAP-05PMMR-SF8001*	MSAP-05PFFR-SF8001*	MSBP-05PMMR-SF8001*	MSBP-05PFFR-SF8001*
M12D-04PMMS-SF8001	M12D-04PFFS-SF8001	M12A-05PMMS-SF8001	M12A-05PFFS-SF8001	M12B-05PMMS-SF8001	M12B-05PFFS-SF8001
M12D-04PMMP-SF8001	M12D-04PFFP-SF8001	M12A-05PMMP-SF8001	M12A-05PFFP-SF8001	M12B-05PMMP-SF8001	M12B-05PFFP-SF8001
M12D-04PMMR-SF8001	M12D-04PFFR-SF8001	M12A-05PMMR-SF8001	M12A-05PFFR-SF8001	M12B-05PMMR-SF8001	M12B-05PFFR-SF8001
MSDS-04PMMS-SF8001	MSDS-04PFFS-SF8001	MSAS-05PMMS-SF8001	MSAS-05PFFS-SF8001	MSBS-05PMMS-SF8001*	MSBS-05PFFS-SF8001*
MSDS-04PMMP-SF8001	MSDS-04PFFP-SF8001	MSAS-05PMMP-SF8001	MSAS-05PFFP-SF8001	MSBS-05PMMP-SF8001	MSBS-05PFFP-SF8001
MSDS-04PMMR-SF8001*	MSDS-04PFFR-SF8001*	MSAS-05PMMR-SF8001*	MSAS-05PFFR-SF8001*	MSBS-05PMMR-SF8001*	MSBS-05PFFR-SF8001*
SM12D-04PMMS-SF8001*	SM12D-04PFFS-SF8001*	SM12A-05PMMS-SF8001	SM12A-05PFFS-SF8001	SM12B-05PMMS-SF8001*	SM12B-05PFFS-SF8001*
SM12D-04PMMP-SF8001*	SM12D-04PFFP-SF8001*	SM12A-05PMMP-SF8001*	SM12A-05PFFP-SF8001*	SM12B-05PMMP-SF8001*	SM12B-05PFFP-SF8001*
SM12D-04PMMR-SF8001*	SM12D-04PFFR-SF8001*	SM12A-05PMMR-SF8001*	SM12A-05PFFR-SF8001*	SM12B-05PMMR-SF8001*	SM12B-05PFFR-SF8001*
SMSDS-04PMMS-SF8001*	SMSDS-04PFFS-SF8001*	SMSAS-05PMMS-SF8001*	SMSAS-05PFFS-SF8001*	SMSBS-05PMMS-SF8001*	SMSBS-05PFFS-SF8001*
SMSDS-04PMMP-SF8001*	SMSDS-04PFFP-SF8001*	SMSAS-05PMMP-SF8001*	SMSAS-05PFFP-SF8001*	SMSBS-05PMMP-SF8001*	SMSBS-05PFFP-SF8001*
SMSDS-04PMMR-SF8001*	SMSDS-04PFFR-SF8001*	SMSAS-05PMMR-SF8001*	SMSAS-05PFFR-SF8001*	SMSBS-05PMMR-SF8001*	SMSBS-05PFFR-SF8001*
MSDP-04PMMS-SF8002*	MSDP-04PFFS-SF8002*	MSAP-05PMMS-SF8002*	MSAP-05PFFS-SF8002	MSBP-05PMMS-SF8002*	MSBP-05PFFS-SF8002*
MSDP-04PMMP-SF8002*	MSDP-04PFFP-SF8002*	MSAP-05PMMP-SF8002*	MSAP-05PFFP-SF8002	MSBP-05PMMP-SF8002*	MSBP-05PFFP-SF8002*
MSDP-04PMMR-SF8002*	MSDP-04PFFR-SF8002	MSAP-05PMMR-SF8002*	MSAP-05PFFR-SF8002	MSBP-05PMMR-SF8002*	MSBP-05PFFR-SF8002
M12D-04PMMS-SF8002	M12D-04PFFS-SF8002	M12A-05PMMS-SF8002	M12A-05PFFS-SF8002	M12B-05PMMS-SF8002	M12B-05PFFS-SF8002
M12D-04PMMP-SF8002	M12D-04PFFP-SF8002	M12A-05PMMP-SF8002	M12A-05PFFP-SF8002	M12B-05PMMP-SF8002	M12B-05PFFP-SF8002
M12D-04PMMR-SF8002*	M12D-04PFFR-SF8002*	M12A-05PMMR-SF8002	M12A-05PFFR-SF8002	M12B-05PMMR-SF8002*	M12B-05PFFR-SF8002*
MSDS-04PMMS-SF8002*	MSDS-04PFFS-SF8002*	MSAS-05PMMS-SF8002	MSAS-05PFFS-SF8002	MSBS-05PMMS-SF8002	MSBS-05PFFS-SF8002
MSDS-04PMMP-SF8002	MSDS-04PFFP-SF8002	MSAS-05PMMP-SF8002	MSAS-05PFFP-SF8002	MSBS-05PMMP-SF8002	MSBS-05PFFP-SF8002
MSDS-04PMMR-SF8002*	MSDS-04PFFR-SF8002*	MSAS-05PMMR-SF8002*	MSAS-05PFFR-SF8002*	MSBS-05PMMR-SF8002*	MSBS-05PFFR-SF8002*
SM12D-04PMMS-SF8002*	SM12D-04PFFS-SF8002*	SM12A-05PMMS-SF8002*	SM12A-05PFFS-SF8002*	SM12B-05PMMS-SF8002*	SM12B-05PFFS-SF8002*
SM12D-04PMMP-SF8002*	SM12D-04PFFP-SF8002*	SM12A-05PMMP-SF8002*	SM12A-05PFFP-SF8002*	SM12B-05PMMP-SF8002*	SM12B-05PFFP-SF8002*
SM12D-04PMMR-SF8002*	SM12D-04PFFR-SF8002*	SM12A-05PMMR-SF8002*	SM12A-05PFFR-SF8002*	SM12B-05PMMR-SF8002*	SM12B-05PFFR-SF8002*
SMSDS-04PMMS-SF8002*	SMSDS-04PFFS-SF8002*	SMSAS-05PMMS-SF8002*	SMSAS-05PFFS-SF8002*	SMSBS-05PMMS-SF8002*	SMSBS-05PFFS-SF8002*
SMSDS-04PMMP-SF8002*	SMSDS-04PFFP-SF8002*	SMSAS-05PMMP-SF8002*	SMSAS-05PFFP-SF8002*	SMSBS-05PMMP-SF8002*	SMSBS-05PFFP-SF8002*
SMSDS-04PMMR-SF8002*	SMSDS-04PFFR-SF8002*	SMSAS-05PMMR-SF8002*	SMSAS-05PFFR-SF8002*	SMSBS-05PMMR-SF8002*	SMSBS-05PFFR-SF8002*
MSDP-04PMMS-SF8003*	MSDP-04PFFS-SF8003*	MSAP-05PMMS-SF8003*	MSAP-05PFFS-SF8003*	MSBP-05PMMS-SF8003*	MSBP-05PFFS-SF8003*
MSDP-04PMMP-SF8003*	MSDP-04PFFP-SF8003*	MSAP-05PMMP-SF8003	MSAP-05PFFP-SF8003*	MSBP-05PMMP-SF8003*	MSBP-05PFFP-SF8003*
MSDP-04PMMR-SF8003	MSDP-04PFFR-SF8003*	MSAP-05PMMR-SF8003	MSAP-05PFFR-SF8003*	MSBP-05PMMR-SF8003	MSBP-05PFFR-SF8003*
M12D-04PMMS-SF8003*	M12D-04PFFS-SF8003*	M12A-05PMMS-SF8003*	M12A-05PFFS-SF8003*	M12B-05PMMS-SF8003*	M12B-05PFFS-SF8003*
M12D-04PMMP-SF8003*	M12D-04PFFP-SF8003*	M12A-05PMMP-SF8003*	M12A-05PFFP-SF8003*	M12B-05PMMP-SF8003*	M12B-05PFFP-SF8003*
M12D-04PMMR-SF7003	M12D-04PFFR-SF7003	M12A-05PMMR-SF7003	M12A-05PFFR-SF7003	M12B-05PMMR-SF7003	M12B-05PFFR-SF7003
MSDS-04PMMS-SF8003*	MSDS-04PFFS-SF8003*	MSAS-05PMMS-SF8003*	MSAS-05PFFS-SF8003*	MSBS-05PMMS-SF8003*	MSBS-05PFFS-SF8003*
MSDS-04PMMP-SF8003*	MSDS-04PFFP-SF8003*	MSAS-05PMMP-SF8003*	MSAS-05PFFP-SF8003*	MSBS-05PMMP-SF8003*	MSBS-05PFFP-SF8003*
MSDS-04PMMR-SF8003*	MSDS-04PFFR-SF8003*	MSAS-05PMMR-SF8003*	MSAS-05PFFR-SF8003*	MSBS-05PMMR-SF8003*	MSBS-05PFFR-SF8003*
SM12D-04PMMS-SF8003*	SM12D-04PFFS-SF8003*	SM12A-05PMMS-SF8003*	SM12A-05PFFS-SF8003*	SM12B-05PMMS-SF8003*	SM12B-05PFFS-SF8003*
SM12D-04PMMP-SF8003*	SM12D-04PFFP-SF8003*	SM12A-05PMMP-SF8003*	SM12A-05PFFP-SF8003*	SM12B-05PMMP-SF8003*	SM12B-05PFFP-SF8003*
SM12D-04PMMR-SF8003*	SM12D-04PFFR-SF8003*	SM12A-05PMMR-SF8003*	SM12A-05PFFR-SF8003*	SM12B-05PMMR-SF8003*	SM12B-05PFFR-SF8003*
SMSDS-04PMMS-SF8003*	SMSDS-04PFFS-SF8003*	SMSAS-05PMMS-SF8003*	SMSAS-05PFFS-SF8003*	SMSBS-05PMMS-SF8003*	SMSBS-05PFFS-SF8003*
SMSDS-04PMMP-SF8003*	SMSDS-04PFFP-SF8003*	SMSAS-05PMMP-SF8003*	SMSAS-05PFFP-SF8003*	SMSBS-05PMMP-SF8003*	SMSBS-05PFFP-SF8003*
SMSDS-04PMMR-SF8003*	SMSDS-04PFFR-SF8003*	SMSAS-05PMMR-SF8003*	SMSAS-05PFFR-SF8003*	SMSBS-05PMMR-SF8003*	SMSBS-05PFFR-SF8003*

M12 I-Code

Bulkhead / Receptacle, Hexagonal Flange, Front Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

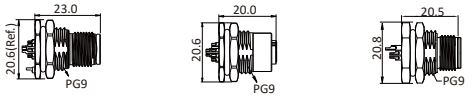
Number of Contacts	5	
Coding	I	
Rated Voltage (AC/DC)	60V	
Nominal current	4A	
Pin Assignment	Male/Hybrid	Female/Hybrid
MM: Male Connector Male Contact **FF**: Female Connector Female Contact	**MI**: Male Connector Male + Female Contact **FI**: Female Connector Male + Female Contact	

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

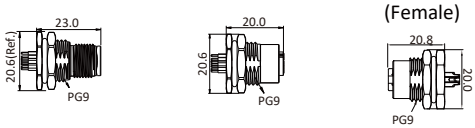
PG9

(A code, Metal/Shielded/Stainless) (I code, Metal)

(MM) (FF) (Male)

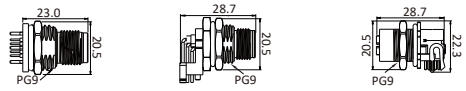


(Female)



(X code, Metal/Stainless)

(MM) (FF)

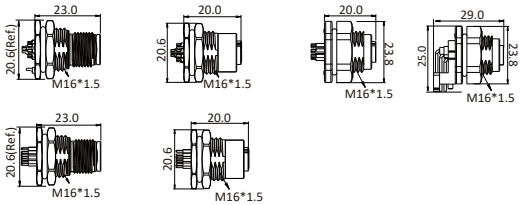


Plastic	Solder Pins	MSIP-05P**MIS**-SF8001*	MSIP-05P**FIS**-SF8001*
	Straight PCB	MSIP-05P**MIP**-SF8001*	MSIP-05P**FIP**-SF8001*
	Right Angle PCB	-	-
Metal Nut	Solder Pins	M12I-05P**MIS**-SF8001*	M12I-05P**FIS**-SF8001*
	Straight PCB	M12I-05P**MIP**-SF8001*	M12I-05P**FIP**-SF8001*
	Right Angle PCB	-	-
Shielded	Solder Pins	MSIS-05P**MIS**-SF8001*	MSIS-05P**FIS**-SF8001*
	Straight PCB	MSIS-05P**MIP**-SF8001*	MSIS-05P**FIP**-SF8001*
	Right Angle PCB	-	-
Stainless	Solder Pins	SM12I-05P**MIS**-SF8001*	SM12I-05P**FIS**-SF8001*
	Straight PCB	SM12I-05P**MIP**-SF8001*	SM12I-05P**FIP**-SF8001*
	Right Angle PCB	-	-
Stainless Shielded	Solder Pins	SMSIS-05P**MIS**-SF8001*	SMSIS-05P**FIS**-SF8001*
	Straight PCB	SMSIS-05P**MIP**-SF8001*	SMSIS-05P**FIP**-SF8001*
	Right Angle PCB	-	-

M16 x 1.5

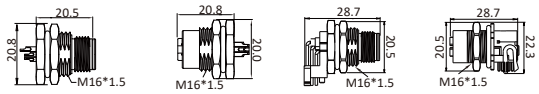
(A code, Metal/Shielded/Stainless) (A code, Plastic)

(MM) (FF) (FF)



(I code, Metal) (X code, Metal/Stainless)

(Male) (Female) (MM) (FF)

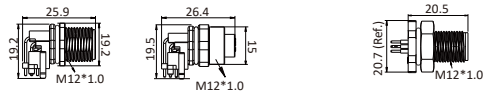


Plastic	Solder Pins	MSIP-05P**MIS**-SF8002*	MSIP-05P**FIS**-SF8002*
	Straight PCB	-	-
	Right Angle PCB	-	-
Metal Nut	Solder Pins	M12I-05P**MIS**-SF8002*	M12I-05P**FIS**-SF8002*
	Straight PCB	M12I-05P**MIP**-SF8002*	M12I-05P**FIP**-SF8002*
	Right Angle PCB	-	-
Shielded	Solder Pins	MSIS-05P**MIS**-SF8002*	MSIS-05P**FIS**-SF8002*
	Straight PCB	MSIS-05P**MIP**-SF8002*	MSIS-05P**FIP**-SF8002*
	Right Angle PCB	-	-
Stainless	Solder Pins	SM12I-05P**MIS**-SF8002*	SM12I-05P**FIS**-SF8002*
	Straight PCB	SM12I-05P**MIP**-SF8002*	SM12I-05P**FIP**-SF8002*
	Right Angle PCB	-	-
Stainless Shielded	Solder Pins	SMSIS-05P**MIS**-SF8002*	SMSIS-05PFUIS-SF8002*
	Straight PCB	SMSIS-05P**MIP**-SF8002*	SMSIS-05P**FIP**-SF8002*
	Right Angle PCB	-	-

M12 x 1.0

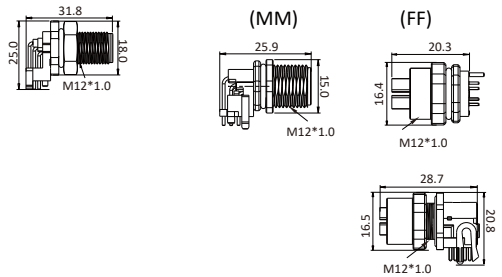
(A code, Metal/Shielded/Stainless) (A code, Plastic)

(MM) (FF) (MM)



(A code, Plastic, MM) (X code, Metal/Stainless)

(MM) (FF)



Plastic	Solder Pins	MSIP-05P**MIS**-SF8003*	MSIP-05P**FIS**-SF8003*
	Straight PCB	-	-
	Right Angle PCB	-	-
Metal Nut	Solder Pins	M12I-05P**MIS**-SF8003*	M12I-05P**FIS**-SF8003*
	Straight PCB	M12I-05P**MIP**-SF8003*	M12I-05P**FIP**-SF8003*
	Right Angle PCB	-	-
Shielded	Solder Pins	MSIS-05P**MIS**-SF8003*	MSIS-05P**FIS**-SF8003*
	Straight PCB	MSIS-05P**MIP**-SF8003*	MSIS-05P**FIP**-SF8003*
	Right Angle PCB	-	-
Stainless	Solder Pins	SM12I-05P**MIS**-SF8003*	SM12I-05P**FIS**-SF8003*
	Straight PCB	SM12I-05P**MIP**-SF8003*	SM12I-05P**FIP**-SF8003*
	Right Angle PCB	-	-
Stainless Shielded	Solder Pins	SMSIS-05P**MIS**-SF8003*	SMSIS-05PFUIS-SF8003*
	Straight PCB	SMSIS-05P**MIP**-SF8003*	SMSIS-05P**FIP**-SF8003*
	Right Angle PCB	-	-

* Upon Request

6		8		8	
A		A		X (CAT.6A)	
30V		30V		30V	
2A		2A		2A	
MM	FF	MM	FF	MM	FF
MSAP-06PMMS-SF8001*	MSAP-06PFFS-SF8001*	MSAP-08PMMS-SF8001	MSAP-08PFFS-SF8001	-	-
MSAP-06PMMP-SF8001*	MSAP-06PFFP-SF8001*	MSAP-08PMMP-SF8001*	MSAP-08PFFP-SF8001*	-	-
MSAP-06PMMR-SF8001*	MSAP-06PFFR-SF8001*	MSAP-08PMMR-SF8001*	MSAP-08PFFR-SF8001*	-	-
M12A-06PMMS-SF8001	M12A-06PFFS-SF8001	M12A-08PMMS-SF8001	M12A-08PFFS-SF8001	-	-
M12A-06PMMP-SF8001	M12A-06PFFP-SF8001	M12A-08PMMP-SF8001	M12A-08PFFP-SF8001	-	-
M12A-06PMMR-SF8001*	M12A-06PFFR-SF8001*	M12A-08PMMR-SF8001*	M12A-08PFFR-SF8001*	-	-
MSAS-06PMMS-SF8001	MSAS-06PFFS-SF8001	MSAS-08PMMS-SF8001	MSAS-08PFFS-SF8001	-	-
MSAS-06PMMP-SF8001	MSAS-06PFFP-SF8001	MSAS-08PMMP-SF8001	MSAS-08PFFP-SF8001	MSXS-08PMMP-SF7001*	MSXS-08PFFP-SF7001
MSAS-06PMMR-SF8001*	MSAS-06PFFR-SF8001*	MSAS-08PMMR-SF8001*	MSAS-08PFFR-SF8001*	MSXS-08PMMR-SF7001*	MSXS-08PFFR-SF7001
SM12A-06PMMS-SF8001*	SM12A-06PFFS-SF8001*	SM12A-08PMMS-SF8001	SM12A-08PFFS-SF8001	-	-
SM12A-06PMMP-SF8001*	SM12A-06PFFP-SF8001*	SM12A-08PMMP-SF8001*	SM12A-08PFFP-SF8001	-	-
SM12A-06PMMR-SF8001*	SM12A-06PFFR-SF8001*	SM12A-08PMMR-SF8001*	SM12A-08PFFR-SF8001	-	-
SMSAS-06PMMS-SF8001*	SMSAS-06PFFS-SF8001*	SMSAS-08PMMS-SF8001*	SMSAS-08PFFS-SF8001*	-	-
SMSAS-06PMMP-SF8001*	SMSAS-06PFFP-SF8001*	SMSAS-08PMMP-SF8001*	SMSAS-08PFFP-SF8001*	SMSXS-08PMMP-SF7001*	SMSXS-08PFFP-SF7001
SMSAS-06PMMR-SF8001*	SMSAS-06PFFR-SF8001*	SMSAS-08PMMR-SF8001*	SMSAS-08PFFR-SF8001*	SMSXS-08PMMR-SF7001*	SMSXS-08PFFR-SF7001*
MSAP-06PMMS-SF8002*	MSAP-06PFFS-SF8002*	MSAP-08PMMS-SF8002*	MSAP-08PFFS-SF8002*	-	-
MSAP-06PMMP-SF8002*	MSAP-06PFFP-SF8002*	MSAP-08PMMP-SF8002*	MSAP-08PFFP-SF8002*	-	-
MSAP-06PMMR-SF8002*	MSAP-06PFFR-SF8002*	MSAP-08PMMR-SF8002*	MSAP-08PFFR-SF8002*	-	-
M12A-06PMMS-SF8002	M12A-06PFFS-SF8002	M12A-08PMMS-SF8002	M12A-08PFFS-SF8002	-	-
M12A-06PMMP-SF8002	M12A-06PFFP-SF8002	M12A-08PMMP-SF8002	M12A-08PFFP-SF8002	-	-
M12A-06PMMR-SF8002*	M12A-06PFFR-SF8002*	M12A-08PMMR-SF8002*	M12A-08PFFR-SF8002*	-	-
MSAS-06PMMS-SF8002	MSAS-06PFFS-SF8002	MSAS-08PMMS-SF8002	MSAS-08PFFS-SF8002	-	-
MSAS-06PMMP-SF8002	MSAS-06PFFP-SF8002	MSAS-08PMMP-SF8002	MSAS-08PFFP-SF8002	MSXS-08PMMP-SF7002*	MSXS-08PFFP-SF7002
MSAS-06PMMR-SF8002*	MSAS-06PFFR-SF8002*	MSAS-08PMMR-SF8002*	MSAS-08PFFR-SF8002*	MSXS-08PMMR-SF7002*	MSXS-08PFFR-SF7002
SM12A-06PMMS-SF8002*	SM12A-06PFFS-SF8002*	SM12A-08PMMS-SF8002*	SM12A-08PFFS-SF8002	-	-
SM12A-06PMMP-SF8002*	SM12A-06PFFP-SF8002*	SM12A-08PMMP-SF8002*	SM12A-08PFFP-SF8002	-	-
SM12A-06PMMR-SF8002*	SM12A-06PFFR-SF8002*	SM12A-08PMMR-SF8002*	SM12A-08PFFR-SF8002	-	-
SMSAS-06PMMS-SF8002*	SMSAS-06PFFS-SF8002*	SMSAS-08PMMS-SF8002*	SMSAS-08PFFS-SF8002*	-	-
SMSAS-06PMMP-SF8002*	SMSAS-06PFFP-SF8002*	SMSAS-08PMMP-SF8002*	SMSAS-08PFFP-SF8002*	SMSXS-08PMMP-SF7002*	SMSXS-08PFFP-SF7002*
SMSAS-06PMMR-SF8002*	SMSAS-06PFFR-SF8002*	SMSAS-08PMMR-SF8002*	SMSAS-08PFFR-SF8002*	SMSXS-08PMMR-SF7002*	SMSXS-08PFFR-SF7002*
MSAP-06PMMS-SF8003*	MSAP-06PFFS-SF8003*	MSAP-08PMMS-SF8003*	MSAP-08PFFS-SF8003*	-	-
MSAP-06PMMP-SF8003*	MSAP-06PFFP-SF8003*	MSAP-08PMMP-SF8003*	MSAP-08PFFP-SF8003*	-	-
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M12A-06PMMS-SF8003*	M12A-06PFFS-SF8003*	M12A-08PMMS-SF8003*	M12A-08PFFS-SF8003*	-	-
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M12A-06PMMR-SF7003*	M12A-06PFFR-SF7003*	M12A-08PMMR-SF7003	M12A-08PFFR-SF7003	-	-
MSAS-06PMMS-SF8003*	MSAS-06PFFS-SF8003*	MSAS-08PMMS-SF8003*	MSAS-08PFFS-SF8003*	-	-
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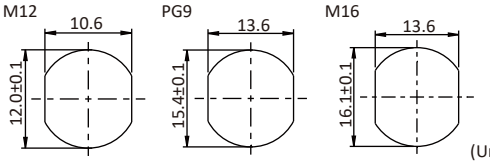
SM12A-06PMMP-SF8003*	SM12A-06PFFP-SF8003*	SM12A-08PMMP-SF8003*	SM12A-08PFFP-SF8003*	-	-
SM12A-06PMMR-SF8003*	SM12A-06PFFR-SF8003*	SM12A-08PMMR-SF8003*	SM12A-08PFFR-SF8003*	-	-
SMSAS-06PMMS-SF8003*	SMSAS-06PFFS-SF8003*	SMSAS-08PMMS-SF8003*	SMSAS-08PFFS-SF8003*	-	-
SMSAS-06PMMP-SF8003*	SMSAS-06PFFP-SF8003*	SMSAS-08PMMP-SF8003*	SMSAS-08PFFP-SF8003*	SMSXS-08PMMP-SF7003*	SMSXS-08PFFP-SF7003*
SMSAS-06PMMR-SF8003*	SMSAS-06PFFR-SF8003*	SMSAS-08PMMR-SF8003*	SMSAS-08PFFR-SF8003*	SMSXS-08PMMR-SF7003*	SMSXS-08PFFR-SF7003*

M12 A & Y-Code

Bulkhead / Receptacle Hexagonal Flange, Front Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

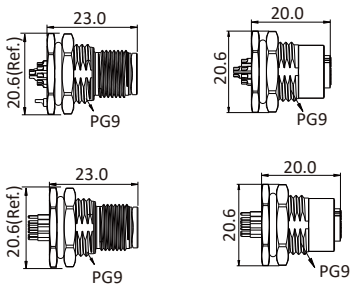
Number of Contacts	8	10
Coding	Y (Hybrid)*	A
Rated Voltage (AC/DC)	60V	30V
Nominal current	0.5A / 6A	1.5A
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact **FI**: Female Connector Male + Female Contact	FF	MM

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

PG9

(Metal/Shielded/Stainless)

(MM) (FF)



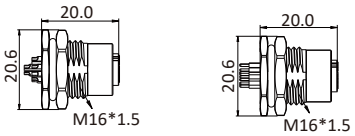
Plastic	Solder Pins	-	MSAP-10P**MMS**-SF8001*
	Straight PCB	-	MSAP-10P**MMP**-SF8001*
	Right Angle PCB	-	MSAP-10P**MMR**-SF8001*
Metal Nut	Solder Pins	-	M12A-10P**MMS**-SF8001
	Straight PCB	-	M12A-10P**MMP**-SF8001
	Right Angle PCB	-	M12A-10P**MMR**-SF8001*
Shielded	Solder Pins	-	MSAS-10P**MMS**-SF8001
	Straight PCB	MSYS-08P**FIP**-SF7001*	MSAS-10P**MMP**-SF8001
	Right Angle PCB	MSYS-08P**FIR**-SF7001*	MSAS-10P**MMR**-SF8001*
Stainless	Solder Pins	-	SM12A-10P**MMS**-SF8001*
	Straight PCB	-	SM12A-10P**MMP**-SF8001*
	Right Angle PCB	-	SM12A-10P**MMR**-SF8001*
Stainless Shielded	Solder Pins	-	SMSAS-10P**MMS**-SF8001*
	Straight PCB	SMSYS-08P**FIP**-SF7001*	SMSAS-10P**MMP**-SF8001*
	Right Angle PCB	SMSYS-08P**FIR**-SF7001*	SMSAS-10P**MMR**-SF8001*

M16 x 1.5

(Metal/Shielded/Stainless)

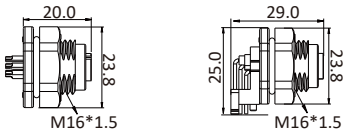
(MM)

(FF)



(A Code, Plastic)

(FF)

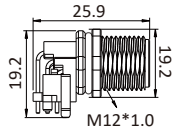


Plastic	Solder Pins	-	MSAP-10P**MMS**-SF8002*
	Straight PCB	-	MSAP-10P**MMP**-SF8002*
	Right Angle PCB	-	MSAP-10P**MMR**-SF8002*
Metal Nut	Solder Pins	-	M12A-10P**MMS**-SF8002
	Straight PCB	-	M12A-10P**MMP**-SF8002
	Right Angle PCB	-	M12A-10P**MMR**-SF8002*
Shielded	Solder Pins	-	MSAS-10P**MMS**-SF8002
	Straight PCB	MSYS-08P**FIP**-SF7002*	MSAS-10P**MMP**-SF8002
	Right Angle PCB	MSYS-08P**FIR**-SF7002*	MSAS-10P**MMR**-SF8002*
Stainless	Solder Pins	-	SM12A-10P**MMS**-SF8002*
	Straight PCB	-	SM12A-10P**MMP**-SF8002*
	Right Angle PCB	-	SM12A-10P**MMR**-SF8002*
Stainless Shielded	Solder Pins	-	SMSAS-10P**MMS**-SF8002*
	Straight PCB	SMSYS-08P**FIP**-SF7002*	SMSAS-10P**MMP**-SF8002*
	Right Angle PCB	SMSYS-08P**FIR**-SF7002*	SMSAS-10P**MMR**-SF8002*

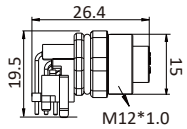
M12 x 1.0

(Metal/Shielded/Stainless)

(MM)

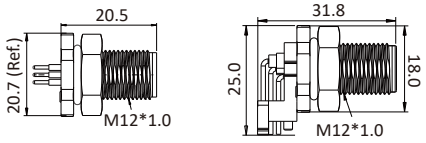


(FF)



(A code, Plastic)

(MM)



Plastic	Solder Pins	-	MSAP-10P**MMS**-SF8003*
	Straight PCB	-	MSAP-10P**MMP**-SF8003*
	Right Angle PCB	-	MSAP-10P**MMR**-SF8003*
Metal Nut	Solder Pins	-	M12A-10P**MMS**-SF8003*
	Straight PCB	-	M12A-10P**MMP**-SF8003*
	Right Angle PCB	-	M12A-10P**MMR**-SF8003*
Shielded	Solder Pins	-	MSAS-10P**MMS**-SF8003*
	Straight PCB	MSYS-08P**FIP**-SF7003*	MSAS-10P**MMP**-SF8003*
	Right Angle PCB	MSYS-08P**FIR**-SF7003*	MSAS-10P**MMR**-SF8003*
Stainless	Solder Pins	-	SM12A-10P**MMS**-SF8003*
	Straight PCB	-	SM12A-10P**MMP**-SF8003*
	Right Angle PCB	-	SM12A-10P**MMR**-SF8003*
Stainless Shielded	Solder Pins	-	SMSAS-10P**MMS**-SF8003*
	Straight PCB	SMSYS-08P**FIP**-SF7003*	SMSAS-10P**MMP**-SF8003*
	Right Angle PCB	SMSYS-08P**FIR**-SF7003*	SMSAS-10P**MMR**-SF8003*

* Upon Request

10	12		17	
A	A		A	
30V	30V		30V	
1.5A	1.5A		1.5A	
FF	MM	FF	MM	FF
MSAP-10PFFS-SF8001*	MSAP-12PMMS-SF8001*	MSAP-12PFFS-SF8001*	MSAP-17PMMS-SF8001*	MSAP-17PFFS-SF8001*
MSAP-10PFFP-SF8001*	MSAP-12PMMP-SF8001*	MSAP-12PFFP-SF8001*	MSAP-17PMMP-SF8001*	MSAP-17PFFP-SF8001*
MSAP-10PFFR-SF8001*	MSAP-12PMMR-SF8001*	MSAP-12PFFR-SF8001*	MSAP-17PMMR-SF8001*	MSAP-17PFFR-SF8001*
M12A-10PFFS-SF8001	M12A-12PMMS-SF8001	M12A-12PFFS-SF8001	M12A-17PMMS-SF8001	M12A-17PFFS-SF8001
M12A-10PFFP-SF8001	M12A-12PMMP-SF8001	M12A-12PFFP-SF8001	M12A-17PMMP-SF8001	M12A-17PFFP-SF8001
M12A-10PFFR-SF8001*	M12A-12PMMR-SF8001	M12A-12PFFR-SF8001*	M12A-17PMMR-SF8001*	M12A-17PFFR-SF8001*
MSAS-10PFFS-SF8001	MSAS-12PMMS-SF8001	MSAS-12PFFS-SF8001	MSAS-17PMMS-SF8001	MSAS-17PFFS-SF8001
MSAS-10PFFP-SF8001	MSAS-12PMMP-SF8001	MSAS-12PFFP-SF8001	MSAS-17PMMP-SF8001	MSAS-17PFFP-SF8001
MSAS-10PFFR-SF8001*	MSAS-12PMMR-SF8001*	MSAS-12PFFR-SF8001*	MSAS-17PMMR-SF8001*	MSAS-17PFFR-SF8001*
SM12A-10PFFS-SF8001*	SM12A-12PMMS-SF8001*	SM12A-12PFFS-SF8001*	SM12A-17PMMS-SF8001*	SM12A-17PFFS-SF8001*
SM12A-10PFFP-SF8001*	SM12A-12PMMP-SF8001*	SM12A-12PFFP-SF8001*	SM12A-17PMMP-SF8001*	SM12A-17PFFP-SF8001*
SM12A-10PFFR-SF8001*	SM12A-12PMMR-SF8001*	SM12A-12PFFR-SF8001*	SM12A-17PMMR-SF8001*	SM12A-17PFFR-SF8001*
SMSAS-10PFFS-SF8001*	SMSAS-12PMMS-SF8001*	SMSAS-12PFFS-SF8001*	SMSAS-17PMMS-SF8001*	SMSAS-17PFFS-SF8001*
SMSAS-10PFFP-SF8001*	SMSAS-12PMMP-SF8001*	SMSAS-12PFFP-SF8001*	SMSAS-17PMMP-SF8001*	SMSAS-17PFFP-SF8001*
SMSAS-10PFFR-SF8001*	SMSAS-12PMMR-SF8001*	SMSAS-12PFFR-SF8001*	SMSAS-17PMMR-SF8001*	SMSAS-17PFFR-SF8001*
MSAP-10PFFS-SF8002*	MSAP-12PMMS-SF8002*	MSAP-12PFFS-SF8002*	MSAP-17PMMS-SF8002*	MSAP-17PFFS-SF8002*
MSAP-10PFFP-SF8002*	MSAP-12PMMP-SF8002*	MSAP-12PFFP-SF8002*	MSAP-17PMMP-SF8002*	MSAP-17PFFP-SF8002*
MSAP-10PFFR-SF8002*	MSAP-12PMMR-SF8002*	MSAP-12PFFR-SF8002*	MSAP-17PMMR-SF8002*	MSAP-17PFFR-SF8002*
M12A-10PFFS-SF8002	M12A-12PMMS-SF8002	M12A-12PFFS-SF8002	M12A-17PMMS-SF8002	M12A-17PFFS-SF8002
M12A-10PFFP-SF8002	M12A-12PMMP-SF8002	M12A-12PFFP-SF8002	M12A-17PMMP-SF8002	M12A-17PFFP-SF8002
M12A-10PFFR-SF8002*	M12A-12PMMR-SF8002*	M12A-12PFFR-SF8002*	M12A-17PMMR-SF8002*	M12A-17PFFR-SF8002*
MSAS-10PFFS-SF8002	MSAS-12PMMS-SF8002	MSAS-12PFFS-SF8002	MSAS-17PMMS-SF8002	MSAS-17PFFS-SF8002
MSAS-10PFFP-SF8002	MSAS-12PMMP-SF8002	MSAS-12PFFP-SF8002	MSAS-17PMMP-SF8002	MSAS-17PFFP-SF8002
MSAS-10PFFR-SF8002*	MSAS-12PMMR-SF8002*	MSAS-12PFFR-SF8002*	MSAS-17PMMR-SF8002*	MSAS-17PFFR-SF8002*
SM12A-10PFFS-SF8002*	SM12A-12PMMS-SF8002*	SM12A-12PFFS-SF8002*	SM12A-17PMMS-SF8002*	SM12A-17PFFS-SF8002*
SM12A-10PFFP-SF8002*	SM12A-12PMMP-SF8002*	SM12A-12PFFP-SF8002*	SM12A-17PMMP-SF8002*	SM12A-17PFFP-SF8002*
SM12A-10PFFR-SF8002*	SM12A-12PMMR-SF8002*	SM12A-12PFFR-SF8002*	SM12A-17PMMR-SF8002*	SM12A-17PFFR-SF8002*
SMSAS-10PFFS-SF8002*	SMSAS-12PMMS-SF8002*	SMSAS-12PFFS-SF8002*	SMSAS-17PMMS-SF8002*	SMSAS-17PFFS-SF8002*
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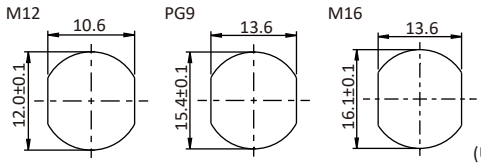
SMSAS-10PFFR-SF8002*	SMSAS-12PMMR-SF8002*	SMSAS-12PFFR-SF8002*	SMSAS-17PMMR-SF8002*	SMSAS-17PFFR-SF8002*
MSAP-10PFFS-SF8003*	MSAP-12PMMS-SF8003	MSAP-12PFFS-SF8003*	MSAP-17PMMS-SF8003*	MSAP-17PFFS-SF8003*
MSAP-10PFFP-SF8003*	MSAP-12PMMP-SF8003*	MSAP-12PFFP-SF8003*	MSAP-17PMMP-SF8003*	MSAP-17PFFP-SF8003*
MSAP-10PFFR-SF8003*	MSAP-12PMMR-SF8003*	MSAP-12PFFR-SF8003*	MSAP-17PMMR-SF8003*	MSAP-17PFFR-SF8003*
M12A-10PFFS-SF8003*	M12A-12PMMS-SF8003*	M12A-12PFFS-SF8003*	M12A-17PMMS-SF8003*	M12A-17PFFS-SF8003*
M12A-10PFFP-SF8003*	M12A-12PMMP-SF8003*	M12A-12PFFP-SF8003*	M12A-17PMMP-SF8003*	M12A-17PFFP-SF8003*
M12A-10PFFR-SF8003*	M12A-12PMMR-SF8003*	M12A-12PFFR-SF8003*	M12A-17PMMR-SF8003*	M12A-17PFFR-SF8003*
MSAS-10PFFS-SF8003*	MSAS-12PMMS-SF8003*	MSAS-12PFFS-SF8003*	MSAS-17PMMS-SF8003*	MSAS-17PFFS-SF8003*
MSAS-10PFFP-SF8003*	MSAS-12PMMP-SF8003*	MSAS-12PFFP-SF8003*	MSAS-17PMMP-SF8003*	MSAS-17PFFP-SF8003*
MSAS-10PFFR-SF8003*	MSAS-12PMMR-SF8003*	MSAS-12PFFR-SF8003*	MSAS-17PMMR-SF8003*	MSAS-17PFFR-SF8003*
SM12A-10PFFS-SF8003*	SM12A-12PMMS-SF8003*	SM12A-12PFFS-SF8003*	SM12A-17PMMS-SF8003*	SM12A-17PFFS-SF8003*
SM12A-10PFFP-SF8003*	SM12A-12PMMP-SF8003*	SM12A-12PFFP-SF8003*	SM12A-17PMMP-SF8003*	SM12A-17PFFP-SF8003*
SM12A-10PFFR-SF8003*	SM12A-12PMMR-SF8003*	SM12A-12PFFR-SF8003*	SM12A-17PMMR-SF8003*	SM12A-17PFFR-SF8003*
SMSAS-10PFFS-SF8003*	SMSAS-12PMMS-SF8003*	SMSAS-12PFFS-SF8003*	SMSAS-17PMMS-SF8003*	SMSAS-17PFFS-SF8003*
SMSAS-10PFFP-SF8003*	SMSAS-12PMMP-SF8003*	SMSAS-12PFFP-SF8003*	SMSAS-17PMMP-SF8003*	SMSAS-17PFFP-SF8003*
SMSAS-10PFFR-SF8003*	SMSAS-12PMMR-SF8003*	SMSAS-12PFFR-SF8003*	SMSAS-17PMMR-SF8003*	SMSAS-17PFFR-SF8003*

Panel Cut-Out



Assemble Style

PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

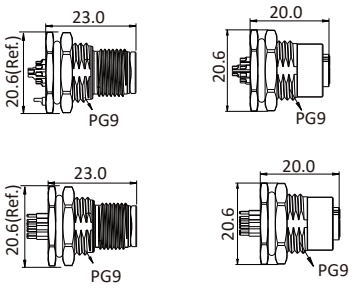
Number of Contacts	18	
Coding	A	
Rated Voltage (AC/DC)	30V	
Nominal current	0.5A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact	MM	FF

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

PG9

(Metal/Shielded/Stainless)

(MM) (FF)



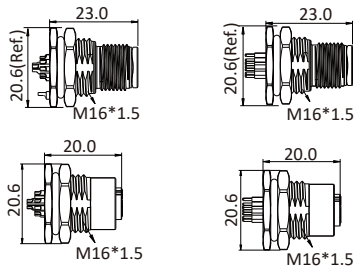
Plastic	Solder Pins	MSAP-18PMMS-SF8001*	MSAP-18PFFS-SF8001*
	Straight PCB	MSAP-18PMMP-SF8001*	MSAP-18PFFP-SF8001*
	Right Angle PCB	MSAP-18PMMR-SF8001*	MSAP-18PFFR-SF8001*
Metal Nut	Solder Pins	M12A-18PMMS-SF8001*	M12A-18PFFS-SF8001*
	Straight PCB	M12A-18PMMP-SF8001*	M12A-18PFFP-SF8001*
	Right Angle PCB	M12A-18PMMR-SF8001*	M12A-18PFFR-SF8001*
Shielded	Solder Pins	MSAS-18PMMS-SF8001*	MSAS-18PFFS-SF8001*
	Straight PCB	MSAS-18PMMP-SF8001*	MSAS-18PFFP-SF8001*
	Right Angle PCB	MSAS-18PMMR-SF8001*	MSAS-18PFFR-SF8001*
Stainless	Solder Pins	SM12A-18PMMS-SF8001*	SM12A-18PFFS-SF8001*
	Straight PCB	SM12A-18PMMP-SF8001*	SM12A-18PFFP-SF8001*
	Right Angle PCB	SM12A-18PMMR-SF8001*	SM12A-18PFFR-SF8001*
Stainless Shielded	Solder Pins	SMSAS-18PMMS-SF8001*	SMSAS-18PFFS-SF8001*
	Straight PCB	SMSAS-18PMMP-SF8001*	SMSAS-18PFFP-SF8001*
	Right Angle PCB	SMSAS-18PMMR-SF8001*	SMSAS-18PFFR-SF8001*

M16 x 1.5

(Metal/Shielded/Stainless)

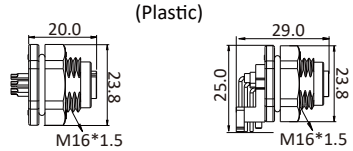
(MM)

(FF)



(Plastic)

(FF)



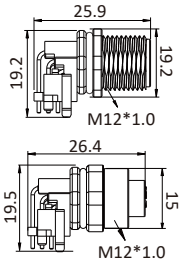
Plastic	Solder Pins	MSAP-18PMMS-SF8002*	MSAP-18PFFS-SF8002*
	Straight PCB	MSAP-18PMMP-SF8002*	MSAP-18PFFP-SF8002*
	Right Angle PCB	MSAP-18PMMR-SF8002*	MSAP-18PFFR-SF8002*
Metal Nut	Solder Pins	M12A-18PMMS-SF8002*	M12A-18PFFS-SF8002*
	Straight PCB	M12A-18PMMP-SF8002*	M12A-18PFFP-SF8002*
	Right Angle PCB	M12A-18PMMR-SF8002*	M12A-18PFFR-SF8002*
Shielded	Solder Pins	MSAS-18PMMS-SF8002*	MSAS-18PFFS-SF8002*
	Straight PCB	MSAS-18PMMP-SF8002*	MSAS-18PFFP-SF8002*
	Right Angle PCB	MSAS-18PMMR-SF8002*	MSAS-18PFFR-SF8002*
Stainless	Solder Pins	SM12A-18PMMS-SF8002*	SM12A-18PFFS-SF8002*
	Straight PCB	SM12A-18PMMP-SF8002*	SM12A-18PFFP-SF8002*
	Right Angle PCB	SM12A-18PMMR-SF8002*	SM12A-18PFFR-SF8002*
Stainless Shielded	Solder Pins	SMSAS-18PMMS-SF8002*	SMSAS-18PFFS-SF8002*
	Straight PCB	SMSAS-18PMMP-SF8002*	SMSAS-18PFFP-SF8002*
	Right Angle PCB	SMSAS-18PMMR-SF8002*	SMSAS-18PFFR-SF8002*

M12 x 1.0

(Metal/Shielded/Stainless)

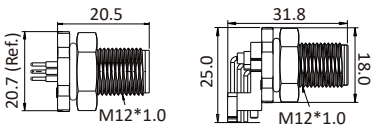
(MM)

(FF)



(Plastic)

(MM)



Plastic	Solder Pins	MSAP-18PMMS-SF8003*	MSAP-18PFFS-SF8003*
	Straight PCB	MSAP-18PMMP-SF8003*	MSAP-18PFFP-SF8003*
	Right Angle PCB	MSAP-18PMMR-SF8003*	MSAP-18PFFR-SF8003*
Metal Nut	Solder Pins	M12A-18PMMS-SF8003*	M12A-18PFFS-SF8003*
	Straight PCB	M12A-18PMMP-SF8003*	M12A-18PFFP-SF8003*
	Right Angle PCB	M12A-18PMMR-SF8003*	M12A-18PFFR-SF8003*
Shielded	Solder Pins	MSAS-18PMMS-SF8003*	MSAS-18PFFS-SF8003*
	Straight PCB	MSAS-18PMMP-SF8003*	MSAS-18PFFP-SF8003*
	Right Angle PCB	MSAS-18PMMR-SF8003*	MSAS-18PFFR-SF8003*
Stainless	Solder Pins	SM12A-18PMMS-SF8003*	SM12A-18PFFS-SF8003*
	Straight PCB	SM12A-18PMMP-SF8003*	SM12A-18PFFP-SF8003*
	Right Angle PCB	SM12A-18PMMR-SF8003*	SM12A-18PFFR-SF8003*
Stainless Shielded	Solder Pins	SMSAS-18PMMS-SF8003*	SMSAS-18PFFS-SF8003*
	Straight PCB	SMSAS-18PMMP-SF8003*	SMSAS-18PFFP-SF8003*
	Right Angle PCB	SMSAS-18PMMR-SF8003*	SMSAS-18PFFR-SF8003*

* Upon Request

24		28	
A		A	
30V		30V	
0.5A		0.5A	
MM	FF	MM	FF
MSAP-24PMMS-SF8001*	MSAP-24PFFS-SF8001*	MSAP-28PMMS-SF8001*	MSAP-28PFFS-SF8001*
MSAP-24PMMP-SF8001*	MSAP-24PFFP-SF8001*	MSAP-28PMMP-SF8001*	MSAP-28PFFP-SF8001*
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SM12A-24PMMR-SF8001*	SM12A-24PFFR-SF8001*	SM12A-28PMMR-SF8001*	SM12A-28PFFR-SF8001*
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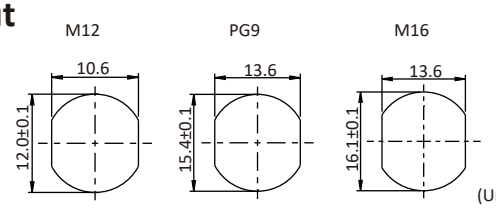
SM12A-24PMMR-SF8003*	SM12A-24PFFR-SF8003*	SM12A-28PMMR-SF8003*	SM12A-28PFFR-SF8003*
SMSAS-24PMMS-SF8003*	SMSAS-24PFFS-SF8003*	SMSAS-28PMMS-SF8003*	SMSAS-28PFFS-SF8003*
SMSAS-24PMMP-SF8003*	SMSAS-24PFFP-SF8003*	SMSAS-28PMMP-SF8003*	SMSAS-28PFFP-SF8003*
SMSAS-24PMMR-SF8003*	SMSAS-24PFFR-SF8003*	SMSAS-28PMMR-SF8003*	SMSAS-28PFFR-SF8003*

Panel Cut-Out



(Unit: mm)

Assemble Style

Solder
(S) Receptacle

Number of Contacts	3	
Coding	A	
Rated Voltage (AC/DC)	250V	
Nominal current	4A	
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact	MM	FF

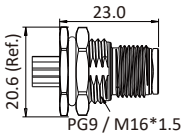
M12 Bulkhead / Receptacle With UL1061 PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

(10) Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).

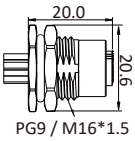
Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(A, D code, Plastic/Metal/Shielded/Stainless)

(MM)



(FF)

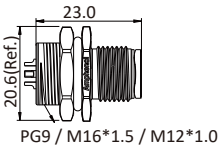


PG9		
Plastic	MSAP-03P**MM**C-SF8B (10)*	MSAP-03P**FF**C-SF8B (10)*
Metal Nut	M12A-03P**MM**C-SF8B (10)	M12A-03P**FF**C-SF8B (10)
Shielded	MSAS-03P**MM**C-SF8B (10)	MSAS-03P**FF**C-SF8B (10)
Stainless	SM12A-03P**MM**C-SF8B (10)*	SM12A-03P**FF**C-SF8B (10)*
Stainless Shielded	SMSAS-03P**MM**C-SF8B (10)*	SMSAS-03P**FF**C-SF8B (10)*
M16 x 1.5		
Plastic	MSAP-03P**MM**C-SF8C (10)	MSAP-03P**FF**C-SF8C (10)
Metal Nut	M12A-03P**MM**C-SF8C (10)	M12A-03P**FF**C-SF8C (10)
Shielded	MSAS-03P**MM**C-SF8C (10)	MSAS-03P**FF**C-SF8C (10)
Stainless	SM12A-03P**MM**C-SF8C (10)	SM12A-03P**FF**C-SF8C (10)
Stainless Shielded	SMSAS-03P**MM**C-SF8C (10)*	SMSAS-03P**FF**C-SF8C (10)*

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

(A, D code, Metal/Shielded/Stainless)

(MM)



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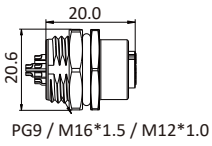


PG9			
Plastic	Solder Pins	MSAP-03P**MM**S-SH8001*	MSAP-03P**FF**S-SH8001*
Metal Nut	Solder Pins	M12A-03P**MM**S-SH8001	M12A-03P**FF**S-SH8001
Stainless	Solder Pins	SM12A-03P**MM**S-SH8001*	SM12A-03P**FF**S-SH8001*
M16 x 1.5			
Plastic	Solder Pins	MSAP-03P**MM**S-SH8002*	MSAP-03P**FF**S-SH8002*
Metal Nut	Solder Pins	M12A-03P**MM**S-SH8002	M12A-03P**FF**S-SH8002
Stainless	Solder Pins	SM12A-03P**MM**S-SH8002*	SM12A-03P**FF**S-SH8002*
M12 x 1.0			
Plastic	Solder Pins	MSAP-03P**MM**S-SH8003*	MSAP-03P**FF**S-SH8003*
Metal Nut	Solder Pins	M12A-03P**MM**S-SH8003*	M12A-03P**FF**S-SH8003*
Stainless	Solder Pins	SM12A-03P**MM**S-SH8003*	SM12A-03P**FF**S-SH8003*

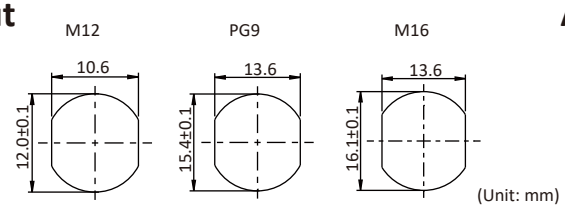
* Upon Request

4		4		5	
A		D		A	
250V		250V		60V	
4A		4A		4A	
MM	FF	MM	FF	MM	FF
MSAP-04P**MM**C-SF8B 10*	MSAP-04P**FF**C-SF8B 10*	MSDP-04P**MM**C-SF8B 10*	MSDP-04P**FF**C-SF8B 10*	MSAP-05P**MM**C-SF8B 10*	MSAP-05P**FF**C-SF8B 10*
M12A-04P**MM**C-SF8B 10	M12A-04P**FF**C-SF8B 10	M12D-04P**MM**C-SF8B 10	M12D-04P**FF**C-SF8B 10	M12A-05P**MM**C-SF8B 10	M12A-05P**FF**C-SF8B 10
MSAS-04P**MM**C-SF8B 10	MSAS-04P**FF**C-SF8B 10	MSDS-04P**MM**C-SF8B 10	MSDS-04P**FF**C-SF8B 10	MSAS-05P**MM**C-SF8B 10	MSAS-05P**FF**C-SF8B 10
SM12A-04P**MM**C-SF8B 10*	SM12A-04P**FF**C-SF8B 10*	SM12D-04P**MM**C-SF8B 10*	SM12D-04P**FF**C-SF8B 10*	SM12A-05P**MM**C-SF8B 10*	SM12A-05P**FF**C-SF8B 10*
SMSAS-04P**MM**C-SF8B 10*	SMSAS-04P**FF**C-SF8B 10*	SMSDS-04P**MM**C-SF8B 10*	SMSDS-04P**FF**C-SF8B 10*	SMSAS-05P**MM**C-SF8B 10*	SMSAS-05P**FF**C-SF8B 10*
MSAP-04P**MM**C-SF8C 10*	MSAP-04P**FF**C-SF8C 10*	MSDP-04P**MM**C-SF8C 10*	MSDP-04P**FF**C-SF8C 10*	MSAP-05P**MM**C-SF8C 10*	MSAP-05P**FF**C-SF8C 10*
M12A-04P**MM**C-SF8C 10	M12A-04P**FF**C-SF8C 10	M12D-04P**MM**C-SF8C 10	M12D-04P**FF**C-SF8C 10	M12A-05P**MM**C-SF8C 10	M12A-05P**FF**C-SF8C 10
MSAS-04P**MM**C-SF8C 10	MSAS-04P**FF**C-SF8C 10	MSDS-04P**MM**C-SF8C 10	MSDS-04P**FF**C-SF8C 10	MSAS-05P**MM**C-SF8C 10	MSAS-05P**FF**C-SF8C 10
SM12A-04P**MM**C-SF8C 10*	SM12A-04P**FF**C-SF8C 10*	SM12D-04P**MM**C-SF8C 10*	SM12D-04P**FF**C-SF8C 10*	SM12A-05P**MM**C-SF8C 10*	SM12A-05P**FF**C-SF8C 10*
SMSAS-04P**MM**C-SF8C 10*	SMSAS-04P**FF**C-SF8C 10*	SMSDS-04P**MM**C-SF8C 10*	SMSDS-04P**FF**C-SF8C 10*	SMSAS-05P**MM**C-SF8C 10*	SMSAS-05P**FF**C-SF8C 10*
MSAP-04P**MM**S-SH8001*	MSAP-04P**FF**S-SH8001*	MSDP-04P**MM**S-SH8001*	MSDP-04P**FF**S-SH8001*	MSAP-05P**MM**S-SH8001*	MSAP-05P**FF**S-SH8001*
M12A-04P**MM**S-SH8001	M12A-04P**FF**S-SH8001	M12D-04P**MM**S-SH8001	M12D-04P**FF**S-SH8001	M12A-05P**MM**S-SH8001	M12A-05P**FF**S-SH8001
SM12A-04P**MM**S-SH8001*	SM12A-04P**FF**S-SH8001*	SM12D-04P**MM**S-SH8001*	SM12D-04P**FF**S-SH8001*	SM12A-05P**MM**S-SH8001*	SM12A-05P**FF**S-SH8001*
MSAP-04P**MM**S-SH8002*	MSAP-04P**FF**S-SH8002*	MSDP-04P**MM**S-SH8002*	MSDP-04P**FF**S-SH8002*	MSAP-05P**MM**S-SH8002*	MSAP-05P**FF**S-SH8002*
M12A-04P**MM**S-SH8002	M12A-04P**FF**S-SH8002	M12D-04P**MM**S-SH8002	M12D-04P**FF**S-SH8002	M12A-05P**MM**S-SH8002	M12A-05P**FF**S-SH8002
SM12A-04P**MM**S-SH8002*	SM12A-04P**FF**S-SH8002*	SM12D-04P**MM**S-SH8002*	SM12D-04P**FF**S-SH8002*	SM12A-05P**MM**S-SH8002*	SM12A-05P**FF**S-SH8002*
MSAP-04P**MM**S-SH8003*	MSAP-04P**FF**S-SH8003*	MSDP-04P**MM**S-SH8003*	MSDP-04P**FF**S-SH8003*	MSAP-05P**MM**S-SH8003*	MSAP-05P**FF**S-SH8003*
M12A-04P**MM**S-SH8003*	M12A-04P**FF**S-SH8003*	M12D-04P**MM**S-SH8003*	M12D-04P**FF**S-SH8003*	M12A-05P**MM**S-SH8003*	M12A-05P**FF**S-SH8003*
SM12A-04P**MM**S-SH8003*	SM12A-04P**FF**S-SH8003*	SM12D-04P**MM**S-SH8003*	SM12D-04P**FF**S-SH8003*	SM12A-05P**MM**S-SH8003*	SM12A-05P**FF**S-SH8003*

M12 B-Code

Bulkhead / Receptacle With Wires, Hexagonal Flange, Front & Rear Fastened

Panel Cut-Out



Assemble Style

Solder
(S) Receptacle

Number of Contacts	5	
Coding	B	
Rated Voltage (AC/DC)	60V	
Nominal current	4A	
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact	MM	FF

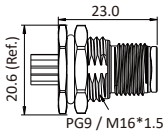
M12 Bulkhead / Receptacle With UL1061 PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

(10) Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).

Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(A, B code, Plastic/Metal/Shielded/Stainless)

(MM)



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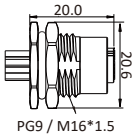
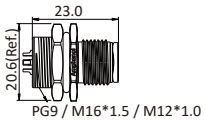


PG9		
Plastic	MSBP-05P**MM**C-SF8B (10)*	MSBP-05P**FF**C-SF8B (10)*
Metal Nut	M12B-05P**MM**C-SF8B (10)	M12B-05P**FF**C-SF8B (10)
Shielded	MSBS-05P**MM**C-SF8B (10)	MSBS-05P**FF**C-SF8B (10)
Stainless	SM12B-05P**MM**C-SF8B (10)*	SM12B-05P**FF**C-SF8B (10)*
Stainless Shielded	SMSBS-05P**MM**C-SF8B (10)*	SMSBS-05P**FF**C-SF8B (10)*
M16 x 1.5		
Plastic	MSBP-05P**MM**C-SF8C (10)*	MSBP-05P**FF**C-SF8C (10)*
Metal Nut	M12B-05P**MM**C-SF8C (10)	M12B-05P**FF**C-SF8C (10)
Shielded	MSBS-05P**MM**C-SF8C (10)	MSBS-05P**FF**C-SF8C (10)
Stainless	SM12B-05P**MM**C-SF8C (10)*	SM12B-05P**FF**C-SF8C (10)*
Stainless Shielded	SMSBS-05P**MM**C-SF8C (10)*	SMSBS-05P**FF**C-SF8C (10)*

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

(A, B code, Metal/Shielded/Stainless)

(MM)



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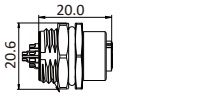
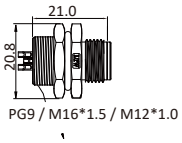
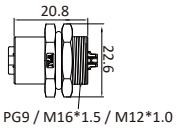


(I code, Metal)

(Male)



(Female)



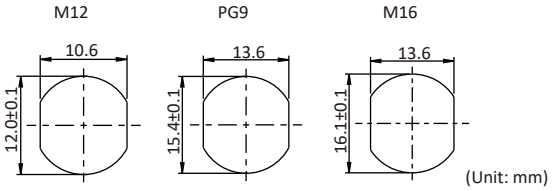
PG9			
Plastic	Solder Pins	MSBP-05P**MM**S-SH8001*	MSBP-05P**FF**S-SH8001*
Metal Nut	Solder Pins	M12B-05P**MM**S-SH8001	M12B-05P**FF**S-SH8001
Stainless	Solder Pins	SM12B-05P**MM**S-SH8001*	SM12B-05P**FF**S-SH8001*
M16 x 1.5			
Plastic	Solder Pins	MSBP-05P**MM**S-SH8002*	MSBP-05P**FF**S-SH8002*
Metal Nut	Solder Pins	M12B-05P**MM**S-SH8002	M12B-05P**FF**S-SH8002
Stainless	Solder Pins	SM12B-05P**MM**S-SH8002*	SM12B-05P**FF**S-SH8002*
M12 x 1.0			
Plastic	Solder Pins	MSBP-05P**MM**S-SH8003*	MSBP-05P**FF**S-SH8003*
Metal Nut	Solder Pins	M12B-05P**MM**S-SH8003*	M12B-05P**FF**S-SH8003*
Stainless	Solder Pins	SM12B-05P**MM**S-SH8003*	SM12B-05P**FF**S-SH8003*

* Upon Request

5		6		8	
I		A		A	
60V		30V		30V	
4A		2A		2A	
Male/Hybrid	Female/Hybrid	MM	FF	MM	FF
MSIP-05PMIC-SF8B 10*	MSIP-05PFIC-SF8B 10*	MSAP-06PMMC-SF8B 10*	MSAP-06PFFC-SF8B 10*	MSAP-08PMMC-SF8B 10*	MSAP-08PFFC-SF8B 10*
M12I-05PMIC-SF8B 10*	M12I-05PFIC-SF8B 10*	M12A-06PMMS-SF8B 10	M12A-06PFFS-SF8B 10	M12A-08PMMS-SF8B 10	M12A-08PFFS-SF8B 10
MSIS-05PMIC-SF8B 10*	MSIS-05PFIC-SF8B 10*	MSAS-06PMMS-SF8B 10	MSAS-06PFFS-SF8B 10	MSAS-08PMMS-SF8B 10	MSAS-08PFFS-SF8B 10
SM12I-05PMIC-SF8B 10*	SM12I-05PFIC-SF8B 10*	SM12A-06PMMC-SF8B 10*	SM12A-06PFFC-SF8B 10*	SM12A-08PMMC-SF8B 10*	SM12A-08PFFC-SF8B 10*
SMSIS-05PMIC-SF8B 10*	SMSIS-05PFIC-SF8B 10*	SMSAS-06PMMC-SF8B 10*	SMSAS-06PFFC-SF8B 10*	SMSAS-08PMMC-SF8B 10*	SMSAS-08PFFC-SF8B 10*
MSIP-05PMIC-SF8C 10*	MSIP-05PFIC-SF8C 10*	MSAP-06PMMC-SF8C 10*	MSAP-06PFFC-SF8C 10*	MSAP-08PMMC-SF8C 10*	MSAP-08PFFC-SF8C 10*
M12I-05PMIC-SF8C 10*	M12I-05PFIC-SF8C 10*	M12A-06PMMS-SF8C 10	M12A-06PFFS-SF8C 10	M12A-08PMMS-SF8C 10	M12A-08PFFS-SF8C 10
MSIS-05PMIC-SF8C 10*	MSIS-05PFIC-SF8C 10*	MSAS-06PMMS-SF8C 10	MSAS-06PFFS-SF8C 10	MSAS-08PMMS-SF8C 10	MSAS-08PFFS-SF8C 10
SM12I-05PMIC-SF8C 10*	SM12I-05PFIC-SF8C 10*	SM12A-06PMMC-SF8C 10*	SM12A-06PFFC-SF8C 10*	SM12A-08PMMC-SF8C 10*	SM12A-08PFFC-SF8C 10*
SMSIS-05PMIC-SF8C 10*	SMSIS-05PFIC-SF8C 10*	SMSAS-06PMMC-SF8C 10*	SMSAS-06PFFC-SF8C 10*	SMSAS-08PMMC-SF8C 10*	SMSAS-08PFFC-SF8C 10*
MSIP-05PMIS-SH8001*	MSIP-05PFIS-SH8001*	MSAP-06PMMS-SH8001*	MSAP-06PFFS-SH8001*	MSAP-08PMMS-SH8001*	MSAP-08PFFS-SH8001*
M12I-05PMIS-SH8001*	M12I-05PFIS-SH8001*	M12A-06PMMS-SH8001	M12A-06PFFS-SH8001	M12A-08PMMS-SH8001	M12A-08PFFS-SH8001
SM12I-05PMIS-SH8001*	SM12I-05PFIS-SH8001*	SM12A-06PMMS-SH8001*	SM12A-06PFFS-SH8001	SM12A-08PMMS-SH8001*	SM12A-08PFFS-SH8001*
MSIP-05PMIS-SH8002*	MSIP-05PFIS-SH8002*	MSAP-06PMMS-SH8002*	MSAP-06PFFS-SH8002*	MSAP-08PMMS-SH8002*	MSAP-08PFFS-SH8002*
M12I-05PMIS-SH8002*	M12I-05PFIS-SH8002*	M12A-06PMMS-SH8002	M12A-06PFFS-SH8002	M12A-08PMMS-SH8002	M12A-08PFFS-SH8002
SM12I-05PMIS-SH8002*	SM12I-05PFIS-SH8002*	SM12A-06PMMS-SH8002*	SM12A-06PFFS-SH8002	SM12A-08PMMS-SH8002*	SM12A-08PFFS-SH8002*
MSIP-05PMIS-SH8003*	MSIP-05PFIS-SH8003*	MSAP-06PMMS-SH8003*	MSAP-06PFFS-SH8003*	MSAP-08PMMS-SH8003*	MSAP-08PFFS-SH8003*
M12I-05PMIS-SH8003*	M12I-05PFIS-SH8003*	M12A-06PMMS-SH8003*	M12A-06PFFS-SH8003*	M12A-08PMMS-SH8003*	M12A-08PFFS-SH8003*
SM12I-05PMIS-SH8003*	SM12I-05PFIS-SH8003*	SM12A-06PMMS-SH8003*	SM12A-06PFFS-SH8003*	SM12A-08PMMS-SH8003*	SM12A-08PFFS-SH8003*

M12 X & Y-Code Bulkhead / Receptacle With Wires, Hexagonal Flange, Front & Rear Fastened

Panel Cut-Out



Assemble Style

PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

Number of Contacts	8		8
Coding	X (CAT.6A)		Y (Hybrid)*
Rated Voltage (AC/DC)	30V		60V
Nominal current	2A		0.5A / 6A
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact **FI**: Female Connector Male + Female Contact	MM	FF	FF

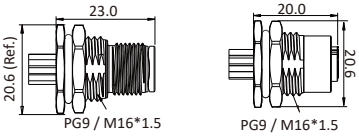
M12 Bulkhead / Receptacle With UL1061 PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

⑩ Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).

Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(A code, Plastic/Metal/Shielded/Stainless)

(MM) (FF)

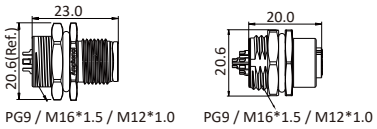


PG9			
Plastic	-	-	-
Metal Nut	-	-	-
Shielded	-	-	-
Stainless	-	-	-
Stainless Shielded	-	-	-
M16 x 1.5			
Plastic	-	-	-
Metal Nut	-	-	-
Shielded	-	-	-
Stainless	-	-	-
Stainless Shielded	-	-	-

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

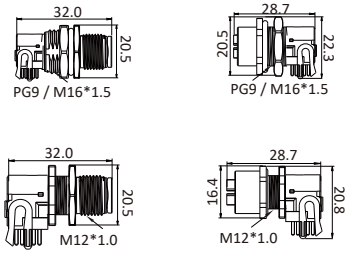
(A, Y code, Metal/Shielded/Stainless)

(MM) (FF)



(X code, Metal/Stainless)

(MM) (FF)

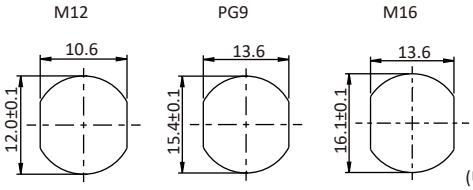


PG9				
Plastic	Solder Pins	-	-	-
Metal Nut	Solder Pins	-	-	-
Shielded	Straight PCB	MSXS-08P**MM**P-SH7001*	MSXS-08P**FF**P-SH7001*	MSYS-08P**FI**P-SH7001*
	Right Angle PCB	MSXS-08P**MM**R-SH7001*	MSXS-08P**FF**R-SH7001	MSYS-08P**FI**R-SH7001*
Stainless	Solder Pins	-	-	-
Stainless Shielded	Straight PCB	SMSXS-08P**MM**P-SH7001*	SMSXS-08P**FF**P-SH7001*	SMSYS-08P**FI**P-SH7001*
	Right Angle PCB	SMSXS-08P**MM**R-SH7001*	SMSXS-08P**FF**R-SH7001*	SMSYS-08P**FI**R-SH7001*
M16 x 1.5				
Plastic	Solder Pins	-	-	-
Metal Nut	Solder Pins	-	-	-
Shielded	Straight PCB	MSXS-08P**MM**P-SH7002*	MSXS-08P**FF**P-SH7002*	MSYS-08P**FI**P-SH7002*
	Right Angle PCB	MSXS-08P**MM**R-SH7002*	MSXS-08P**FF**R-SH7002	MSYS-08P**FI**R-SH7002*
Stainless	Solder Pins	-	-	-
Stainless Shielded	Straight PCB	SMSXS-08P**MM**P-SH7002*	SMSXS-08P**FF**P-SH7002*	SMSYS-08P**FI**P-SH7002*
	Right Angle PCB	SMSXS-08P**MM**R-SH7002*	SMSXS-08P**FF**R-SH7002*	SMSYS-08P**FI**R-SH7002*
M12 x 1.0				
Plastic	Solder Pins	-	-	-
	Straight PCB	MSXS-08P**MM**P-SH7003*	MSXS-08P**FF**P-SH7003	MSYS-08P**FI**P-SH7003*
	Right Angle PCB	MSXS-08P**MM**R-SH7003*	MSXS-08P**FF**R-SH7003	MSYS-08P**FI**R-SH7003*
Metal Nut	Solder Pins	-	-	-
Stainless	Solder Pins	-	-	-

* Upon Request

10		12		17	
A		A		A	
30V		30V		30V	
1.5A		1.5A		1.5A	
MM	FF	MM	FF	MM	FF
MSAP-10PMMC-SF8B 10*	MSAP-10PFFC-SF8B 10*	MSAP-12PMMC-SF8B 10*	MSAP-12PFFC-SF8B 10*	MSAP-17PMMC-SF8B 10*	MSAP-17PFFC-SF8B 10*
M12A-10PMMS-SF8B 10	M12A-10PFFS-SF8B 10	M12A-12PMMS-SF8B 10	M12A-12PFFS-SF8B 10	M12A-17PMMC-SF8B 10*	M12A-17PFFC-SF8B 10*
MSAS-10PMMS-SF8B 10	MSAS-10PFFS-SF8B 10	MSAS-12PMMS-SF8B 10	MSAS-12PFFS-SF8B 10	MSAS-17PMMC-SF8B 10*	MSAS-17PFFC-SF8B 10*
SM12A-10PMMC-SF8B 10*	SM12A-10PFFC-SF8B 10*	SM12A-12PMMC-SF8B 10*	SM12A-12PFFC-SF8B 10*	SM12A-17PMMC-SF8B 10*	SM12A-17PFFC-SF8B 10*
SMSAS-10PMMC-SF8B 10*	SMSAS-10PFFC-SF8B 10*	SMSAS-12PMMC-SF8B 10*	SMSAS-12PFFC-SF8B 10*	SMSAS-17PMMC-SF8B 10*	SMSAS-17PFFC-SF8B 10*
MSAP-10PMMC-SF8C 10*	MSAP-10PFFC-SF8C 10*	MSAP-12PMMC-SF8C 10*	MSAP-12PFFC-SF8C 10*	MSAP-17PMMC-SF8C 10*	MSAP-17PFFC-SF8C 10*
M12A-10PMMS-SF8C 10	M12A-10PFFS-SF8C 10	M12A-12PMMS-SF8C 10	M12A-12PFFS-SF8C 10	M12A-17PMMC-SF8C 10*	M12A-17PFFC-SF8C 10*
MSAS-10PMMS-SF8C 10	MSAS-10PFFS-SF8C 10	MSAS-12PMMS-SF8C 10	MSAS-12PFFS-SF8C 10	MSAS-17PMMC-SF8C 10*	MSAS-17PFFC-SF8C 10*
SM12A-10PMMC-SF8C 10*	SM12A-10PFFC-SF8C 10*	SM12A-12PMMC-SF8C 10*	SM12A-12PFFC-SF8C 10*	SM12A-17PMMC-SF8C 10*	SM12A-17PFFC-SF8C 10*
SMSAS-10PMMC-SF8C 10*	SMSAS-10PFFC-SF8C 10*	SMSAS-12PMMC-SF8C 10*	SMSAS-12PFFC-SF8C 10*	SMSAS-17PMMC-SF8C 10*	SMSAS-17PFFC-SF8C 10*
MSAP-10PMMS-SH8001*	MSAP-10PFFS-SH8001*	MSAP-12PMMS-SH8001*	MSAP-12PFFS-SH8001*	MSAP-17PMMS-SH8001*	MSAP-17PFFS-SH8001*
M12A-10PMMS-SH8001	M12A-10PFFS-SH8001	M12A-12PMMS-SH8001	M12A-12PFFS-SH8001	M12A-17PMMS-SH8001	M12A-17PFFS-SH8001
-	-	-	-	-	-
-	-	-	-	-	-
SM12A-10PMMS-SH8001*	SM12A-10PFFS-SH8001*	SM12A-12PMMS-SH8001*	SM12A-12PFFS-SH8001*	SM12A-17PMMS-SH8001*	SM12A-17PFFS-SH8001*
-	-	-	-	-	-
-	-	-	-	-	-
MSAP-10PMMS-SH8002*	MSAP-10PFFS-SH8002*	MSAP-12PMMS-SH8002*	MSAP-12PFFS-SH8002*	MSAP-17PMMS-SH8002*	MSAP-17PFFS-SH8002*
M12A-10PMMS-SH8002	M12A-10PFFS-SH8002	M12A-12PMMS-SH8002	M12A-12PFFS-SH8002	M12A-17PMMS-SH8002	M12A-17PFFS-SH8002
-	-	-	-	-	-
-	-	-	-	-	-
SM12A-10PMMS-SH8002*	SM12A-10PFFS-SH8002*	SM12A-12PMMS-SH8002*	SM12A-12PFFS-SH8002*	SM12A-17PMMS-SH8002*	SM12A-17PFFS-SH8002*
-	-	-	-	-	-
-	-	-	-	-	-
MSAP-10PMMS-SH8003*	MSAP-10PFFS-SH8003*	MSAP-12PMMS-SH8003*	MSAP-12PFFS-SH8003*	MSAP-17PMMS-SH8003*	MSAP-17PFFS-SH8003*
-	-	-	-	-	-
-	-	-	-	-	-
M12A-10PMMS-SH8003*	M12A-10PFFS-SH8003*	M12A-12PMMS-SH8003*	M12A-12PFFS-SH8003*	M12A-17PMMS-SH8003*	M12A-17PFFS-SH8003*
SM12A-10PMMS-SH8003*	SM12A-10PFFS-SH8003*	SM12A-12PMMS-SH8003*	SM12A-12PFFS-SH8003*	SM12A-17PMMS-SH8003*	SM12A-17PFFS-SH8003*

Panel Cut-Out



Assemble Style

PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

Number of Contacts	18	
Coding	A	
Rated Voltage (AC/DC)	30V	
Nominal current	0.5A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact	MM	FF

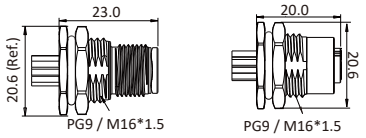
M12 Bulkhead / Receptacle With UL1061 PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

⑩ Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).

Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(Plastic/Metal/Shielded/Stainless)

(MM) (FF)

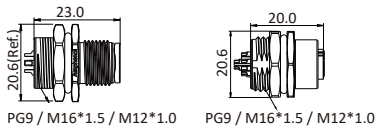


PG9		
Plastic	MSAP-18P**MM**C-SF8B⑩*	MSAP-18P**FF**C-SF8B⑩*
Metal Nut	M12A-18P**MM**C-SF8B⑩*	M12A-18P**FF**C-SF8B⑩*
Shielded	MSAS-18P**MM**C-SF8B⑩*	MSAS-18P**FF**C-SF8B⑩*
Stainless	SM12A-18P**MM**C-SF8B⑩*	SM12A-18P**FF**C-SF8B⑩*
Stainless Shielded	SMSAS-18P**MM**C-SF8B⑩*	SMSAS-18P**FF**C-SF8B⑩*
M16 x 1.5		
Plastic	MSAP-18P**MM**C-SF8C⑩*	MSAP-18P**FF**C-SF8C⑩*
Metal Nut	M12A-18P**MM**C-SF8C⑩*	M12A-18P**FF**C-SF8C⑩*
Shielded	MSAS-18P**MM**C-SF8C⑩*	MSAS-18P**FF**C-SF8C⑩*
Stainless	SM12A-18P**MM**C-SF8C⑩*	SM12A-18P**FF**C-SF8C⑩*
Stainless Shielded	SMSAS-18P**MM**C-SF8C⑩*	SMSAS-18P**FF**C-SF8C⑩*

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

(Metal/Shielded/Stainless)

(MM) (FF)

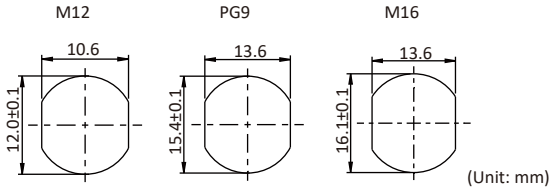


PG9			
Plastic	Solder Pins	MSAP-18P**MM**S-SH8001*	MSAP-18P**FF**S-SH8001*
Metal Nut	Solder Pins	M12A-18P**MM**S-SH8001*	M12A-18P**FF**S-SH8001*
Shielded	Straight PCB	-	-
	Right Angle PCB	-	-
Stainless	Solder Pins	SM12A-18P**MM**S-SH8001*	SM12A-18P**FF**S-SH8001*
Stainless Shielded	Straight PCB	-	-
	Right Angle PCB	-	-
M16 x 1.5			
Plastic	Solder Pins	MSAP-18P**MM**S-SH8002*	MSAP-18P**FF**S-SH8002*
Metal Nut	Solder Pins	M12A-18P**MM**S-SH8002*	M12A-18P**FF**S-SH8002*
Shielded	Straight PCB	-	-
	Right Angle PCB	-	-
Stainless	Solder Pins	SM12A-18P**MM**S-SH8002*	SM12A-18P**FF**S-SH8002*
Stainless Shielded	Straight PCB	-	-
	Right Angle PCB	-	-
M12 x 1.0			
Plastic	Solder Pins	MSAP-18P**MM**S-SH8003*	MSAP-18P**FF**S-SH8003*
	Straight PCB	-	-
	Right Angle PCB	-	-
Metal Nut	Solder Pins	M12A-18P**MM**S-SH8003*	M12A-18P**FF**S-SH8003*
Stainless	Solder Pins	SM12A-18P**MM**S-SH8003*	SM12A-18P**FF**S-SH8003*

* Upon Request

24		28	
A		A	
30V		30V	
0.5A		0.5A	
MM	FF	MM	FF
MSAP-24PMMC-SF8B 10 *	MSAP-24PFFC-SF8B 10 *	MSAP-28PMMC-SF8B 10 *	MSAP-28PFFC-SF8B 10 *
M12A-24PMMC-SF8B 10 *	M12A-24PFFC-SF8B 10 *	M12A-28PMMC-SF8B 10 *	M12A-28PFFC-SF8B 10 *
MSAS-24PMMC-SF8B 10 *	MSAS-24PFFC-SF8B 10 *	MSAS-28PMMC-SF8B 10 *	MSAS-28PFFC-SF8B 10 *
SM12A-24PMMC-SF8B 10 *	SM12A-24PFFC-SF8B 10 *	SM12A-28PMMC-SF8B 10 *	SM12A-28PFFC-SF8B 10 *
SMSAS-24PMMC-SF8B 10 *	SMSAS-24PFFC-SF8B 10 *	SMSAS-28PMMC-SF8B 10 *	SMSAS-28PFFC-SF8B 10 *
MSAP-24PMMC-SF8C 10 *	MSAP-24PFFC-SF8C 10 *	MSAP-28PMMC-SF8C 10 *	MSAP-28PFFC-SF8C 10 *
M12A-24PMMC-SF8C 10 *	M12A-24PFFC-SF8C 10 *	M12A-28PMMC-SF8C 10 *	M12A-28PFFC-SF8C 10 *
MSAS-24PMMC-SF8C 10 *	MSAS-24PFFC-SF8C 10 *	MSAS-28PMMC-SF8C 10 *	MSAS-28PFFC-SF8C 10 *
SM12A-24PMMC-SF8C 10 *	SM12A-24PFFC-SF8C 10 *	SM12A-28PMMC-SF8C 10 *	SM12A-28PFFC-SF8C 10 *
SMSAS-24PMMC-SF8C 10 *	SMSAS-24PFFC-SF8C 10 *	SMSAS-28PMMC-SF8C 10 *	SMSAS-28PFFC-SF8C 10 *
MSAP-24PMMS-SH8001*	MSAP-24PFFS-SH8001*	MSAP-28PMMS-SH8001*	MSAP-28PFFS-SH8001*
M12A-24PMMS-SH8001*	M12A-24PFFS-SH8001*	M12A-28PMMS-SH8001*	M12A-28PFFS-SH8001*
-	-	-	-
-	-	-	-
SM12A-24PMMS-SH8001*	SM12A-24PFFS-SH8001*	SM12A-28PMMS-SH8001*	SM12A-28PFFS-SH8001*
-	-	-	-
-	-	-	-
MSAP-24PMMS-SH8002*	MSAP-24PFFS-SH8002*	MSAP-28PMMS-SH8002*	MSAP-28PFFS-SH8002*
M12A-24PMMS-SH8002*	M12A-24PFFS-SH8002*	M12A-28PMMS-SH8002*	M12A-28PFFS-SH8002*
-	-	-	-
-	-	-	-
SM12A-24PMMS-SH8002*	SM12A-24PFFS-SH8002*	SM12A-28PMMS-SH8002*	SM12A-28PFFS-SH8002*
-	-	-	-
-	-	-	-
MSAP-24PMMS-SH8003*	MSAP-24PFFS-SH8003*	MSAP-28PMMS-SH8003*	MSAP-28PFFS-SH8003*
-	-	-	-
-	-	-	-
M12A-24PMMS-SH8003*	M12A-24PFFS-SH8003*	M12A-28PMMS-SH8003*	M12A-28PFFS-SH8003*
SM12A-24PMMS-SH8003*	SM12A-24PFFS-SH8003*	SM12A-28PMMS-SH8003*	SM12A-28PFFS-SH8003*

Panel Cut-Out



Number of Contacts	3	
Coding	A	
Rated Voltage (AC/DC)	250V	
Nominal current	4A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact	MM	FF

M12 Bulkhead / Receptacle With UL1061 PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

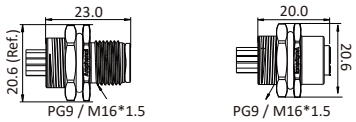
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).

Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(A code, Plastic)

(A, D code, Metal/Stainless)

(MM) (FF)



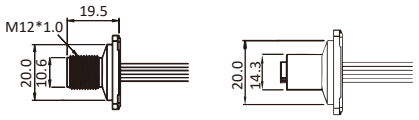
PG9		
Plastic	MSAP-03P**MM**C-SH8B 10*	MSAP-03P**FF**C-SH8B 10*
Metal Nut	M12A-03P**MM**C-SH8B 10	M12A-03P**FF**C-SH8B 10
Stainless	SM12A-03P**MM**C-SH8B 10*	SM12A-03P**FF**C-SH8B 10*
M16 x 1.5		
Plastic	MSAP-03P**MM**C-SH8C 10*	MSAP-03P**FF**C-SH8C 10*
Metal Nut	M12A-03P**MM**C-SH8C 10	M12A-03P**FF**C-SH8C 10
Stainless	SM12A-03P**MM**C-SH8C 10*	SM12A-03P**FF**C-SH8C 10*

M12 Bulkhead / Receptacle With UL1061 PVC Wires, 26mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).

Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(Male) (Female)



Plastic	MSAP-03P**MM**C-SS8E 10*	MSAP-03P**FF**C-SS8E 10*
Shielded	MSAS-03P**MM**C-SS8E 10*	MSAS-03P**FF**C-SS8E 10*
Stainless	SM12A-03P**MM**C-SS8E 10*	SM12A-03P**FF**C-SS8E 10*
Stainless Shielded	SMSAS-03P**MM**C-SS8E 10*	SMSAS-03P**FF**C-SS8E 10*

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

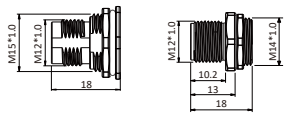
Male (Shielded) Female (Shielded)

(Non Shielded) (Non Shielded)

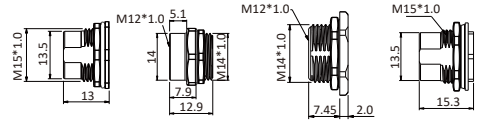
Unshielded	THR Straight	M12A-03P**MM**P-EE0001*	M12A-03P**FF**P-EE0001*
	THR Right Angle	M12A-03P**MM**R-EE0001	M12A-03P**FF**R-EE0001
	SMD Straight	M12A-03P**MM**T-EE0001*	M12A-03P**FF**T-EE0001*
	SMD Straight	M12A-03P**MM**T-EE0002*	M12A-03P**FF**T-EE0002*
Shielded	THR Straight	MSAS-03P**MM**P-EE0001*	MSAS-03P**FF**P-EE0001*
	THR Right Angle	MSAS-03P**MM**R-EE0001	MSAS-03P**FF**R-EE0001
	SMD Straight	MSAS-03P**MM**T-EE0001*	MSAS-03P**FF**T-EE0001*
	SMD Straight	MSAS-03P**MM**T-EE0002*	MSAS-03P**FF**T-EE0002*

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

APPM-AAAMA012-001 APPM-AAAMA012-002 APPM-AAAMA012-005



APPM-AAAFA012-001 APPM-AAAFA012-002 APPM-AAAFA012-004 APPM-AAAFA012-014

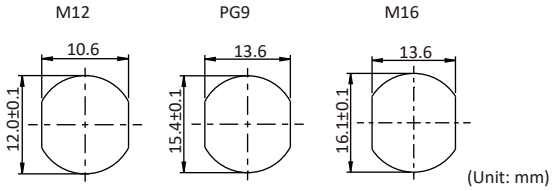


Front Fastened, THR Male	APP**M**-AAA**M**A012-006 (Straight) / APP**M**-AAA**M**A012-005 (Right Angle)
Front Fastened, SMD Male	APP**M**-AAA**M**A012-001
Front Fastened, THR Female	APP**M**-AAA**F**A012-014 (Straight) / APP**M**-AAA**F**A012-005 (Right Angle)
Front Fastened, SMD Female	APP**M**-AAA**F**A012-001
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	APP**M**-AAA**M**A012-002
Rear Fastened, THR Female	APP**M**-AAA**F**A012-012 (Straight) / APP**M**-AAA**F**A012-006 (Right Angle)
Rear Fastened, SMD Female	APP**M**-AAA**F**A012-002

* Upon Request

4		4		5	
A		D		A	
250V		250V		60V	
4A		4A		4A	
MM	FF	MM	FF	MM	FF
MSAP-04P**MM**C-SH8B10*	MSAP-04P**FF**C-SH8B10*	MSDP-04P**MM**C-SH8B10*	MSDP-04P**FF**C-SH8B10*	MSAP-05P**MM**C-SH8B10*	MSAP-05P**FF**C-SH8B10*
M12A-04P**MM**C-SH8B10	M12A-04P**FF**C-SH8B10	M12D-04P**MM**C-SH8B10	M12D-04P**FF**C-SH8B10	M12A-05P**MM**C-SH8B10	M12A-05P**FF**C-SH8B10
SM12A-04P**MM**C-SH8B10*	SM12A-04P**FF**C-SH8B10*	SM12D-04P**MM**C-SH8B10*	SM12D-04P**FF**C-SH8B10*	SM12A-05P**MM**C-SH8B10*	SM12A-05P**FF**C-SH8B10*
MSAP-04P**MM**C-SH8C10*	MSAP-04P**FF**C-SH8C10*	MSDP-04P**MM**C-SH8C10*	MSDP-04P**FF**C-SH8C10*	MSAP-05P**MM**C-SH8C10*	MSAP-05P**FF**C-SH8C10*
M12A-04P**MM**C-SH8C10	M12A-04P**FF**C-SH8C10	M12D-04P**MM**C-SH8C10	M12D-04P**FF**C-SH8C10	M12A-05P**MM**C-SH8C10	M12A-05P**FF**C-SH8C10
SM12A-04P**MM**C-SH8C10*	SM12A-04P**FF**C-SH8C10*	SM12D-04P**MM**C-SH8C10*	SM12D-04P**FF**C-SH8C10*	SM12A-05P**MM**C-SH8C10*	SM12A-05P**FF**C-SH8C10*
MSAP-04P**MM**C-SS8E10*	MSAP-04P**FF**C-SS8E10*	MSDP-04P**MM**C-SS8E10*	MSDP-04P**FF**C-SS8E10*	MSAP-05P**MM**C-SS8E10*	MSAP-05P**FF**C-SS8E10*
MSAS-04P**MM**C-SS8E10*	MSAS-04P**FF**C-SS8E10*	MSDS-04P**MM**C-SS8E10*	MSDS-04P**FF**C-SS8E10*	MSAS-05P**MM**C-SS8E10*	MSAS-05P**FF**C-SS8E10*
SM12A-04P**MM**C-SS8E10*	SM12A-04P**FF**C-SS8E10*	SM12D-04P**MM**C-SS8E10*	SM12D-04P**FF**C-SS8E10*	SM12A-05P**MM**C-SS8E10*	SM12A-05P**FF**C-SS8E10*
SMSAS-04P**MM**C-SS8E10*	SMSAS-04P**FF**C-SS8E10*	SMSDS-04P**MM**C-SS8E10*	SMSDS-04P**FF**C-SS8E10*	SMSAS-05P**MM**C-SS8E10*	SMSAS-05P**FF**C-SS8E10*
M12A-04P**MM**P-EE0001*	M12A-04P**FF**P-EE0001*	M12D-04P**MM**P-EE0001*	M12D-04P**FF**P-EE0001*	M12A-05P**MM**P-EE0001*	M12A-05P**FF**P-EE0001*
M12A-04P**MM**R-EE0001	M12A-04P**FF**R-EE0001	M12D-04P**MM**R-EE0001	M12D-04P**FF**R-EE0001	M12A-05P**MM**R-EE0001	M12A-05P**FF**R-EE0001
M12A-04P**MM**T-EE0001	M12A-04P**FF**T-EE0001	M12D-04P**MM**T-EE0001	M12D-04P**FF**T-EE0001	M12A-05P**MM**T-EE0001	M12A-05P**FF**T-EE0001
M12A-04P**MM**T-EE0002*	M12A-04P**FF**T-EE0002*	M12D-04P**MM**T-EE0002*	M12D-04P**FF**T-EE0002	M12A-05P**MM**T-EE0002*	M12A-05P**FF**T-EE0002*
MSAS-04P**MM**P-EE0001*	MSAS-04P**FF**P-EE0001*	MSDS-04P**MM**P-EE0001*	MSDS-04P**FF**P-EE0001*	MSAS-05P**MM**P-EE0001*	MSAS-05P**FF**P-EE0001*
MSAS-04P**MM**R-EE0001	MSAS-04P**FF**R-EE0001	MSDS-04P**MM**R-EE0001	MSDS-04P**FF**R-EE0001	MSAS-05P**MM**R-EE0001	MSAS-05P**FF**R-EE0001
MSAS-04P**MM**T-EE0001	MSAS-04P**FF**T-EE0001	MSDS-04P**MM**T-EE0001	MSDS-04P**FF**T-EE0001	MSAS-05P**MM**T-EE0001	MSAS-05P**FF**T-EE0001
MSAS-04P**MM**T-EE0002*	MSAS-04P**FF**T-EE0002*	MSDS-04P**MM**T-EE0002*	MSDS-04P**FF**T-EE0002*	MSAS-05P**MM**T-EE0002*	MSAS-05P**FF**T-EE0002*
APP**M**-AAA**M**A012-006 (Straight) / APP**M**-AAA**M**A012-005 (Right Angle)					
APP**M**-AAA**M**A012-001					
APP**M**-AAA**F**A012-014 (Straight) / APP**M**-AAA**F**A012-005 (Right Angle)					
APP**M**-AAA**F**A012-001					
-					
APP**M**-AAA**M**A012-002					
APP**M**-AAA**F**A012-012 (Straight) / APP**M**-AAA**F**A012-006 (Right Angle)					
APP**M**-AAA**F**A012-002		APP**M**-AAA**F**A012-002 APP**M**-AAA**F**A012-004 For M12D-04P**FF**T-EE0002		APP**M**-AAA**F**A012-002	

Panel Cut-Out



Number of Contacts	5	
Coding	B	
Rated Voltage (AC/DC)	60V	
Nominal current	4A	
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact **MI**: Male Connector Male + Female Contact **FI**: Female Connector Male + Female Contact	MM	FF

M12 Bulkhead / Receptacle With UL1061 PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

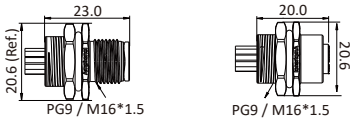
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).

Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(A code, Plastic)

(A, B code, Metal/Stainless)

(MM) (FF)



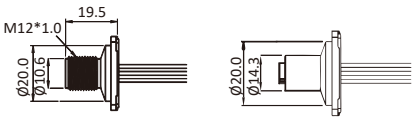
PG9		
Plastic	MSBP-05P**MM**C-SH8B 10 *	MSBP-05P**FF**C-SH8B 10 *
Metal Nut	M12B-05P**MM**C-SH8B 10	M12B-05P**FF**C-SH8B 10
Stainless	SM12B-05P**MM**C-SH8B 10 *	SM12B-05P**FF**C-SH8B 10 *
M16 x 1.5		
Plastic	MSBP-05P**MM**C-SH8C 10 *	MSBP-05P**FF**C-SH8C 10 *
Metal Nut	M12B-05P**MM**C-SH8C 10	M12B-05P**FF**C-SH8C 10
Stainless	SM12B-05P**MM**C-SH8C 10 *	SM12B-05P**FF**C-SH8C 10 *

M12 Bulkhead / Receptacle With UL1061 PVC Wires, 26mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).

Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(Male) (Female)



Plastic	MSBP-05P**MM**C-SS8E 10 *	MSBP-05P**FF**C-SS8E 10 *
Shielded	MSBS-05P**MM**C-SS8E 10 *	MSBS-05P**FF**C-SS8E 10 *
Stainless	SM12B-05P**MM**C-SS8E 10 *	SM12B-05P**FF**C-SS8E 10 *
Stainless Shielded	SMSBS-05P**MM**C-SS8E 10 *	SMSBS-05P**FF**C-SS8E 10 *

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

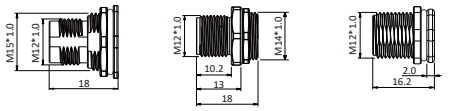
Male (Shielded) Female (Shielded)

(Non Shielded) (Non Shielded)

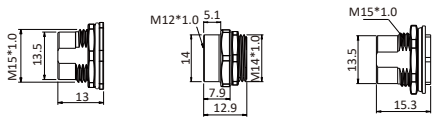
Unshielded	THR Straight	M12B-05P**MM**P-EE0001*	M12B-05P**FF**P-EE0001*
	THR Right Angle	M12B-05P**MM**R-EE0001	M12B-05P**FF**R-EE0001
	SMD Straight	M12B-05P**MM**T-EE0001*	M12B-05P**FF**T-EE0001
	SMD Straight	M12B-05P**MM**T-EE0002*	M12B-05P**FF**T-EE0002*
Shielded	THR Straight	MSBS-05P**MM**P-EE0001*	MSBS-05P**FF**P-EE0001*
	THR Right Angle	MSBS-05P**MM**R-EE0001	MSBS-05P**FF**R-EE0001
	SMD Straight	MSBS-05P**MM**T-EE0001	MSBS-05P**FF**T-EE0001
	SMD Straight	MSBS-05P**MM**T-EE0002*	MSBS-05P**FF**T-EE0002*

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

APPM-AAAMA012-001 APPM-AAAMA012-002 APPM-AAAMA012-005



APPM-AAAFA012-001 APPM-AAAFA012-002 APPM-AAAFA012-014

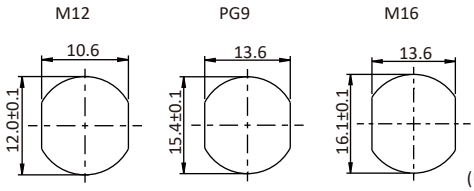


Front Fastened, THR Male	APP**M**-AAA**M**A012-006 (Straight) / APP**M**-AAA**M**A012-005 (Right Angle)
Front Fastened, SMD Male	APP**M**-AAA**M**A012-001
Front Fastened, THR Female	APP**M**-AAA**F**A012-014 (Straight) / APP**M**-AAA**F**A012-005 (Right Angle)
Front Fastened, SMD Female	APP**M**-AAA**F**A012-001
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	APP**M**-AAA**M**A012-002
Rear Fastened, THR Female	APP**M**-AAA**F**A012-012 (Straight) / APP**M**-AAA**F**A012-006 (Right Angle)
Rear Fastened, SMD Female	APP**M**-AAA**F**A012-002

* Upon Request

5		6		8	
I		A		A	
60V		30V		30V	
4A		2A		2A	
Male/Hybrid	Female/Hybrid	MM	FF	MM	FF
MSIP-05P**MI**C-SH8B10*	MSIP-05P**FI**C-SH8B10*	MSAP-06P**MM**C-SH8B10*	MSAP-06P**FF**C-SH8B10*	MSAP-08P**MM**C-SH8B10*	MSAP-08P**FF**C-SH8B10*
M12I-05P**MI**C-SH8B10*	M12I-05P**FI**C-SH8B10*	M12A-06P**MM**C-SH8B10*	M12A-06P**FF**C-SH8B10*	M12A-08P**MM**C-SH8B10*	M12A-08P**FF**C-SH8B10*
SM12I-05P**MI**C-SH8B10*	SM12I-05P**FI**C-SH8B10*	SM12A-06P**MM**C-SH8B10*	SM12A-06P**FF**C-SH8B10*	SM12A-08P**MM**C-SH8B10*	SM12A-08P**FF**C-SH8B10*
MSIP-05P**MI**C-SH8C10*	MSIP-05P**FI**C-SH8C10*	MSAP-06P**MM**C-SH8C10*	MSAP-06P**FF**C-SH8C10*	MSAP-08P**MM**C-SH8C10*	MSAP-08P**FF**C-SH8C10*
M12I-05P**MI**C-SH8C10*	M12I-05P**FI**C-SH8C10*	M12A-06P**MM**C-SH8C10*	M12A-06P**FF**C-SH8C10*	M12A-08P**MM**C-SH8C10*	M12A-08P**FF**C-SH8C10*
SM12I-05P**MI**C-SH8C10*	SM12I-05P**FI**C-SH8C10*	SM12A-06P**MM**C-SH8C10*	SM12A-06P**FF**C-SH8C10*	SM12A-08P**MM**C-SH8C10*	SM12A-08P**FF**C-SH8C10*
MSIP-05P**MI**C-SS8E10*	MSIP-05P**FI**C-SS8E10*	MSAP-06P**MM**C-SS8E10*	MSAP-06P**FF**C-SS8E10*	MSAP-08P**MM**C-SS8E10*	MSAP-08P**FF**C-SS8E10*
MSIS-05P**MI**C-SS8E10*	MSIS-05P**FI**C-SS8E10*	MSAS-06P**MM**C-SS8E10*	MSAS-06P**FF**C-SS8E10*	MSAS-08P**MM**C-SS8E10*	MSAS-08P**FF**C-SS8E10*
SM12I-05P**MI**C-SS8E10*	SM12I-05P**FI**C-SS8E10*	SM12A-06P**MM**C-SS8E10*	SM12A-06P**FF**C-SS8E10*	SM12A-08P**MM**C-SS8E10*	SM12A-08P**FF**C-SS8E10*
SMSIS-05P**MI**C-SS8E10*	SMSIS-05P**FI**C-SS8E10*	SMSAS-06P**MM**C-SS8E10*	SMSAS-06P**FF**C-SS8E10*	SMSAS-08P**MM**C-SS8E10*	SMSAS-08P**FF**C-SS8E10*
-	-	M12A-06P**MM**P-EE0001*	M12A-06P**FF**P-EE0001*	M12A-08P**MM**P-EE0001	M12A-08P**FF**P-EE0001*
-	-	M12A-06P**MM**R-EE0001*	M12A-06P**FF**R-EE0001*	M12A-08P**MM**R-EE0001	M12A-08P**FF**R-EE0001
-	-	M12A-06P**MM**T-EE0001*	M12A-06P**FF**T-EE0001*	M12A-08P**MM**T-EE0001	M12A-08P**FF**T-EE0001
-	-	M12A-06P**MM**T-EE0002*	M12A-06P**FF**T-EE0002*	M12A-08P**MM**T-EE0002*	M12A-08P**FF**T-EE0002*
-	-	MSAS-06P**MM**P-EE0001*	MSAS-06P**FF**P-EE0001*	MSAS-08P**MM**P-EE0001*	MSAS-08P**FF**P-EE0001*
-	-	MSAS-06P**MM**R-EE0001*	MSAS-06P**FF**R-EE0001*	MSAS-08P**MM**R-EE0001	MSAS-08P**FF**R-EE0001
-	-	MSAS-06P**MM**T-EE0001*	MSAS-06P**FF**T-EE0001*	MSAS-08P**MM**T-EE0001	MSAS-08P**FF**T-EE0001
-	-	MSAS-06P**MM**T-EE0002*	MSAS-06P**FF**T-EE0002*	MSAS-08P**MM**T-EE0002*	MSAS-08P**FF**T-EE0002*
-	-	APP**M**-AAA**M**A012-006 (Straight) / APP**M**-AAA**M**A012-005 (Right Angle)			
-	-	APP**M**-AAA**M**A012-001			
-	-	APP**M**-AAA**F**A012-014 (Straight) / APP**M**-AAA**F**A012-005 (Right Angle)			
-	-	APP**M**-AAA**F**A012-001			
-	-	-			
-	-	APP**M**-AAA**M**A012-002			
-	-	APP**M**-AAA**F**A012-012 (Straight) / APP**M**-AAA**F**A012-006 (Right Angle)			
-	-	APP**M**-AAA**F**A012-002			

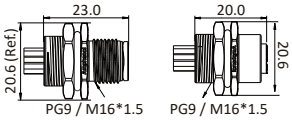
Panel Cut-Out



Number of Contacts	8		8
Coding	X (CAT.6A)		Y (Hybrid)*
Rated Voltage (AC/DC)	30V		60V
Nominal current	2A		0.5A / 6A
Pin Assignment	MM	FF	FF
MM: Male Connector Male Contact **FF**: Female Connector Female Contact **FI** : Female Connector Male + Female Contact			

M12 Bulkhead / Receptacle With UL1061 PVC Wires, Hexagonal Flange, **REAR** Fastened Nut
⑩ Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm).
Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

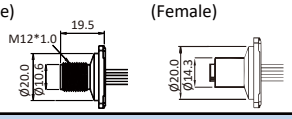
(A code, Plastic/Metal/Stainless)



PG9			
Plastic	-	-	-
Metal Nut	-	-	-
Stainless	-	-	-
M16 x 1.5			
Plastic	-	-	-
Metal Nut	-	-	-
Stainless	-	-	-

M12 Bulkhead / Receptacle With UL1061 PVC Wires, 26mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws
⑩ Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm).
Standard Lengths: (**25**) 250mm and (50) 500mm. Higher MOQ might apply for non-standard lengths.

(Male) (Female)

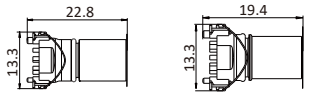


Plastic	-	-	-
Shielded	MSXS-08P**MM**C-SS8E ⑩*	MSXS-08P**FF**C-SS8E ⑩*	MSYS-08P**FI**C-SS8E ⑩*
Stainless	-	-	-
Stainless Shielded	SMSXS-08P**MM**C-SS8E ⑩*	SMSXS-08P**FF**C-SS8E ⑩*	SMSYS-08P**FI**C-SS8E ⑩*

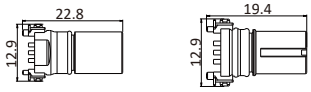
M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

A Code

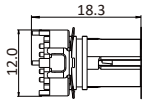
Male (Shielded) Female (Shielded)



(Non Shielded) (Non Shielded)



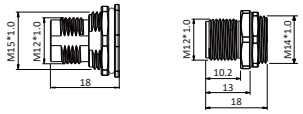
X Code



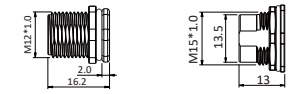
Unshielded	THR Straight	-	-	-
	THR Right Angle	-	-	-
	SMD Straight	-	-	-
	SMD Straight	-	M12X-08P**FF**T-EE0001* (with O-ring Notch) M12X-08P**FF**T-EE0002* (with O-ring Notch) M12X-08P**FF**T-EE0003 (with O-ring Notch)	-
Shielded	THR Straight	-	MSXS-08P**FF**P-EE0001	-
	THR Right Angle	-	MSXS-08P**FF**R-EE0001 MSXS-08P**FF**R-EE0002	-
	SMD Straight	-	MSXS-08P**FF**T-EE0001 (with O-ring Notch)	-
	SMD Straight	-	MSXS-08P**FF**T-EE0002 (without O-ring Notch) MSXS-08P**FF**T-EE0003 (with O-ring Notch)	-

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

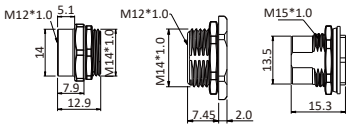
APPM-AAAMA012-001 APPM-AAAMA012-002



APPM-AAAMA012-005 APPM-AAAFA012-001



APPM-AAAFA012-002 APPM-AAAFA012-004 APPM-AAAFA012-014

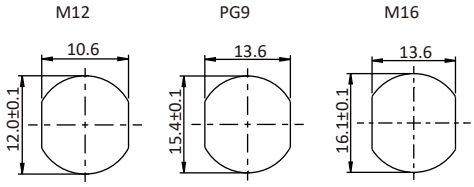


Front Fastened, THR Male	-	-
Front Fastened, SMD Male	-	-
Front Fastened, THR Female	APP**M**-AAA**F**A012-007/008 For MSXS-08P**FF**R-EE0001	-
Front Fastened, SMD Female	APP**M**-AAA**F**A012-001 For MSXS-08P**FF**T-EE0003	-
Rear Fastened, THR Male	-	-
Rear Fastened, SMD Male	-	-
Rear Fastened, THR Female	APP**M**-AAA**F**A012-009/010 For MSXS-08P**FF**R-EE0001 APP**M**-AAA**F**A012-011 For MSXS-08P**FF**R-EE0002 APP**M**-AAA**F**A012-013 For MSXS-08P**FF**P-EE0001	-
Rear Fastened, SMD Female	APP**M**-AAA**F**A012-002 For MSXS-08P**FF**T-EE0003 APP**M**-AAA**F**A012-004 For MSXS-08P**FF**T-EE0001/0002	-

*** Upon Request**

10		12		17	
A		A		A	
30V		30V		30V	
1.5A		1.5A		1.5A	
MM	FF	MM	FF	MM	FF
MSAP-10PMMC-SH8B 10 * M12A-10PMMC-SH8B 10 * SM12A-10PMMC-SH8B 10 *	MSAP-10PFFC-SH8B 10 * M12A-10PFFC-SH8B 10 * SM12A-10PFFC-SH8B 10 *	MSAP-12PMMC-SH8B 10 * M12A-12PMMC-SH8B 10 * SM12A-12PMMC-SH8B 10 *	MSAP-12PFFC-SH8B 10 * M12A-12PFFC-SH8B 10 * SM12A-12PFFC-SH8B 10 *	MSAP-17PMMC-SH8B 10 * M12A-17PMMC-SH8B 10 SM12A-17PMMC-SH8B 10 *	MSAP-17PFFC-SH8B 10 * M12A-17PFFC-SH8B 10 SM12A-17PFFC-SH8B 10 *
MSAP-10PMMC-SH8C 10 * M12A-10PMMC-SH8C 10 * SM12A-10PMMC-SH8C 10 *	MSAP-10PFFC-SH8C 10 * M12A-10PFFC-SH8C 10 * SM12A-10PFFC-SH8C 10 *	MSAP-12PMMC-SH8C 10 * M12A-12PMMC-SH8C 10 * SM12A-12PMMC-SH8C 10 *	MSAP-12PFFC-SH8C 10 * M12A-12PFFC-SH8C 10 * SM12A-12PFFC-SH8C 10 *	MSAP-17PMMC-SH8C 10 * M12A-17PMMC-SH8C 10 SM12A-17PMMC-SH8C 10 *	MSAP-17PFFC-SH8C 10 * M12A-17PFFC-SH8C 10 SM12A-17PFFC-SH8C 10 *
MSAP-10PMMC-SS8E 10 * MSAS-10PMMC-SS8E 10 * SM12A-10PMMC-SS8E 10 * SMSAS-10PMMC-SS8E 10 *	MSAP-10PFFC-SS8E 10 * MSAS-10PFFC-SS8E 10 * SM12A-10PFFC-SS8E 10 * SMSAS-10PFFC-SS8E 10 *	MSAP-12PMMC-SS8E 10 * MSAS-12PMMC-SS8E 10 * SM12A-12PMMC-SS8E 10 * SMSAS-12PMMC-SS8E 10 *	MSAP-12PFFC-SS8E 10 * MSAS-12PFFC-SS8E 10 * SM12A-12PFFC-SS8E 10 * SMSAS-12PFFC-SS8E 10 *	MSAP-17PMMC-SS8E 10 * MSAS-17PMMC-SS8E 10 * SM12A-17PMMC-SS8E 10 * SMSAS-17PMMC-SS8E 10 *	MSAP-17PFFC-SS8E 10 * MSAS-17PFFC-SS8E 10 * SM12A-17PFFC-SS8E 10 * SMSAS-17PFFC-SS8E 10 *
M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers					
M12A-10PMMP-EE0001* M12A-10PMMR-EE0001* M12A-10PMMT-EE0001*	M12A-10PFFP-EE0001* M12A-10PFFR-EE0001* M12A-10PFFT-EE0001*	M12A-12PMMP-EE0001 M12A-12PMMR-EE0001* M12A-12PMMT-EE0001	M12A-12PFFP-EE0001* M12A-12PFFR-EE0001* M12A-12PFFT-EE0001*	M12A-17PMMP-EE0001* M12A-17PMMR-EE0001* M12A-17PMMT-EE0001*	M12A-17PFFP-EE0001* M12A-17PFFR-EE0001* M12A-17PFFT-EE0001*
M12A-10PMMT-EE0002*	M12A-10PFFT-EE0002*	M12A-12PMMT-EE0002*	M12A-12PFFT-EE0002*	M12A-17PMMT-EE0002*	M12A-17PFFT-EE0002*
MSAS-10PMMP-EE0001*	MSAS-10PFFP-EE0001*	MSAS-12PMMP-EE0001*	MSAS-12PFFP-EE0001*	MSAS-17PMMP-EE0001*	MSAS-17PFFP-EE0001*
MSAS-10PMMR-EE0001*	MSAS-10PFFR-EE0001*	MSAS-12PMMR-EE0001*	MSAS-12PFFR-EE0001*	MSAS-17PMMR-EE0001*	MSAS-17PFFR-EE0001*
MSAS-10PMMT-EE0001*	MSAS-10PFFT-EE0001*	MSAS-12PMMT-EE0001	MSAS-12PFFT-EE0001*	MSAS-17PMMT-EE0001*	MSAS-17PFFT-EE0001*
MSAS-10PMMT-EE0002*	MSAS-10PFFT-EE0002*	MSAS-12PMMT-EE0002*	MSAS-12PFFT-EE0002*	MSAS-17PMMT-EE0002*	MSAS-17PFFT-EE0002*
APPM-AAAMA012-006 (Straight) / APPM-AAAMA012-005 (Right Angle)					
APPM-AAAMA012-001					
APPM-AAAFA012-014 (Straight) / APPM-AAAFA012-005 (Right Angle)					
APPM-AAAFA012-001					
-					
APPM-AAAMA012-002					
APPM-AAAFA012-012 (Straight) / APPM-AAAFA012-006 (Right Angle)					
APPM-AAAFA012-002					

Panel Cut-Out

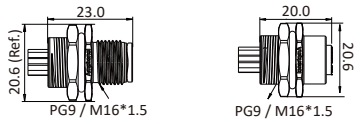


Number of Contacts	18	
Coding	A	
Rated Voltage (AC/DC)	30V	
Nominal current	0.5A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact	MM	FF

M12 Bulkhead / Receptacle With UL1061 PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).
Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

(MM) (FF)

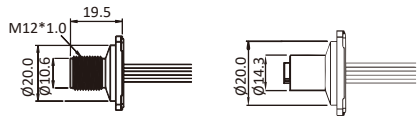


PG9		
Plastic	MSAP-18P**MM**C-SH8B 10*	MSAP-18P**FF**C-SH8B 10*
Metal Nut	M12A-18P**MM**C-SH8B 10*	M12A-18P**FF**C-SH8B 10*
Stainless	SM12A-18P**MM**C-SH8B 10*	SM12A-18P**FF**C-SH8B 10*
M16 x 1.5		
Plastic	MSAP-18P**MM**C-SH8C 10*	MSAP-18P**FF**C-SH8C 10*
Metal Nut	M12A-18P**MM**C-SH8C 10*	M12A-18P**FF**C-SH8C 10*
Stainless	SM12A-18P**MM**C-SH8C 10*	SM12A-18P**FF**C-SH8C 10*

M12 Bulkhead / Receptacle With UL1061 PVC Wires, 26mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) (**A0**) 1,000mm~(**A5**) 1,500mm (Per 100mm).
Standard Lengths: (**25**) 250mm and (**50**) 500mm. Higher MOQ Might Apply For Non-Standard Lengths.

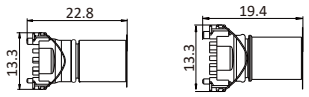
(Male) (Female)



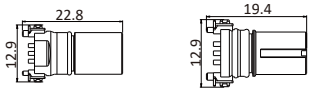
Plastic	MSAP-18P**MM**C-SS8E 10*	MSAP-18P**FF**C-SS8E 10*
Shielded	MSAS-18P**MM**C-SS8E 10*	MSAS-18P**FF**C-SS8E 10*
Stainless	SM12A-18P**MM**C-SS8E 10*	SM12A-18P**FF**C-SS8E 10*
Stainless Shielded	SMSAS-18P**MM**C-SS8E 10*	SMSAS-18P**FF**C-SS8E 10*

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

Male (Shielded) Female (Shielded)



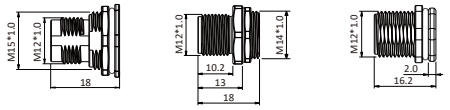
(Non Shielded) (Non Shielded)



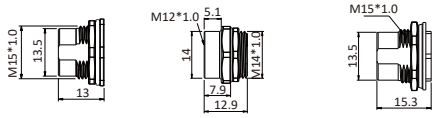
Unshielded	THR Straight	M12A-18P**MM**P-EE0001*	M12A-18P**FF**P-EE0001*
	THR Right Angle	M12A-18P**MM**R-EE0001*	M12A-18P**FF**R-EE0001*
	SMD Straight	M12A-18P**MM**T-EE0001*	M12A-18P**FF**T-EE0001*
	SMD Straight	M12A-18P**MM**T-EE0002*	M12A-18P**FF**T-EE0002*
Shielded	THR Straight	MSAS-18P**MM**P-EE0001*	MSAS-18P**FF**P-EE0001*
	THR Right Angle	MSAS-18P**MM**R-EE0001*	MSAS-18P**FF**R-EE0001*
	SMD Straight	MSAS-18P**MM**T-EE0001*	MSAS-18P**FF**T-EE0001*
	SMD Straight	MSAS-18P**MM**T-EE0002*	MSAS-18P**FF**T-EE0002*

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

APPM-AAAMA012-001 APPM-AAAMA012-002 APPM-AAAMA012-005



APPM-AAAFA012-001 APPM-AAAFA012-002 APPM-AAAFA012-014



Front Fastened, THR Male	APP**M**-AAA**M**A012-006 (Straight) / APP**M**-AAA**M**A012-005 (Right Angle)
Front Fastened, SMD Male	APP**M**-AAA**M**A012-001
Front Fastened, THR Female	APP**M**-AAA**F**A012-014 (Straight) / APP**M**-AAA**F**A012-005 (Right Angle)
Front Fastened, SMD Female	APP**M**-AAA**F**A012-001
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	APP**M**-AAA**M**A012-002
Rear Fastened, THR Female	APP**M**-AAA**F**A012-012 (Straight) / APP**M**-AAA**F**A012-006 (Right Angle)
Rear Fastened, SMD Female	APP**M**-AAA**F**A012-002

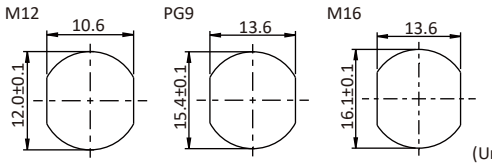
* Upon Request

24		28	
A		A	
30V		30V	
0.5A		0.5A	
MM	FF	MM	FF
MSAP-24P**MM**C-SH8B 10 *	MSAP-24P**FF**C-SH8B 10 *	MSAP-28P**MM**C-SH8B 10 *	MSAP-28P**FF**C-SH8B 10 *
M12A-24P**MM**C-SH8B 10 *	M12A-24P**FF**C-SH8B 10 *	M12A-28P**MM**C-SH8B 10 *	M12A-28P**FF**C-SH8B 10 *
SM12A-24P**MM**C-SH8B 10 *	SM12A-24P**FF**C-SH8B 10 *	SM12A-28P**MM**C-SH8B 10 *	SM12A-28P**FF**C-SH8B 10 *
MSAP-24P**MM**C-SH8C 10 *	MSAP-24P**FF**C-SH8C 10 *	MSAP-28P**MM**C-SH8C 10 *	MSAP-28P**FF**C-SH8C 10 *
M12A-24P**MM**C-SH8C 10 *	M12A-24P**FF**C-SH8C 10 *	M12A-28P**MM**C-SH8C 10 *	M12A-28P**FF**C-SH8C 10 *
SM12A-24P**MM**C-SH8C 10 *	SM12A-24P**FF**C-SH8C 10 *	SM12A-28P**MM**C-SH8C 10 *	SM12A-28P**FF**C-SH8C 10 *
MSAP-24P**MM**C-SS8E 10 *	MSAP-24P**FF**C-SS8E 10 *	MSAP-28P**MM**C-SS8E 10 *	MSAP-28P**FF**C-SS8E 10 *
MSAS-24P**MM**C-SS8E 10 *	MSAS-24P**FF**C-SS8E 10 *	MSAS-28P**MM**C-SS8E 10 *	MSAS-28P**FF**C-SS8E 10 *
SM12A-24P**MM**C-SS8E 10 *	SM12A-24P**FF**C-SS8E 10 *	SM12A-28P**MM**C-SS8E 10 *	SM12A-28P**FF**C-SS8E 10 *
SMSAS-24P**MM**C-SS8E 10 *	SMSAS-24P**FF**C-SS8E 10 *	SMSAS-28P**MM**C-SS8E 10 *	SMSAS-28P**FF**C-SS8E 10 *
M12A-24P**MM**P-EE0001*	M12A-24P**FF**P-EE0001*	M12A-28P**MM**P-EE0001*	M12A-28P**FF**P-EE0001*
M12A-24P**MM**R-EE0001*	M12A-24P**FF**R-EE0001*	M12A-28P**MM**R-EE0001*	M12A-28P**FF**R-EE0001*
M12A-24P**MM**T-EE0001*	M12A-24P**FF**T-EE0001*	M12A-28P**MM**T-EE0001*	M12A-28P**FF**T-EE0001*
M12A-24P**MM**T-EE0002*	M12A-24P**FF**T-EE0002*	M12A-28P**MM**T-EE0002*	M12A-28P**FF**T-EE0002*
MSAS-24P**MM**P-EE0001*	MSAS-24P**FF**P-EE0001*	MSAS-28P**MM**P-EE0001*	MSAS-28P**FF**P-EE0001*
MSAS-24P**MM**R-EE0001*	MSAS-24P**FF**R-EE0001*	MSAS-28P**MM**R-EE0001*	MSAS-28P**FF**R-EE0001*
MSAS-24P**MM**T-EE0001*	MSAS-24P**FF**T-EE0001*	MSAS-28P**MM**T-EE0001*	MSAS-28P**FF**T-EE0001*
MSAS-24P**MM**T-EE0002*	MSAS-24P**FF**T-EE0002*	MSAS-28P**MM**T-EE0002*	MSAS-28P**FF**T-EE0002*
APP**M**-AAA**M**A012-006 (Straight) / APP**M**-AAA**M**A012-005 (Right Angle)			
APP**M**-AAA**M**A012-001			
APP**M**-AAA**F**A012-014 (Straight) / APP**M**-AAA**F**A012-005 (Right Angle)			
APP**M**-AAA**F**A012-001			
-			
APP**M**-AAA**M**A012-002			
APP**M**-AAA**F**A012-012 (Straight) / APP**M**-AAA**F**A012-006 (Right Angle)			
APP**M**-AAA**F**A012-002			

M12 L-Code

Bulkhead / Receptacle & Receptacle With Wires, Hexagonal Flange, Front Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

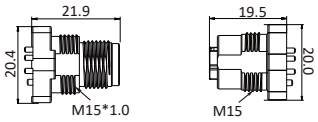
PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

Number of Contacts	2	
Coding	L	
Rated Voltage (AC/DC)	63V	
Nominal current	16A	
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	MM	FF

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

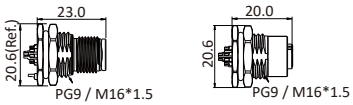
(K, L code, Metal/Shielded/Stainless)

(MM) (FF)



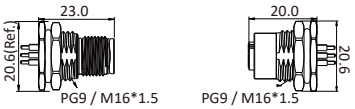
(M code, Metal/Shielded/Stainless)

(MM) (FF)



(T code, Metal/Shielded/Stainless)

(MM) (FF)



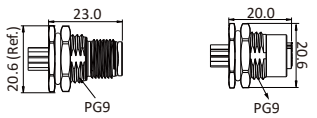
PG9			
Plastic	Solder Pins	MSLP-02P**MM**S-SF8001 *	MSLP-02P**FF**S-SF8001 *
	Straight PCB	MSLP-02P**MM**P-SF8001 *	MSLP-02P**FF**P-SF8001 *
	Right Angle PCB	MSLP-02P**MM**R-SF8001 *	MSLP-02P**FF**R-SF8001 *
Metal Nut	Solder Pins	M12L-02P**MM**S-SF8001 *	M12L-02P**FF**S-SF8001 *
	Straight PCB	M12L-02P**MM**P-SF8001 *	M12L-02P**FF**P-SF8001 *
	Right Angle PCB	M12L-02P**MM**R-SF8001 *	M12L-02P**FF**R-SF8001 *
Shielded	Solder Pins	MSLS-02P**MM**S-SF8001 *	MSLS-02P**FF**S-SF8001 *
	Straight PCB	MSLS-02P**MM**P-SF8001 *	MSLS-02P**FF**P-SF8001 *
	Right Angle PCB	MSLS-02P**MM**R-SF8001 *	MSLS-02P**FF**R-SF8001 *
Stainless	Solder Pins	SM12L-02P**MM**S-SF8001 *	SM12L-02P**FF**S-SF8001 *
	Straight PCB	SM12L-02P**MM**P-SF8001 *	SM12L-02P**FF**P-SF8001 *
	Right Angle PCB	SM12L-02P**MM**R-SF8001 *	SM12L-02P**FF**R-SF8001 *
Stainless Shielded	Solder Pins	SMSLS-02P**MM**S-SF8001 *	SMSLS-02P**FF**S-SF8001 *
	Straight PCB	SMSLS-02P**MM**P-SF8001 *	SMSLS-02P**FF**P-SF8001 *
	Right Angle PCB	SMSLS-02P**MM**R-SF8001 *	SMSLS-02P**FF**R-SF8001 *
M16 x 1.5			
Plastic	Solder Pins	MSLP-02P**MM**S-SF8002 *	MSLP-02P**FF**S-SF8002 *
	Straight PCB	MSLP-02P**MM**P-SF8002 *	MSLP-02P**FF**P-SF8002 *
	Right Angle PCB	MSLP-02P**MM**R-SF8002 *	MSLP-02P**FF**R-SF8002 *
Metal Nut	Solder Pins	M12L-02P**MM**S-SF8002 *	M12L-02P**FF**S-SF8002 *
	Straight PCB	M12L-02P**MM**P-SF8002 *	M12L-02P**FF**P-SF8002 *
	Right Angle PCB	M12L-02P**MM**R-SF8002 *	M12L-02P**FF**R-SF8002 *
Shielded	Solder Pins	MSLS-02P**MM**S-SF8002 *	MSLS-02P**FF**S-SF8002 *
	Straight PCB	MSLS-02P**MM**P-SF8002 *	MSLS-02P**FF**P-SF8002 *
	Right Angle PCB	MSLS-02P**MM**R-SF8002 *	MSLS-02P**FF**R-SF8002 *
Stainless	Solder Pins	SM12L-02P**MM**S-SF8002 *	SM12L-02P**FF**S-SF8002 *
	Straight PCB	SM12L-02P**MM**P-SF8002 *	SM12L-02P**FF**P-SF8002 *
	Right Angle PCB	SM12L-02P**MM**R-SF8002 *	SM12L-02P**FF**R-SF8002 *
Stainless Shielded	Solder Pins	SMSLS-02P**MM**S-SF8002 *	SMSLS-02P**FF**S-SF8002 *
	Straight PCB	SMSLS-02P**MM**P-SF8002 *	SMSLS-02P**FF**P-SF8002 *
	Right Angle PCB	SMSLS-02P**MM**R-SF8002 *	SMSLS-02P**FF**R-SF8002 *

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

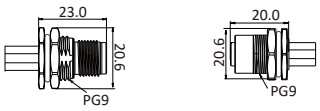
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(K, L, M code, Metal/Shielded/Stainless)

(MM) (FF)



(T code, Metal/Shielded/Stainless)



PG9		
Plastic	MSLP-02P**MM**S-SF8B10 *	MSLP-02P**FF**S-SF8B10 *
Metal Nut	M12L-02P**MM**S-SF8B10 *	M12L-02P**FF**S-SF8B10 *
Shielded	MSLS-02P**MM**S-SF8B10 *	MSLS-02P**FF**S-SF8B10 *
Stainless	SM12L-02P**MM**S-SF8B10 *	SM12L-02P**FF**S-SF8B10 *
Stainless Shielded	SMSLS-02P**MM**S-SF8B10 *	SMSLS-02P**FF**S-SF8B10 *

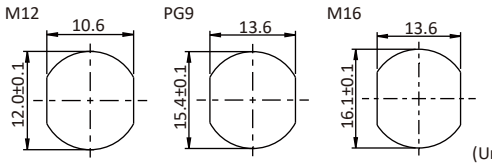
* Upon Request

2		3 (2+PE)		3 (2+PE)	
T		K		M	
63V		630V		630V	
12A		16A		8A	
MM	FF	Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground
MSTP-02PMMS-SF8001*	MSTP-02PFFS-SF8001*	MSKP-03PMES-SF8001*	MSKP-03PFDS-SF8001*	MSMP-03PMES-SF8001*	MSMP-03PFDS-SF8001*
MSTP-02PMMP-SF8001*	MSTP-02PFFP-SF8001*	MSKP-03PMEP-SF8001*	MSKP-03PFDP-SF8001*	MSMP-03PMEP-SF8001*	MSMP-03PFDP-SF8001*
MSTP-02PMMR-SF8001*	MSTP-02PFFR-SF8001*	MSKP-03PMER-SF8001*	MSKP-03PFDR-SF8001*	MSMP-03PMER-SF8001*	MSMP-03PFDR-SF8001*
M12T-02PMMS-SF8001*	M12T-02PFFS-SF8001*	M12K-03PMES-SF8001*	M12K-03PFDS-SF8001*	M12M-03PMES-SF8001*	M12M-03PFDS-SF8001*
M12T-02PMMP-SF8001*	M12T-02PFFP-SF8001*	M12K-03PMEP-SF8001*	M12K-03PFDP-SF8001*	M12M-03PMEP-SF8001*	M12M-03PFDP-SF8001*
M12T-02PMMR-SF8001*	M12T-02PFFR-SF8001*	M12K-03PMER-SF8001*	M12K-03PFDR-SF8001*	M12M-03PMER-SF8001*	M12M-03PFDR-SF8001*
MSTS-02PMMS-SF8001*	MSTS-02PFFS-SF8001*	MSKS-03PMES-SF8001*	MSKS-03PFDS-SF8001*	MSMS-03PMES-SF8001*	MSMS-03PFDS-SF8001*
MSTS-02PMMP-SF8001*	MSTS-02PFFP-SF8001*	MSKS-03PMEP-SF8001*	MSKS-03PFDP-SF8001*	MSMS-03PMEP-SF8001*	MSMS-03PFDP-SF8001*
MSTS-02PMMR-SF8001*	MSTS-02PFFR-SF8001*	MSKS-03PMER-SF8001*	MSKS-03PFDR-SF8001*	MSMS-03PMER-SF8001*	MSMS-03PFDR-SF8001*
SM12T-02PMMS-SF8001*	SM12T-02PFFS-SF8001*	SM12K-03PMES-SF8001*	SM12K-03PFDS-SF8001*	SM12M-03PMES-SF8001*	SM12M-03PFDS-SF8001*
SM12T-02PMMP-SF8001*	SM12T-02PFFP-SF8001*	SM12K-03PMEP-SF8001*	SM12K-03PFDP-SF8001*	SM12M-03PMEP-SF8001*	SM12M-03PFDP-SF8001*
SM12T-02PMMR-SF8001*	SM12T-02PFFR-SF8001*	SM12K-03PMER-SF8001*	SM12K-03PFDR-SF8001*	SM12M-03PMER-SF8001*	SM12M-03PFDR-SF8001*
SMSTS-02PMMS-SF8001*	SMSTS-02PFFS-SF8001*	SMSKS-03PMES-SF8001*	SMSKS-03PFDS-SF8001*	SMSMS-03PMES-SF8001*	SMSMS-03PFDS-SF8001*
SMSTS-02PMMP-SF8001*	SMSTS-02PFFP-SF8001*	SMSKS-03PMEP-SF8001*	SMSKS-03PFDP-SF8001*	SMSMS-03PMEP-SF8001*	SMSMS-03PFDP-SF8001*
SMSTS-02PMMR-SF8001*	SMSTS-02PFFR-SF8001*	SMSKS-03PMER-SF8001*	SMSKS-03PFDR-SF8001*	SMSMS-03PMER-SF8001*	SMSMS-03PFDR-SF8001*
MSTP-02PMMS-SF8002*	MSTP-02PFFS-SF8002*	MSKP-03PMES-SF8002*	MSKP-03PFDS-SF8002*	MSMP-03PMES-SF8002*	MSMP-03PFDS-SF8002*
MSTP-02PMMP-SF8002*	MSTP-02PFFP-SF8002*	MSKP-03PMEP-SF8002*	MSKP-03PFDP-SF8002*	MSMP-03PMEP-SF8002*	MSMP-03PFDP-SF8002*
MSTP-02PMMR-SF8002*	MSTP-02PFFR-SF8002*	MSKP-03PMER-SF8002*	MSKP-03PFDR-SF8002*	MSMP-03PMER-SF8002*	MSMP-03PFDR-SF8002*
M12T-02PMMS-SF8002*	M12T-02PFFS-SF8002*	M12K-03PMES-SF8002*	M12K-03PFDS-SF8002*	M12M-03PMES-SF8002*	M12M-03PFDS-SF8002*
M12T-02PMMP-SF8002*	M12T-02PFFP-SF8002*	M12K-03PMEP-SF8002*	M12K-03PFDP-SF8002*	M12M-03PMEP-SF8002*	M12M-03PFDP-SF8002*
M12T-02PMMR-SF8002*	M12T-02PFFR-SF8002*	M12K-03PMER-SF8002*	M12K-03PFDR-SF8002*	M12M-03PMER-SF8002*	M12M-03PFDR-SF8002*
MSTS-02PMMS-SF8002*	MSTS-02PFFS-SF8002*	MSKS-03PMES-SF8002*	MSKS-03PFDS-SF8002*	MSMS-03PMES-SF8002*	MSMS-03PFDS-SF8002*
MSTS-02PMMP-SF8002*	MSTS-02PFFP-SF8002*	MSKS-03PMEP-SF8002*	MSKS-03PFDP-SF8002*	MSMS-03PMEP-SF8002*	MSMS-03PFDP-SF8002*
MSTS-02PMMR-SF8002*	MSTS-02PFFR-SF8002*	MSKS-03PMER-SF8002*	MSKS-03PFDR-SF8002*	MSMS-03PMER-SF8002*	MSMS-03PFDR-SF8002*
SM12T-02PMMS-SF8002*	SM12T-02PFFS-SF8002*	SM12K-03PMES-SF8002*	SM12K-03PFDS-SF8002*	SM12M-03PMES-SF8002*	SM12M-03PFDS-SF8002*
SM12T-02PMMP-SF8002*	SM12T-02PFFP-SF8002*	SM12K-03PMEP-SF8002*	SM12K-03PFDP-SF8002*	SM12M-03PMEP-SF8002*	SM12M-03PFDP-SF8002*
SM12T-02PMMR-SF8002*	SM12T-02PFFR-SF8002*	SM12K-03PMER-SF8002*	SM12K-03PFDR-SF8002*	SM12M-03PMER-SF8002*	SM12M-03PFDR-SF8002*
SMSTS-02PMMS-SF8002*	SMSTS-02PFFS-SF8002*	SMSKS-03PMES-SF8002*	SMSKS-03PFDS-SF8002*	SMSMS-03PMES-SF8002*	SMSMS-03PFDS-SF8002*
SMSTS-02PMMP-SF8002*	SMSTS-02PFFP-SF8002*	SMSKS-03PMEP-SF8002*	SMSKS-03PFDP-SF8002*	SMSMS-03PMEP-SF8002*	SMSMS-03PFDP-SF8002*
SMSTS-02PMMR-SF8002*	SMSTS-02PFFR-SF8002*	SMSKS-03PMER-SF8002*	SMSKS-03PFDR-SF8002*	SMSMS-03PMER-SF8002*	SMSMS-03PFDR-SF8002*
MSTP-02PMMS-SF8B10*	MSTP-02PFFS-SF8B10*	MSKP-03PMES-SF8B10*	MSKP-03PFDS-SF8B10*	MSMP-03PMES-SF8B10*	MSMP-03PFDS-SF8B10*
M12T-02PMMS-SF8B10*	M12T-02PFFS-SF8B10*	M12K-03PMES-SF8B10*	M12K-03PFDS-SF8B10*	M12M-03PMES-SF8B10*	M12M-03PFDS-SF8B10*
MSTS-02PMMS-SF8B10*	MSTS-02PFFS-SF8B10*	MSKS-03PMES-SF8B10*	MSKS-03PFDS-SF8B10*	MSMS-03PMES-SF8B10*	MSMS-03PFDS-SF8B10*
SM12T-02PMMS-SF8B10*	SM12T-02PFFS-SF8B10*	SM12K-03PMES-SF8B10*	SM12K-03PFDS-SF8B10*	SM12M-03PMES-SF8B10*	SM12M-03PFDS-SF8B10*
SMSTS-02PMMS-SF8B10*	SMSTS-02PFFS-SF8B10*	SMSKS-03PMES-SF8B10*	SMSKS-03PFDS-SF8B10*	SMSMS-03PMES-SF8B10*	SMSMS-03PFDS-SF8B10*

M12 L-Code

Bulkhead / Receptacle & Receptacle With Wires, Hexagonal Flange, Front Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

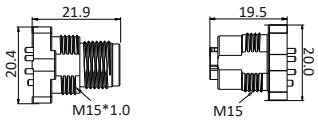
PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

Number of Contacts	3 (2+FE)	
Coding	L	
Rated Voltage (AC/DC)	63V	
Nominal current	16A	
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact **ME**: Male Connector Male PWD + Female GND **FD**: Female Connector Female PWD + Male GND	Male Power / Female Ground	Female Power / Male Ground

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

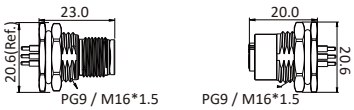
(L code, Metal/Shielded/Stainless)

(MM) (FF)



(S, T code, Metal/Shielded/Stainless)

(MM) (FF)



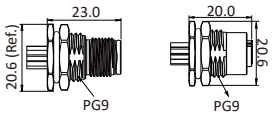
PG9			
Plastic	Solder Pins	MSLP-03P**M**E**S**-SF8001*	MSLP-03P**FD**S-SF8001*
	Straight PCB	MSLP-03P**M**E**P**-SF8001*	MSLP-03P**FD**P-SF8001*
	Right Angle PCB	MSLP-03P**M**E**R**-SF8001*	MSLP-03P**FD**R-SF8001*
Metal Nut	Solder Pins	M12L-03P**M**E**S**-SF8001*	M12L-03P**FD**S-SF8001*
	Straight PCB	M12L-03P**M**E**P**-SF8001*	M12L-03P**FD**P-SF8001*
	Right Angle PCB	M12L-03P**M**E**R**-SF8001*	M12L-03P**FD**R-SF8001*
Shielded	Solder Pins	MSLS-03P**M**E**S**-SF8001*	MSLS-03P**FD**S-SF8001*
	Straight PCB	MSLS-03P**M**E**P**-SF8001*	MSLS-03P**FD**P-SF8001*
	Right Angle PCB	MSLS-03P**M**E**R**-SF8001*	MSLS-03P**FD**R-SF8001*
Stainless	Solder Pins	SM12L-03P**M**E**S**-SF8001*	SM12L-03P**FD**S-SF8001*
	Straight PCB	SM12L-03P**M**E**P**-SF8001*	SM12L-03P**FD**P-SF8001*
	Right Angle PCB	SM12L-03P**M**E**R**-SF8001*	SM12L-03P**FD**R-SF8001*
Stainless Shielded	Solder Pins	SMSLS-03P**M**E**S**-SF8001*	SMSLS-03P**FD**S-SF8001*
	Straight PCB	SMSLS-03P**M**E**P**-SF8001*	SMSLS-03P**FD**P-SF8001*
	Right Angle PCB	SMSLS-03P**M**E**R**-SF8001*	SMSLS-03P**FD**R-SF8001*
M16 x 1.5			
Plastic	Solder Pins	MSLP-03P**M**E**S**-SF8002*	MSLP-03P**FD**S-SF8002*
	Straight PCB	MSLP-03P**M**E**P**-SF8002*	MSLP-03P**FD**P-SF8002*
	Right Angle PCB	MSLP-03P**M**E**R**-SF8002*	MSLP-03P**FD**R-SF8002*
Metal Nut	Solder Pins	M12L-03P**M**E**S**-SF8002*	M12L-03P**FD**S-SF8002*
	Straight PCB	M12L-03P**M**E**P**-SF8002*	M12L-03P**FD**P-SF8002*
	Right Angle PCB	M12L-03P**M**E**R**-SF8002*	M12L-03P**FD**R-SF8002*
Shielded	Solder Pins	MSLS-03P**M**E**S**-SF8002*	MSLS-03P**FD**S-SF8002*
	Straight PCB	MSLS-03P**M**E**P**-SF8002*	MSLS-03P**FD**P-SF8002*
	Right Angle PCB	MSLS-03P**M**E**R**-SF8002*	MSLS-03P**FD**R-SF8002*
Stainless	Solder Pins	SM12L-03P**M**E**S**-SF8002*	SM12L-03P**FD**S-SF8002*
	Straight PCB	SM12L-03P**M**E**P**-SF8002*	SM12L-03P**FD**P-SF8002*
	Right Angle PCB	SM12L-03P**M**E**R**-SF8002*	SM12L-03P**FD**R-SF8002*
Stainless Shielded	Solder Pins	SMSLS-03P**M**E**S**-SF8002*	SMSLS-03P**FD**S-SF8002*
	Straight PCB	SMSLS-03P**M**E**P**-SF8002*	SMSLS-03P**FD**P-SF8002*
	Right Angle PCB	SMSLS-03P**M**E**R**-SF8002*	SMSLS-03P**FD**R-SF8002*

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

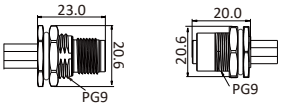
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(MM) (FF)

(L code Metal/ Shielded/ Stainless)



(S, T code Metal/ Shielded/ Stainless)



PG9		
Plastic	MSLP-03P**M**E**S**-SF8B10*	MSLP-03P**FD**S-SF8B10*
Metal Nut	M12L-03P**M**E**S**-SF8B10*	M12L-03P**FD**S-SF8B10*
Shielded	MSLS-03P**M**E**S**-SF8B10*	MSLS-03P**FD**S-SF8B10*
Stainless	SM12L-03P**M**E**S**-SF8B10*	SM12L-03P**FD**S-SF8B10*
Stainless Shielded	SMSLS-03P**M**E**S**-SF8B10*	SMSLS-03P**FD**S-SF8B10*

* Upon Request

3		3 (2+PE)		3	
L		S		T	
63V		630V		63V	
16A		12A		12A	
MM	FF	MM	FF	MM	FF
MSLP-03PMMS-SF8001*	MSLP-03PFFS-SF8001*	MSSP-03PMMS-SF8001*	MSSP-03PFFS-SF8001*	MSTP-03PMMS-SF8001*	MSTP-03PFFS-SF8001*
MSLP-03PMMP-SF8001*	MSLP-03PFFP-SF8001*	MSSP-03PMMP-SF8001*	MSSP-03PFFP-SF8001*	MSTP-03PMMP-SF8001*	MSTP-03PFFP-SF8001*
MSLP-03PMMR-SF8001*	MSLP-03PFFR-SF8001*	MSSP-03PMMR-SF8001*	MSSP-03PFFR-SF8001*	MSTP-03PMMR-SF8001*	MSTP-03PFFR-SF8001*
M12L-03PMMS-SF8001*	M12L-03PFFS-SF8001*	M12S-03PMMS-SF8001*	M12S-03PFFS-SF8001*	M12T-03PMMS-SF8001*	M12T-03PFFS-SF8001*
M12L-03PMMP-SF8001*	M12L-03PFFP-SF8001*	M12S-03PMMP-SF8001*	M12S-03PFFP-SF8001*	M12T-03PMMP-SF8001*	M12T-03PFFP-SF8001*
M12L-03PMMR-SF8001*	M12L-03PFFR-SF8001*	M12S-03PMMR-SF8001*	M12S-03PFFR-SF8001*	M12T-03PMMR-SF8001*	M12T-03PFFR-SF8001*
MSLS-03PMMS-SF8001*	MSLS-03PFFS-SF8001*	MSSS-03PMMS-SF8001*	MSSS-03PFFS-SF8001*	MSTS-03PMMS-SF8001*	MSTS-03PFFS-SF8001*
MSLS-03PMMP-SF8001*	MSLS-03PFFP-SF8001*	MSSS-03PMMP-SF8001*	MSSS-03PFFP-SF8001*	MSTS-03PMMP-SF8001*	MSTS-03PFFP-SF8001*
MSLS-03PMMR-SF8001*	MSLS-03PFFR-SF8001*	MSSS-03PMMR-SF8001*	MSSS-03PFFR-SF8001*	MSTS-03PMMR-SF8001*	MSTS-03PFFR-SF8001*
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SMSLS-03PMMS-SF8001*	SMSLS-03PFFS-SF8001*	SMSSS-03PMMS-SF8001*	SMSSS-03PFFS-SF8001*	SMSTS-03PMMS-SF8001*	SMSTS-03PFFS-SF8001*
SMSLS-03PMMP-SF8001*	SMSLS-03PFFP-SF8001*	SMSSS-03PMMP-SF8001*	SMSSS-03PFFP-SF8001*	SMSTS-03PMMP-SF8001*	SMSTS-03PFFP-SF8001*
SMSLS-03PMMR-SF8001*	SMSLS-03PFFR-SF8001*	SMSSS-03PMMR-SF8001*	SMSSS-03PFFR-SF8001*	SMSTS-03PMMR-SF8001*	SMSTS-03PFFR-SF8001*
MSLP-03PMMS-SF8002*	MSLP-03PFFS-SF8002*	MSSP-03PMMS-SF8002*	MSSP-03PFFS-SF8002*	MSTP-03PMMS-SF8002*	MSTP-03PFFS-SF8002*
MSLP-03PMMP-SF8002*	MSLP-03PFFP-SF8002*	MSSP-03PMMP-SF8002*	MSSP-03PFFP-SF8002*	MSTP-03PMMP-SF8002*	MSTP-03PFFP-SF8002*
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M12L-03PMMS-SF8002*	M12L-03PFFS-SF8002*	M12S-03PMMS-SF8002*	M12S-03PFFS-SF8002*	M12T-03PMMS-SF8002*	M12T-03PFFS-SF8002*
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M12L-03PMMR-SF8002*	M12L-03PFFR-SF8002*	M12S-03PMMR-SF8002*	M12S-03PFFR-SF8002*	M12T-03PMMR-SF8002*	M12T-03PFFR-SF8002*
MSLS-03PMMS-SF8002*	MSLS-03PFFS-SF8002*	MSSS-03PMMS-SF8002*	MSSS-03PFFS-SF8002*	MSTS-03PMMS-SF8002*	MSTS-03PFFS-SF8002*
MSLS-03PMMP-SF8002*	MSLS-03PFFP-SF8002*	MSSS-03PMMP-SF8002*	MSSS-03PFFP-SF8002*	MSTS-03PMMP-SF8002*	MSTS-03PFFP-SF8002*
MSLS-03PMMR-SF8002*	MSLS-03PFFR-SF8002*	MSSS-03PMMR-SF8002*	MSSS-03PFFR-SF8002*	MSTS-03PMMR-SF8002*	MSTS-03PFFR-SF8002*
SM12L-03PMMS-SF8002*	SM12L-03PFFS-SF8002*	SM12S-03PMMS-SF8002*	SM12S-03PFFS-SF8002*	SM12T-03PMMS-SF8002*	SM12T-03PFFS-SF8002*
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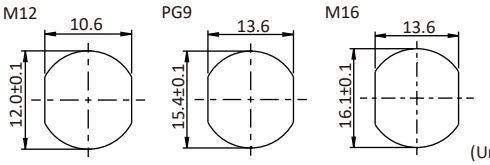
SMSLS-03PMMS-SF8002*	SMSLS-03PFFS-SF8002*	SMSSS-03PMMS-SF8002*	SMSSS-03PFFS-SF8002*	SMSTS-03PMMS-SF8002*	SMSTS-03PFFS-SF8002*
SMSLS-03PMMP-SF8002*	SMSLS-03PFFP-SF8002*	SMSSS-03PMMP-SF8002*	SMSSS-03PFFP-SF8002*	SMSTS-03PMMP-SF8002*	SMSTS-03PFFP-SF8002*
SMSLS-03PMMR-SF8002*	SMSLS-03PFFR-SF8002*	SMSSS-03PMMR-SF8002*	SMSSS-03PFFR-SF8002*	SMSTS-03PMMR-SF8002*	SMSTS-03PFFR-SF8002*
MSLP-03PMMS-SF8B10*	MSLP-03PFFS-SF8B10*	MSSP-03PMMS-SF8B10*	MSSP-03PFFS-SF8B10*	MSTP-03PMMS-SF8B10*	MSTP-03PFFS-SF8B10*
M12L-03PMMS-SF8B10*	M12L-03PFFS-SF8B10*	M12S-03PMMS-SF8B10*	M12S-03PFFS-SF8B10*	M12T-03PMMS-SF8B10*	M12T-03PFFS-SF8B10*
MSLS-03PMMS-SF8B10*	MSLS-03PFFS-SF8B10*	MSSS-03PMMS-SF8B10*	MSSS-03PFFS-SF8B10*	MSTS-03PMMS-SF8B10*	MSTS-03PFFS-SF8B10*
SM12L-03PMMS-SF8B10*	SM12L-03PFFS-SF8B10*	SM12S-03PMMS-SF8B10*	SM12S-03PFFS-SF8B10*	SM12T-03PMMS-SF8B10*	SM12T-03PFFS-SF8B10*
SMSLS-03PMMS-SF8B10*	SMSLS-03PFFS-SF8B10*	SMSSS-03PMMS-SF8B10*	SMSSS-03PFFS-SF8B10*	SMSTS-03PMMS-SF8B10*	SMSTS-03PFFS-SF8B10*

M12 K-Code

Bulkhead / Receptacle & Receptacle With Wires, Hexagonal Flange, Front Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

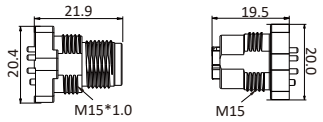
PCB 180°	PCB 90°	Solder
(P) Receptacle	(R) Receptacle	(S) Receptacle

Number of Contacts	4 (3+PE)	
Coding	K	
Rated Voltage (AC/DC)	630V	
Nominal current	16A	
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact **ME**: Male Connector Male PWD + Female GND **FD**: Female Connector Female PWD + Male GND	Male Power / Female Ground	Female Power / Male Ground

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

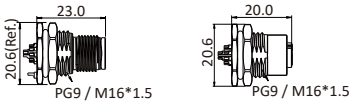
(K, L code, Metal/Shielded/Stainless)

(MM) (FF)



(M code, Metal/Shielded/Stainless)

(MM) (FF)



PG9			
Plastic	Solder Pins	MSKP-04P**ME**S-SF8001 *	MSKP-04P**FD**S-SF8001 *
	Straight PCB	MSKP-04P**ME**P-SF8001 *	MSKP-04P**FD**P-SF8001 *
	Right Angle PCB	MSKP-04P**ME**R-SF8001 *	MSKP-04P**FD**R-SF8001 *
Metal Nut	Solder Pins	M12K-04P**ME**S-SF8001 *	M12K-04P**FD**S-SF8001 *
	Straight PCB	M12K-04P**ME**P-SF8001 *	M12K-04P**FD**P-SF8001 *
	Right Angle PCB	M12K-04P**ME**R-SF8001 *	M12K-04P**FD**R-SF8001 *
Shielded	Solder Pins	MSKS-04P**ME**S-SF8001 *	MSKS-04P**FD**S-SF8001 *
	Straight PCB	MSKS-04P**ME**P-SF8001 *	MSKS-04P**FD**P-SF8001 *
	Right Angle PCB	MSKS-04P**ME**R-SF8001 *	MSKS-04P**FD**R-SF8001 *
Stainless	Solder Pins	SM12K-04P**ME**S-SF8001 *	SM12K-04P**FD**S-SF8001 *
	Straight PCB	SM12K-04P**ME**P-SF8001 *	SM12K-04P**FD**P-SF8001 *
	Right Angle PCB	SM12K-04P**ME**R-SF8001 *	SM12K-04P**FD**R-SF8001 *
Stainless Shielded	Solder Pins	SMSKS-04P**ME**S-SF8001 *	SMSKS-04P**FD**S-SF8001 *
	Straight PCB	SMSKS-04P**ME**P-SF8001 *	SMSKS-04P**FD**P-SF8001 *
	Right Angle PCB	SMSKS-04P**ME**R-SF8001 *	SMSKS-04P**FD**R-SF8001 *
M16 x 1.5			
Plastic	Solder Pins	MSKP-04P**ME**S-SF8002 *	MSKP-04P**FD**S-SF8002 *
	Straight PCB	MSKP-04P**ME**P-SF8002 *	MSKP-04P**FD**P-SF8002 *
	Right Angle PCB	MSKP-04P**ME**R-SF8002 *	MSKP-04P**FD**R-SF8002 *
Metal Nut	Solder Pins	M12K-04P**ME**S-SF8002 *	M12K-04P**FD**S-SF8002 *
	Straight PCB	M12K-04P**ME**P-SF8002 *	M12K-04P**FD**P-SF8002 *
	Right Angle PCB	M12K-04P**ME**R-SF8002 *	M12K-04P**FD**R-SF8002 *
Shielded	Solder Pins	MSKS-04P**ME**S-SF8002 *	MSKS-04P**FD**S-SF8002 *
	Straight PCB	MSKS-04P**ME**P-SF8002 *	MSKS-04P**FD**P-SF8002 *
	Right Angle PCB	MSKS-04P**ME**R-SF8002 *	MSKS-04P**FD**R-SF8002 *
Stainless	Solder Pins	SM12K-04P**ME**S-SF8002 *	SM12K-04P**FD**S-SF8002 *
	Straight PCB	SM12K-04P**ME**P-SF8002 *	SM12K-04P**FD**P-SF8002 *
	Right Angle PCB	SM12K-04P**ME**R-SF8002 *	SM12K-04P**FD**R-SF8002 *
Stainless Shielded	Solder Pins	SMSKS-04P**ME**S-SF8002 *	SMSKS-04P**FD**S-SF8002 *
	Straight PCB	SMSKS-04P**ME**P-SF8002 *	SMSKS-04P**FD**P-SF8002 *
	Right Angle PCB	SMSKS-04P**ME**R-SF8002 *	SMSKS-04P**FD**R-SF8002 *

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

(10) Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(K, L, M code, Metal/Shielded/Stainless)

(MM) (FF)

PG9			
Plastic		MSKP-04P**ME**S-SF8B(10) *	MSKP-04P**FD**S-SF8B(10) *
Metal Nut		M12K-04P**ME**S-SF8B(10) *	M12K-04P**FD**S-SF8B(10) *
Shielded		MSKS-04P**ME**S-SF8B(10) *	MSKS-04P**FD**S-SF8B(10) *
Stainless		SM12K-04P**ME**S-SF8B(10) *	SM12K-04P**FD**S-SF8B(10) *
Stainless Shielded		SMSKS-04P**ME**S-SF8B(10) *	SMSKS-04P**FD**S-SF8B(10) *

* Upon Request

4 (3+PE)		4 (3+FE)		4	
M		L		L	
630V		63V		63V	
8A		12A		16A	
Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground	MM	FF
MSMP-04PMES-SF8001 *	MSMP-04PFDS-SF8001 *	MSLP-04PMES-SF8001 *	MSLP-04PFDS-SF8001 *	MSLP-04PMMS-SF8001 *	MSLP-04PFFS-SF8001 *
MSMP-04PMEP-SF8001 *	MSMP-04PFDP-SF8001 *	MSLP-04PMEP-SF8001 *	MSLP-04PFDP-SF8001 *	MSLP-04PMMP-SF8001 *	MSLP-04PFFP-SF8001 *
MSMP-04PMER-SF8001 *	MSMP-04PFDR-SF8001 *	MSLP-04PMER-SF8001 *	MSLP-04PFDR-SF8001 *	MSLP-04PMMR-SF8001 *	MSLP-04PFFR-SF8001 *
M12M-04PMES-SF8001 *	M12M-04PFDS-SF8001 *	M12L-04PMES-SF8001 *	M12L-04PFDS-SF8001 *	M12L-04PMMS-SF8001 *	M12L-04PFFS-SF8001 *
M12M-04PMEP-SF8001 *	M12M-04PFDP-SF8001 *	M12L-04PMEP-SF8001 *	M12L-04PFDP-SF8001 *	M12L-04PMMP-SF8001 *	M12L-04PFFP-SF8001 *
M12M-04PMER-SF8001 *	M12M-04PFDR-SF8001 *	M12L-04PMER-SF8001 *	M12L-04PFDR-SF8001 *	M12L-04PMMR-SF8001 *	M12L-04PFFR-SF8001 *
MSMS-04PMES-SF8001 *	MSMS-04PFDS-SF8001 *	MSLS-04PMES-SF8001 *	MSLS-04PFDS-SF8001 *	MSLS-04PMMS-SF8001 *	MSLS-04PFFS-SF8001 *
MSMS-04PMEP-SF8001 *	MSMS-04PFDP-SF8001 *	MSLS-04PMEP-SF8001 *	MSLS-04PFDP-SF8001 *	MSLS-04PMMP-SF8001 *	MSLS-04PFFP-SF8001 *
MSMS-04PMER-SF8001 *	MSMS-04PFDR-SF8001 *	MSLS-04PMER-SF8001 *	MSLS-04PFDR-SF8001 *	MSLS-04PMMR-SF8001 *	MSLS-04PFFR-SF8001 *
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SM12M-04PMER-SF8001 *	SM12M-04PFDR-SF8001 *	SM12L-04PMER-SF8001 *	SM12L-04PFDR-SF8001 *	SM12L-04PMMR-SF8001 *	SM12L-04PFFR-SF8001 *
SMSMS-04PMES-SF8001 *	SMSMS-04PFDS-SF8001 *	SMSLS-04PMES-SF8001 *	SMSLS-04PFDS-SF8001 *	SMSLS-04PMMS-SF8001 *	SMSLS-04PFFS-SF8001 *
SMSMS-04PMEP-SF8001 *	SMSMS-04PFDP-SF8001 *	SMSLS-04PMEP-SF8001 *	SMSLS-04PFDP-SF8001 *	SMSLS-04PMMP-SF8001 *	SMSLS-04PFFP-SF8001 *
SMSMS-04PMER-SF8001 *	SMSMS-04PFDR-SF8001 *	SMSLS-04PMER-SF8001 *	SMSLS-04PFDR-SF8001 *	SMSLS-04PMMR-SF8001 *	SMSLS-04PFFR-SF8001 *
MSMP-04PMES-SF8002 *	MSMP-04PFDS-SF8002 *	MSLP-04PMES-SF8002 *	MSLP-04PFDS-SF8002 *	MSLP-04PMMS-SF8002 *	MSLP-04PFFS-SF8002 *
MSMP-04PMEP-SF8002 *	MSMP-04PFDP-SF8002 *	MSLP-04PMEP-SF8002 *	MSLP-04PFDP-SF8002 *	MSLP-04PMMP-SF8002 *	MSLP-04PFFP-SF8002 *
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M12M-04PMEP-SF8002 *	M12M-04PFDP-SF8002 *	M12L-04PMEP-SF8002 *	M12L-04PFDP-SF8002 *	M12L-04PMMP-SF8002 *	M12L-04PFFP-SF8002 *
M12M-04PMER-SF8002 *	M12M-04PFDR-SF8002 *	M12L-04PMER-SF8002 *	M12L-04PFDR-SF8002 *	M12L-04PMMR-SF8002 *	M12L-04PFFR-SF8002 *
MSMS-04PMES-SF8002 *	MSMS-04PFDS-SF8002 *	MSLS-04PMES-SF8002 *	MSLS-04PFDS-SF8002 *	MSLS-04PMMS-SF8002 *	MSLS-04PFFS-SF8002 *
MSMS-04PMEP-SF8002 *	MSMS-04PFDP-SF8002 *	MSLS-04PMEP-SF8002 *	MSLS-04PFDP-SF8002 *	MSLS-04PMMP-SF8002 *	MSLS-04PFFP-SF8002 *
MSMS-04PMER-SF8002 *	MSMS-04PFDR-SF8002 *	MSLS-04PMER-SF8002 *	MSLS-04PFDR-SF8002 *	MSLS-04PMMR-SF8002 *	MSLS-04PFFR-SF8002 *
SM12M-04PMES-SF8002 *	SM12M-04PFDS-SF8002 *	SM12L-04PMES-SF8002 *	SM12L-04PFDS-SF8002 *	SM12L-04PMMS-SF8002 *	SM12L-04PFFS-SF8002 *
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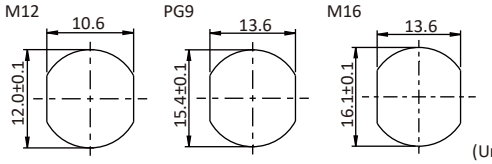
SM12M-04PMER-SF8002 *	SM12M-04PFDR-SF8002 *	SM12L-04PMER-SF8002 *	SM12L-04PFDR-SF8002 *	SM12L-04PMMR-SF8002 *	SM12L-04PFFR-SF8002 *
SMSMS-04PMES-SF8002 *	SMSMS-04PFDS-SF8002 *	SMSLS-04PMES-SF8002 *	SMSLS-04PFDS-SF8002 *	SMSLS-04PMMS-SF8002 *	SMSLS-04PFFS-SF8002 *
SMSMS-04PMEP-SF8002 *	SMSMS-04PFDP-SF8002 *	SMSLS-04PMEP-SF8002 *	SMSLS-04PFDP-SF8002 *	SMSLS-04PMMP-SF8002 *	SMSLS-04PFFP-SF8002 *
SMSMS-04PMER-SF8002 *	SMSMS-04PFDR-SF8002 *	SMSLS-04PMER-SF8002 *	SMSLS-04PFDR-SF8002 *	SMSLS-04PMMR-SF8002 *	SMSLS-04PFFR-SF8002 *
MSMP-04PMES-SF8B10 *	MSMP-04PFDS-SF8B10 *	MSLP-04PMES-SF8B10 *	MSLP-04PFDS-SF8B10 *	MSLP-04PMMS-SF8B10 *	MSLP-04PFFS-SF8B10 *
M12M-04PMES-SF8B10 *	M12M-04PFDS-SF8B10 *	M12L-04PMES-SF8B10 *	M12L-04PFDS-SF8B10 *	M12L-04PMMS-SF8B10 *	M12L-04PFFS-SF8B10 *
MSMS-04PMES-SF8B10 *	MSMS-04PFDS-SF8B10 *	MSLS-04PMES-SF8B10 *	MSLS-04PFDS-SF8B10 *	MSLS-04PMMS-SF8B10 *	MSLS-04PFFS-SF8B10 *
SM12M-04PMES-SF8B10 *	SM12M-04PFDS-SF8B10 *	SM12L-04PMES-SF8B10 *	SM12L-04PFDS-SF8B10 *	SM12L-04PMMS-SF8B10 *	SM12L-04PFFS-SF8B10 *
SMSMS-04PMES-SF8B10 *	SMSMS-04PFDS-SF8B10 *	SMSLS-04PMES-SF8B10 *	SMSLS-04PFDS-SF8B10 *	SMSLS-04PMMS-SF8B10 *	SMSLS-04PFFS-SF8B10 *

M12 S-Code

Bulkhead / Receptacle & Receptacle With Wires, Hexagonal Flange, Front Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

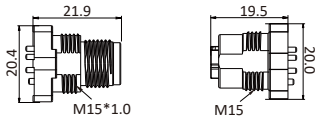
PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

Number of Contacts	4 (3+PE)	
Coding	S	
Rated Voltage (AC/DC)	630V	
Nominal current	12A	
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact **ME**: Male Connector Male PWD + Female GND **FD**: Female Connector Female PWD + Male GND	MM	FF

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

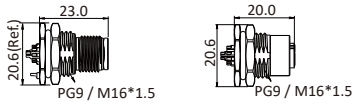
(K code, Metal/Shielded/Stainless)

(MM) (FF)



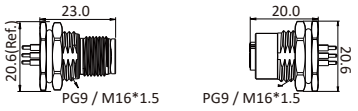
(M code, Metal/Shielded/Stainless)

(MM) (FF)



(S, T code, Metal/Shielded/Stainless)

(MM) (FF)



PG9			
Plastic	Solder Pins	MSSP-04P**MM**S-SF8001*	MSSP-04P**FF**S-SF8001*
	Straight PCB	MSSP-04P**MM**P-SF8001*	MSSP-04P**FF**P-SF8001*
	Right Angle PCB	MSSP-04P**MM**R-SF8001*	MSSP-04P**FF**R-SF8001*
Metal Nut	Solder Pins	M12S-04P**MM**S-SF8001*	M12S-04P**FF**S-SF8001*
	Straight PCB	M12S-04P**MM**P-SF8001*	M12S-04P**FF**P-SF8001*
	Right Angle PCB	M12S-04P**MM**R-SF8001*	M12S-04P**FF**R-SF8001*
Shielded	Solder Pins	MSSS-04P**MM**S-SF8001*	MSSS-04P**FF**S-SF8001*
	Straight PCB	MSSS-04P**MM**P-SF8001*	MSSS-04P**FF**P-SF8001*
	Right Angle PCB	MSSS-04P**MM**R-SF8001*	MSSS-04P**FF**R-SF8001*
Stainless	Solder Pins	SM12S-04P**MM**S-SF8001*	SM12S-04P**FF**S-SF8001*
	Straight PCB	SM12S-04P**MM**P-SF8001*	SM12S-04P**FF**P-SF8001*
	Right Angle PCB	SM12S-04P**MM**R-SF8001*	SM12S-04P**FF**R-SF8001*
Stainless Shielded	Solder Pins	SMSSS-04P**MM**S-SF8001*	SMSSS-04P**FF**S-SF8001*
	Straight PCB	SMSSS-04P**MM**P-SF8001*	SMSSS-04P**FF**P-SF8001*
	Right Angle PCB	SMSSS-04P**MM**R-SF8001*	SMSSS-04P**FF**R-SF8001*
M16 x 1.5			
Plastic	Solder Pins	MSSP-04P**MM**S-SF8002*	MSSP-04P**FF**S-SF8002*
	Straight PCB	MSSP-04P**MM**P-SF8002*	MSSP-04P**FF**P-SF8002*
	Right Angle PCB	MSSP-04P**MM**R-SF8002*	MSSP-04P**FF**R-SF8002*
Metal Nut	Solder Pins	M12S-04P**MM**S-SF8002*	M12S-04P**FF**S-SF8002*
	Straight PCB	M12S-04P**MM**P-SF8002*	M12S-04P**FF**P-SF8002*
	Right Angle PCB	M12S-04P**MM**R-SF8002*	M12S-04P**FF**R-SF8002*
Shielded	Solder Pins	MSSS-04P**MM**S-SF8002*	MSSS-04P**FF**S-SF8002*
	Straight PCB	MSSS-04P**MM**P-SF8002*	MSSS-04P**FF**P-SF8002*
	Right Angle PCB	MSSS-04P**MM**R-SF8002*	MSSS-04P**FF**R-SF8002*
Stainless	Solder Pins	SM12S-04P**MM**S-SF8002*	SM12S-04P**FF**S-SF8002*
	Straight PCB	SM12S-04P**MM**P-SF8002*	SM12S-04P**FF**P-SF8002*
	Right Angle PCB	SM12S-04P**MM**R-SF8002*	SM12S-04P**FF**R-SF8002*
Stainless Shielded	Solder Pins	SMSSS-04P**MM**S-SF8002*	SMSSS-04P**FF**S-SF8002*
	Straight PCB	SMSSS-04P**MM**P-SF8002*	SMSSS-04P**FF**P-SF8002*
	Right Angle PCB	SMSSS-04P**MM**R-SF8002*	SMSSS-04P**FF**R-SF8002*

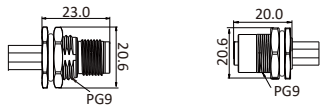
M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(K, M code, Metal/Shielded/Stainless)

(MM) (FF)

(S, T code, Metal/Shielded/Stainless)

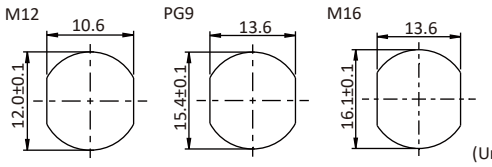


PG9		
Plastic	MSSP-04P**MM**S-SF8B10*	MSSP-04P**FF**S-SF8B10*
Metal Nut	M12S-04P**MM**S-SF8B10	M12S-04P**FF**S-SF8B10
Shielded	MSSS-04P**MM**S-SF8B10*	MSSS-04P**FF**S-SF8B10*
Stainless	SM12S-04P**MM**S-SF8B10*	SM12S-04P**FF**S-SF8B10*
Stainless Shielded	SMSSS-04P**MM**S-SF8B10*	SMSSS-04P**FF**S-SF8B10*

* Upon Request

4		5 (4+PE)		5 (4+PE)	
T		K		M	
63V		630V		630V	
12A		16A		8A	
MM	FF	Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground
MSTP-04PMMS-SF8001*	MSTP-04PFFS-SF8001*	MSKP-05PMES-SF8001*	MSKP-05PFDS-SF8001*	MSMP-05PMES-SF8001*	MSMP-05PFDS-SF8001*
MSTP-04PMMP-SF8001*	MSTP-04PFFP-SF8001*	MSKP-05PMEP-SF8001*	MSKP-05PFDP-SF8001*	MSMP-05PMEP-SF8001*	MSMP-05PFDP-SF8001*
MSTP-04PMMR-SF8001*	MSTP-04PFFR-SF8001*	MSKP-05PMER-SF8001*	MSKP-05PFDR-SF8001*	MSMP-05PMER-SF8001*	MSMP-05PFDR-SF8001*
M12T-04PMMS-SF8001*	M12T-04PFFS-SF8001*	M12K-05PMES-SF8001*	M12K-05PFDS-SF8001*	M12M-05PMES-SF8001*	M12M-05PFDS-SF8001*
M12T-04PMMP-SF8001*	M12T-04PFFP-SF8001*	M12K-05PMEP-SF8001*	M12K-05PFDP-SF8001*	M12M-05PMEP-SF8001*	M12M-05PFDP-SF8001*
M12T-04PMMR -SF8001*	M12T-04PFFR-SF8001*	M12K-05PMER-SF8001*	M12K-05PFDR-SF8001*	M12M-05PMER-SF8001*	M12M-05PFDR-SF8001*
MSTS-04PMMS-SF8001*	MSTS-04PFFS-SF8001*	MSKS-05PMES-SF8001*	MSKS-05PFDS-SF8001*	MSMS-05PMES-SF8001*	MSMS-05PFDS-SF8001*
MSTS-04PMMP-SF8001*	MSTS-04PFFP-SF8001*	MSKS-05PMEP-SF8001*	MSKS-05PFDP-SF8001*	MSMS-05PMEP-SF8001*	MSMS-05PFDP-SF8001*
MSTS-04PMMR-SF8001*	MSTS-04PFFR-SF8001*	MSKS-05PMER-SF8001*	MSKS-05PFDR-SF8001*	MSMS-05PMER-SF8001*	MSMS-05PFDR-SF8001*
SM12T-04PMMS-SF8001*	SM12T-04PFFS-SF8001*	SM12K-05PMES-SF8001*	SM12K-05PFDS-SF8001*	SM12M-05PMES-SF8001*	SM12M-05PFDS-SF8001*
SM12T-04PMMP-SF8001*	SM12T-04PFFP-SF8001*	SM12K-05PMEP-SF8001*	SM12K-05PFDP-SF8001*	SM12M-05PMEP-SF8001*	SM12M-05PFDP-SF8001*
SM12T-04PMMR-SF8001*	SM12T-04PFFR-SF8001*	SM12K-05PMER-SF8001*	SM12K-05PFDR-SF8001*	SM12M-05PMER-SF8001*	SM12M-05PFDR-SF8001*
SMSTS-04PMMS-SF8001*	SMSTS-04PFFS-SF8001*	SMSKS-05PMES-SF8001*	SMSKS-05PFDS-SF8001*	SMSMS-05PMES-SF8001*	SMSMS-05PFDS-SF8001*
SMSTS-04PMMP-SF8001*	SMSTS-04PFFP-SF8001*	SMSKS-05PMEP-SF8001*	SMSKS-05PFDP-SF8001*	SMSMS-05PMEP-SF8001*	SMSMS-05PFDP-SF8001*
SMSTS-04PMMR-SF8001*	SMSTS-04PFFR-SF8001*	SMSKS-05PMER-SF8001*	SMSKS-05PFDR-SF8001*	SMSMS-05PMER-SF8001*	SMSMS-05PFDR-SF8001*
MSTP-04PMMS-SF8002*	MSTP-04PFFS-SF8002*	MSKP-05PMES-SF8002*	MSKP-05PFDS-SF8002*	MSMP-05PMES-SF8002*	MSMP-05PFDS-SF8002*
MSTP-04PMMP-SF8002*	MSTP-04PFFP-SF8002*	MSKP-05PMEP-SF8002*	MSKP-05PFDP-SF8002*	MSMP-05PMEP-SF8002*	MSMP-05PFDP-SF8002*
MSTP-04PMMR-SF8002*	MSTP-04PFFR-SF8002*	MSKP-05PMER-SF8002*	MSKP-05PFDR-SF8002*	MSMP-05PMER-SF8002*	MSMP-05PFDR-SF8002*
M12T-04PMMS-SF8002*	M12T-04PFFS-SF8002*	M12K-05PMES-SF8002*	M12K-05PFDS-SF8002*	M12M-05PMES-SF8002*	M12M-05PFDS-SF8002*
M12T-04PMMP-SF8002*	M12T-04PFFP-SF8002*	M12K-05PMEP-SF8002*	M12K-05PFDP-SF8002*	M12M-05PMEP-SF8002*	M12M-05PFDP-SF8002*
M12T-04PMMR-SF8002*	M12T-04PFFR-SF8002*	M12K-05PMER-SF8002*	M12K-05PFDR-SF8002*	M12M-05PMER-SF8002*	M12M-05PFDR-SF8002*
MSTS-04PMMS-SF8002*	MSTS-04PFFS-SF8002*	MSKS-05PMES-SF8002*	MSKS-05PFDS-SF8002*	MSMS-05PMES-SF8002*	MSMS-05PFDS-SF8002*
MSTS-04PMMP-SF8002*	MSTS-04PFFP-SF8002*	MSKS-05PMEP-SF8002*	MSKS-05PFDP-SF8002*	MSMS-05PMEP-SF8002*	MSMS-05PFDP-SF8002*
MSTS-04PMMR-SF8002*	MSTS-04PFFR-SF8002*	MSKS-05PMER-SF8002*	MSKS-05PFDR-SF8002*	MSMS-05PMER-SF8002*	MSMS-05PFDR-SF8002*
SM12T-04PMMS-SF8002*	SM12T-04PFFS-SF8002*	SM12K-05PMES-SF8002*	SM12K-05PFDS-SF8002*	SM12M-05PMES-SF8002*	SM12M-05PFDS-SF8002*
SM12T-04PMMP-SF8002*	SM12T-04PFFP-SF8002*	SM12K-05PMEP-SF8002*	SM12K-05PFDP-SF8002*	SM12M-05PMEP-SF8002*	SM12M-05PFDP-SF8002*
SM12T-04PMMR-SF8002*	SM12T-04PFFR-SF8002*	SM12K-05PMER-SF8002*	SM12K-05PFDR-SF8002*	SM12M-05PMER-SF8002*	SM12M-05PFDR-SF8002*
SMSTS-04PMMS-SF8002*	SMSTS-04PFFS-SF8002*	SMSKS-05PMES-SF8002*	SMSKS-05PFDS-SF8002*	SMSMS-05PMES-SF8002*	SMSMS-05PFDS-SF8002*
SMSTS-04PMMP-SF8002*	SMSTS-04PFFP-SF8002*	SMSKS-05PMEP-SF8002*	SMSKS-05PFDP-SF8002*	SMSMS-05PMEP-SF8002*	SMSMS-05PFDP-SF8002*
SMSTS-04PMMR-SF8002*	SMSTS-04PFFR-SF8002*	SMSKS-05PMER-SF8002*	SMSKS-05PFDR-SF8002*	SMSMS-05PMER-SF8002*	SMSMS-05PFDR-SF8002*
MSTP-04PMMS-SF8B10*	MSTP-04PFFS-SF8B10*	MSKP-05PMES-SF8B10*	MSKP-05PFDS-SF8B10*	MSMP-05PMES-SF8B10*	MSMP-05PFDS-SF8B10*
M12T-04PMMS-SF8B10	M12T-04PFFS-SF8B10	M12K-05PMES-SF8B10*	M12K-05PFDS-SF8B10*	M12M-05PMES-SF8B10*	M12M-05PFDS-SF8B10*
MSTS-04PMMS-SF8B10*	MSTS-04PFFS-SF8B10*	MSKS-05PMES-SF8B10*	MSKS-05PFDS-SF8B10*	MSMS-05PMES-SF8B10*	MSMS-05PFDS-SF8B10*
SM12T-04PMMS-SF8B10*	SM12T-04PFFS-SF8B10*	SM12K-05PMES-SF8B10*	SM12K-05PFDS-SF8B10*	SM12M-05PMES-SF8B10*	SM12M-05PFDS-SF8B10*
SMSTS-04PMMS-SF8B10*	SMSTS-04PFFS-SF8B10*	SMSKS-05PMES-SF8B10*	SMSKS-05PFDS-SF8B10*	SMSMS-05PMES-SF8B10*	SMSMS-05PFDS-SF8B10*

Panel Cut-Out



Assemble Style

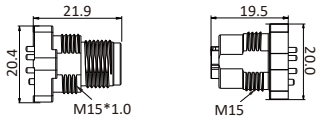
PCB 180° (P) Receptacle | PCB 90° (R) Receptacle | Solder (S) Receptacle

Number of Contacts	5 (4+FE)	
Coding	L	
Rated Voltage (AC/DC)	63V	
Nominal current	16A	
Pin Assignment **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	Male Power / Female Ground	Female Power / Male Ground

M12 Bulkhead / Receptacle, Hexagonal Flange, **FRONT** Fastened Nut

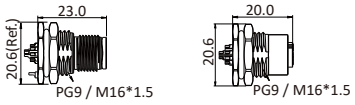
(L code, Metal/Shielded/Stainless)

(MM) (FF)



(M code, Metal/Shielded/Stainless)

(MM) (FF)



PG9			
Plastic	Solder Pins	MSLP-05P**ME**S-SF8001*	MSLP-05P**FD**S-SF8001*
	Straight PCB	MSLP-05P**ME**P-SF8001*	MSLP-05P**FD**P-SF8001*
	Right Angle PCB	MSLP-05P**ME**R-SF8001*	MSLP-05P**FD**R-SF8001*
Metal Nut	Solder Pins	M12L-05P**ME**S-SF8001*	M12L-05P**FD**S-SF8001*
	Straight PCB	M12L-05P**ME**P-SF8001*	M12L-05P**FD**P-SF8001
	Right Angle PCB	M12L-05P**ME**R-SF8001*	M12L-05P**FD**R-SF8001*
Shielded	Solder Pins	MSLS-05P**ME**S-SF8001*	MSLS-05P**FD**S-SF8001*
	Straight PCB	MSLS-05P**ME**P-SF8001*	MSLS-05P**FD**P-SF8001*
	Right Angle PCB	MSLS-05P**ME**R-SF8001*	MSLS-05P**FD**R-SF8001*
Stainless	Solder Pins	SM12L-05P**ME**S-SF8001*	SM12L-05P**FD**S-SF8001*
	Straight PCB	SM12L-05P**ME**P-SF8001*	SM12L-05P**FD**P-SF8001*
	Right Angle PCB	SM12L-05P**ME**R-SF8001*	SM12L-05P**FD**R-SF8001*
Stainless Shielded	Solder Pins	SMSLS-05P**ME**S-SF8001*	SMSLS-05P**FD**S-SF8001*
	Straight PCB	SMSLS-05P**ME**P-SF8001*	SMSLS-05P**FD**P-SF8001*
	Right Angle PCB	SMSLS-05P**ME**R-SF8001*	SMSLS-05P**FD**R-SF8001*
M16 x 1.5			
Plastic	Solder Pins	MSLP-05P**ME**S-SF8002*	MSLP-05P**FD**S-SF8002*
	Straight PCB	MSLP-05P**ME**P-SF8002*	MSLP-05P**FD**P-SF8002*
	Right Angle PCB	MSLP-05P**ME**R-SF8002*	MSLP-05P**FD**R-SF8002*
Metal Nut	Solder Pins	M12L-05P**ME**S-SF8002*	M12L-05P**FD**S-SF8002*
	Straight PCB	M12L-05P**ME**P-SF8002*	M12L-05P**FD**P-SF8002*
	Right Angle PCB	M12L-05P**ME**R-SF8002*	M12L-05P**FD**R-SF8002*
Shielded	Solder Pins	MSLS-05P**ME**S-SF8002*	MSLS-05P**FD**S-SF8002*
	Straight PCB	MSLS-05P**ME**P-SF8002*	MSLS-05P**FD**P-SF8002*
	Right Angle PCB	MSLS-05P**ME**R-SF8002*	MSLS-05P**FD**R-SF8002*
Stainless	Solder Pins	SM12L-05P**ME**S-SF8002*	SM12L-05P**FD**S-SF8002*
	Straight PCB	SM12L-05P**ME**P-SF8002*	SM12L-05P**FD**P-SF8002*
	Right Angle PCB	SM12L-05P**ME**R-SF8002*	SM12L-05P**FD**R-SF8002*
Stainless Shielded	Solder Pins	SMSLS-05P**ME**S-SF8002*	SMSLS-05P**FD**S-SF8002*
	Straight PCB	SMSLS-05P**ME**P-SF8002*	SMSLS-05P**FD**P-SF8002*
	Right Angle PCB	SMSLS-05P**ME**R-SF8002*	SMSLS-05P**FD**R-SF8002*

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(L, M code, Metal/Shielded/Stainless)

(MM) (FF)

PG9		
Plastic	MSLP-05P**ME**S-SF8B10*	MSLP-05P**FD**S-SF8B10*
Metal Nut	M12L-05P**ME**S-SF8B10*	M12L-05P**FD**S-SF8B10*
Shielded	MSLS-05P**ME**S-SF8B10*	MSLS-05P**FD**S-SF8B10*
Stainless	SM12L-05P**ME**S-SF8B10*	SM12L-05P**FD**S-SF8B10*
Stainless Shielded	SMSLS-05P**ME**S-SF8B10*	SMSLS-05P**FD**S-SF8B10*

* Upon Request

6 (5+PE)	
M	
630V	
8A	
Male Power / Female Ground	Female Power / Male Ground

MSMP-06P**ME**S-SF8001*	MSMP-06P**FD**S-SF8001*
MSMP-06P**ME**P-SF8001*	MSMP-06P**FD**P-SF8001*
MSMP-06P**ME**R-SF8001*	MSMP-06P**FD**R-SF8001*
M12M-06P**ME**S-SF8001*	M12M-06P**FD**S-SF8001*
M12M-06P**ME**P-SF8001*	M12M-06P**FD**P-SF8001*
M12M-06P**ME**R-SF8001*	M12M-06P**FD**R-SF8001*
MSMS-06P**ME**S-SF8001*	MSMS-06P**FD**S-SF8001*
MSMS-06P**ME**P-SF8001*	MSMS-06P**FD**P-SF8001*
MSMS-06P**ME**R-SF8001*	MSMS-06P**FD**R-SF8001*
SM12M-06P**ME**S-SF8001*	SM12M-06P**FD**S-SF8001*
SM12M-06P**ME**P-SF8001*	SM12M-06P**FD**P-SF8001*
SM12M-06P**ME**R-SF8001*	SM12M-06P**FD**R-SF8001*
SMSMS-06P**ME**S-SF8001*	SMSMS-06P**FD**S-SF8001*
SMSMS-06P**ME**P-SF8001*	SMSMS-06P**FD**P-SF8001*
SMSMS-06P**ME**R-SF8001*	SMSMS-06P**FD**R-SF8001*

MSMP-06P**ME**S-SF8002*	MSMP-06P**FD**S-SF8002*
MSMP-06P**ME**P-SF8002*	MSMP-06P**FD**P-SF8002*
MSMP-06P**ME**R-SF8002*	MSMP-06P**FD**R-SF8002*
M12M-06P**ME**S-SF8002*	M12M-06P**FD**S-SF8002*
M12M-06P**ME**P-SF8002*	M12M-06P**FD**P-SF8002*
M12M-06P**ME**R-SF8002*	M12M-06P**FD**R-SF8002*
MSMS-06P**ME**S-SF8002*	MSMS-06P**FD**S-SF8002*
MSMS-06P**ME**P-SF8002*	MSMS-06P**FD**P-SF8002*
MSMS-06P**ME**R-SF8002*	MSMS-06P**FD**R-SF8002*
SM12M-06P**ME**S-SF8002*	SM12M-06P**FD**S-SF8002*
SM12M-06P**ME**P-SF8002*	SM12M-06P**FD**P-SF8002*
SM12M-06P**ME**R-SF8002*	SM12M-06P**FD**R-SF8002*
SMSMS-06P**ME**S-SF8002*	SMSMS-06P**FD**S-SF8002*
SMSMS-06P**ME**P-SF8002*	SMSMS-06P**FD**P-SF8002*
SMSMS-06P**ME**R-SF8002*	SMSMS-06P**FD**R-SF8002*

MSMP-06P**ME**S-SF8B10*	MSMP-06P**FD**S-SF8B10*
M12M-06P**ME**S-SF8B10*	M12M-06P**FD**S-SF8B10*
MSMS-06P**ME**S-SF8B10*	MSMS-06P**FD**S-SF8B10*
SM12M-06P**ME**S-SF8B10*	SM12M-06P**FD**S-SF8B10*
SMSMS-06P**ME**S-SF8B10*	SMSMS-06P**FD**S-SF8B10*

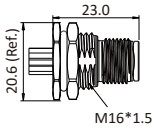
Number of Contacts	2
Coding	L
Rated Voltage (AC/DC)	63V
Nominal current	16A
Pin Assignment	MM
MM: Male Connector Male Contact	

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm)

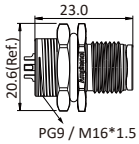
Standard Lengths: (**25**) 250mm and (**50**) 500mm

M16 x 1.5



Plastic	MSLP-02P**MM**S-SF8C10*
Metal Nut	M12L-02P**MM**S-SF8C10*
Shielded	MSLS-02P**MM**S-SF8C10*
Stainless	SM12L-02P**MM**S-SF8C10*
Stainless Shielded	SMSLS-02P**MM**S-SF8C10*

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut



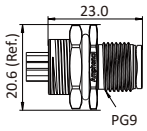
PG9		
Plastic	Solder Pins	MSLP-02P**MM**S-SH8001*
Metal Nut	Solder Pins	M12L-02P**MM**S-SH8001*
Shielded	Solder Pins	MSLS-02P**MM**S-SH8001*
Stainless	Solder Pins	SM12L-02P**MM**S-SH8001*
Stainless Shielded	Solder Pins	SMSLS-02P**MM**S-SH8001*
M16 x 1.5		
Plastic	Solder Pins	MSLP-02P**MM**S-SH8002*
Metal Nut	Solder Pins	M12L-02P**MM**S-SH8002*
Shielded	Solder Pins	MSLS-02P**MM**S-SH8002*
Stainless	Solder Pins	SM12L-02P**MM**S-SH8002*
Stainless Shielded	Solder Pins	SMSLS-02P**MM**S-SH8002*

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm)

Standard Lengths: (**25**) 250mm and (**50**) 500mm

PG9



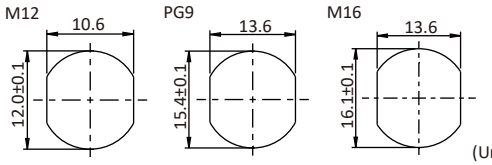
Plastic	MSLP-02P**MM**S-SH8B10*
Metal Nut	M12L-02P**MM**S-SH8B10*
Shielded	MSLS-02P**MM**S-SH8B10*
Stainless	SM12L-02P**MM**S-SH8B10*
Stainless Shielded	SMSLS-02P**MM**S-SH8B10*

* Upon Request

M12 L & T-Code

Bulkhead / Receptacle With Wires, Hexagonal Flange, Front & Rear Fastened

Panel Cut-Out



(Unit: mm)

Assemble Style

Solder
(S) Receptacle

Number of Contacts	2	2	
Coding	L	T	
Rated Voltage (AC/DC)	63V	63V	
Nominal current	16A	12A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	FF	MM	FF

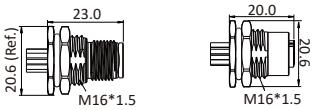
M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

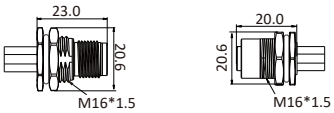
M16 x 1.5

(K, L, M code, Plastic/Metal/Shielded/Stainless)

(MM) (FF)



(T code, Plastic/Metal/Shielded/Stainless)

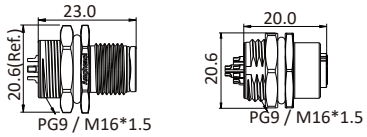


Plastic	MSLP-02P**FF**S-SF8C10*	MSTP-02P**MM**S-SF8C10*	MSTP-02P**FF**S-SF8C10*
Metal Nut	M12L-02P**FF**S-SF8C10*	M12T-02P**MM**S-SF8C10*	M12T-02P**FF**S-SF8C10*
Shielded	MSLS-02P**FF**S-SF8C10*	MSTS-02P**MM**S-SF8C10*	MSTS-02P**FF**S-SF8C10*
Stainless	SM12L-02P**FF**S-SF8C10*	SM12T-02P**MM**S-SF8C10*	SM12T-02P**FF**S-SF8C10*
Stainless Shielded	SMSLS-02P**FF**S-SF8C10*	SMSTS-02P**MM**S-SF8C10*	SMSTS-02P**FF**S-SF8C10*

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

(K, L, M, T code Plastic/Metal/Shielded/Stainless)

(MM) (FF)



PG9				
Plastic	Solder Pins	MSLP-02P**FF**S-SH8001*	MSTP-02P**MM**S-SH8001*	MSTP-02P**FF**S-SH8001*
Metal Nut	Solder Pins	M12L-02P**FF**S-SH8001*	M12T-02P**MM**S-SH8001*	M12T-02P**FF**S-SH8001*
Shielded	Solder Pins	MSLS-02P**FF**S-SH8001*	MSTS-02P**MM**S-SH8001*	MSTS-02P**FF**S-SH8001*
Stainless	Solder Pins	SM12L-02P**FF**S-SH8001*	SM12T-02P**MM**S-SH8001*	SM12T-02P**FF**S-SH8001*
Stainless Shielded	Solder Pins	SMSLS-02P**FF**S-SH8001*	SMSTS-02P**MM**S-SH8001*	SMSTS-02P**FF**S-SH8001*
M16 x 1.5				
Plastic	Solder Pins	MSLP-02P**FF**S-SH8002*	MSTP-02P**MM**S-SH8002*	MSTP-02P**FF**S-SH8002*
Metal Nut	Solder Pins	M12L-02P**FF**S-SH8002*	M12T-02P**MM**S-SH8002*	M12T-02P**FF**S-SH8002*
Shielded	Solder Pins	MSLS-02P**FF**S-SH8002*	MSTS-02P**MM**S-SH8002*	MSTS-02P**FF**S-SH8002*
Stainless	Solder Pins	SM12L-02P**FF**S-SH8002*	SM12T-02P**MM**S-SH8002*	SM12T-02P**FF**S-SH8002*
Stainless Shielded	Solder Pins	SMSLS-02P**FF**S-SH8002*	SMSTS-02P**MM**S-SH8002*	SMSTS-02P**FF**S-SH8002*

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

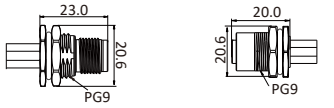
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

PG9

(K, L, M code, Plastic/Metal/Shielded/Stainless)

(MM) (FF)

(T code, Plastic/Metal/Shielded/Stainless)

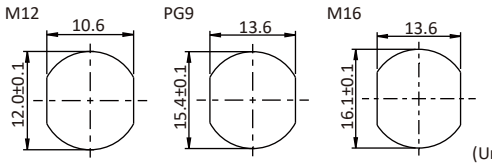


Plastic	MSLP-02P**FF**S-SH8B10*	MSTP-02P**MM**S-SH8B10*	MSTP-02P**FF**S-SH8B10*
Metal Nut	M12L-02P**FF**S-SH8B10*	M12T-02P**MM**S-SH8B10*	M12T-02P**FF**S-SH8B10*
Shielded	MSLS-02P**FF**S-SH8B10*	MSTS-02P**MM**S-SH8B10*	MSTS-02P**FF**S-SH8B10*
Stainless	SM12L-02P**FF**S-SH8B10*	SM12T-02P**MM**S-SH8B10*	SM12T-02P**FF**S-SH8B10*
Stainless Shielded	SMSLS-02P**FF**S-SH8B10*	SMSTS-02P**MM**S-SH8B10*	SMSTS-02P**FF**S-SH8B10*

* Upon Request

3 (2+PE)		3 (2+PE)		3 (2+FE)	
K		M		L	
630V		630V		63V	
16A		8A		16A	
Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground
MSKP-03P**ME**S-SF8C10*	MSKP-03P**FD**S-SF8C10*	MSMP-03P**ME**S-SF8C10*	MSMP-03P**FD**S-SF8C10*	MSLP-03P**ME**S-SF8C10*	MSLP-03P**FD**S-SF8C10*
M12K-03P**ME**S-SF8C10*	M12K-03P**FD**S-SF8C10*	M12M-03P**ME**S-SF8C10*	M12M-03P**FD**S-SF8C10*	M12L-03P**ME**S-SF8C10*	M12L-03P**FD**S-SF8C10*
MSKS-03P**ME**S-SF8C10*	MSKS-03P**FD**S-SF8C10*	MSMS-03P**ME**S-SF8C10*	MSMS-03P**FD**S-SF8C10*	MSLS-03P**ME**S-SF8C10*	MSLS-03P**FD**S-SF8C10*
SM12K-03P**ME**S-SF8C10*	SM12K-03P**FD**S-SF8C10*	SM12M-03P**ME**S-SF8C10*	SM12M-03P**FD**S-SF8C10*	SM12L-03P**ME**S-SF8C10*	SM12L-03P**FD**S-SF8C10*
SMSKS-03P**ME**S-SF8C10*	SMSKS-03P**FD**S-SF8C10*	SMSMS-03P**ME**S-SF8C10*	SMSMS-03P**FD**S-SF8C10*	SMSLS-03P**ME**S-SF8C10*	SMSLS-03P**FD**S-SF8C10*
MSKP-03P**ME**S-SH8001*	MSKP-03P**FD**S-SH8001*	MSMP-03P**ME**S-SH8001*	MSMP-03P**FD**S-SH8001*	MSLP-03P**ME**S-SH8001*	MSLP-03P**FD**S-SH8001*
M12K-03P**ME**S-SH8001*	M12K-03P**FD**S-SH8001*	M12M-03P**ME**S-SH8001*	M12M-03P**FD**S-SH8001*	M12L-03P**ME**S-SH8001*	M12L-03P**FD**S-SH8001*
MSKS-03P**ME**S-SH8001*	MSKS-03P**FD**S-SH8001*	MSMS-03P**ME**S-SH8001*	MSMS-03P**FD**S-SH8001*	MSLS-03P**ME**S-SH8001*	MSLS-03P**FD**S-SH8001*
SM12K-03P**ME**S-SH8001*	SM12K-03P**FD**S-SH8001*	SM12M-03P**ME**S-SH8001*	SM12M-03P**FD**S-SH8001*	SM12L-03P**ME**S-SH8001*	SM12L-03P**FD**S-SH8001*
SMSKS-03P**ME**S-SH8001*	SMSKS-03P**FD**S-SH8001*	SMSMS-03P**ME**S-SH8001*	SMSMS-03P**FD**S-SH8001*	SMSLS-03P**ME**S-SH8001*	SMSLS-03P**FD**S-SH8001*
MSKP-03P**ME**S-SH8002*	MSKP-03P**FD**S-SH8002*	MSMP-03P**ME**S-SH8002*	MSMP-03P**FD**S-SH8002*	MSLP-03P**ME**S-SH8002*	MSLP-03P**FD**S-SH8002*
M12K-03P**ME**S-SH8002*	M12K-03P**FD**S-SH8002*	M12M-03P**ME**S-SH8002*	M12M-03P**FD**S-SH8002*	M12L-03P**ME**S-SH8002*	M12L-03P**FD**S-SH8002*
MSKS-03P**ME**S-SH8002*	MSKS-03P**FD**S-SH8002*	MSMS-03P**ME**S-SH8002*	MSMS-03P**FD**S-SH8002*	MSLS-03P**ME**S-SH8002*	MSLS-03P**FD**S-SH8002*
SM12K-03P**ME**S-SH8002*	SM12K-03P**FD**S-SH8002*	SM12M-03P**ME**S-SH8002*	SM12M-03P**FD**S-SH8002*	SM12L-03P**ME**S-SH8002*	SM12L-03P**FD**S-SH8002*
SMSKS-03P**ME**S-SH8002*	SMSKS-03P**FD**S-SH8002*	SMSMS-03P**ME**S-SH8002*	SMSMS-03P**FD**S-SH8002*	SMSLS-03P**ME**S-SH8002*	SMSLS-03P**FD**S-SH8002*
MSKP-03P**ME**S-SH8B10*	MSKP-03P**FD**S-SH8B10*	MSMP-03P**ME**S-SH8B10*	MSMP-03P**FD**S-SH8B10*	MSLP-03P**ME**S-SH8B10*	MSLP-03P**FD**S-SH8B10*
M12K-03P**ME**S-SH8B10*	M12K-03P**FD**S-SH8B10*	M12M-03P**ME**S-SH8B10*	M12M-03P**FD**S-SH8B10*	M12L-03P**ME**S-SH8B10*	M12L-03P**FD**S-SH8B10*
MSKS-03P**ME**S-SH8B10*	MSKS-03P**FD**S-SH8B10*	MSMS-03P**ME**S-SH8B10*	MSMS-03P**FD**S-SH8B10*	MSLS-03P**ME**S-SH8B10*	MSLS-03P**FD**S-SH8B10*
SM12K-03P**ME**S-SH8B10*	SM12K-03P**FD**S-SH8B10*	SM12M-03P**ME**S-SH8B10*	SM12M-03P**FD**S-SH8B10*	SM12L-03P**ME**S-SH8B10*	SM12L-03P**FD**S-SH8B10*
SMSKS-03P**ME**S-SH8B10*	SMSKS-03P**FD**S-SH8B10*	SMSMS-03P**ME**S-SH8B10*	SMSMS-03P**FD**S-SH8B10*	SMSLS-03P**ME**S-SH8B10*	SMSLS-03P**FD**S-SH8B10*

Panel Cut-Out



(Unit: mm)

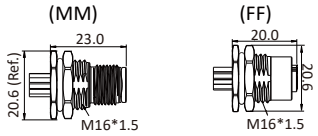
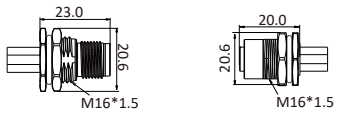
Assemble Style

Solder
(S) Receptacle

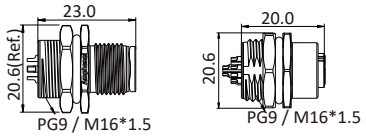
Number of Contacts	3	
Coding	L	
Rated Voltage (AC/DC)	63V	
Nominal current	16A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	MM	FF

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

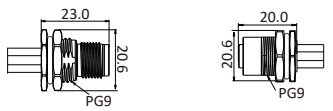
	M16 x 1.5			
(K, L code, Plastic/Metal/Shielded/Stainless) (MM) (FF)  (S, T code, Plastic/Metal/Shielded/Stainless) 	Plastic		MSLP-03P**MM**S-SF8C10*	MSLP-03P**FF**S-SF8C10*
	Metal Nut		M12L-03P**MM**S-SF8C10*	M12L-03P**FF**S-SF8C10*
	Shielded		MSLS-03P**MM**S-SF8C10*	MSLS-03P**FF**S-SF8C10*
	Stainless		SM12L-03P**MM**S-SF8C10*	SM12L-03P**FF**S-SF8C10*
	Stainless Shielded		SMSLS-03P**MM**S-SF8C10*	SMSLS-03P**FF**S-SF8C10*

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

	PG9			
(K, L, S, T code Plastic/Metal/Shielded/Stainless) (MM) (FF) 	Plastic	Solder Pins	MSLP-03P**MM**S-SH8001*	MSLP-03P**FF**S-SH8001*
	Metal Nut	Solder Pins	M12L-03P**MM**S-SH8001*	M12L-03P**FF**S-SH8001*
	Shielded	Solder Pins	MSLS-03P**MM**S-SH8001*	MSLS-03P**FF**S-SH8001*
	Stainless	Solder Pins	SM12L-03P**MM**S-SH8001*	SM12L-03P**FF**S-SH8001*
	Stainless Shielded	Solder Pins	SMSLS-03P**MM**S-SH8001*	SMSLS-03P**FF**S-SH8001*
	M16 x 1.5			
	Plastic	Solder Pins	MSLP-03P**MM**S-SH8002*	MSLP-03P**FF**S-SH8002*
	Metal Nut	Solder Pins	M12L-03P**MM**S-SH8002*	M12L-03P**FF**S-SH8002*
	Shielded	Solder Pins	MSLS-03P**MM**S-SH8002*	MSLS-03P**FF**S-SH8002*
	Stainless	Solder Pins	SM12L-03P**MM**S-SH8002*	SM12L-03P**FF**S-SH8002*
	Stainless Shielded	Solder Pins	SMSLS-03P**MM**S-SH8002*	SMSLS-03P**FF**S-SH8002*

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

	PG9		
(K, L code, Plastic/Metal/Shielded/Stainless) (MM) (FF) (S, T code, Plastic/Metal/Shielded/Stainless) 	Plastic	MSLP-03P**MM**S-SH8B10*	MSLP-03P**FF**S-SH8B10*
	Metal Nut	M12L-03P**MM**S-SH8B10*	M12L-03P**FF**S-SH8B10*
	Shielded	MSLS-03P**MM**S-SH8B10*	MSLS-03P**FF**S-SH8B10*
	Stainless	SM12L-03P**MM**S-SH8B10*	SM12L-03P**FF**S-SH8B10*
	Stainless Shielded	SMSLS-03P**MM**S-SH8B10*	SMSLS-03P**FF**S-SH8B10*

* Upon Request

M12 K, S, T-Code Bulkhead / Receptacle With Wires, Hexagonal Flange, Front & Rear Fastened

3 (2+PE)		3		4 (3+PE)	
S		T		K	
630V		63V		630V	
12A		12A		16A	
MM	FF	MM	FF	Male Power / Female Ground	Female Power / Male Ground
MSSP-03PMMS-SF8C 10*	MSSP-03PFFS-SF8C 10*	MSTP-03PMMS-SF8C 10*	MSTP-03PFFS-SF8C 10*	MSKP-04PMES-SF8C 10*	MSKP-04PFDS-SF8C 10*
M12S-03PMMS-SF8C 10*	M12S-03PFFS-SF8C 10*	M12T-03PMMS-SF8C 10*	M12T-03PFFS-SF8C 10*	M12K-04PMES-SF8C 10*	M12K-04PFDS-SF8C 10*
MSSS-03PMMS-SF8C 10*	MSSS-03PFFS-SF8C 10*	MSTS-03PMMS-SF8C 10*	MSTS-03PFFS-SF8C 10*	MSKS-04PMES-SF8C 10*	MSKS-04PFDS-SF8C 10*
SM12S-03PMMS-SF8C 10*	SM12S-03PFFS-SF8C 10*	SM12T-03PMMS-SF8C 10*	SM12T-03PFFS-SF8C 10*	SM12K-04PMES-SF8C 10*	SM12K-04PFDS-SF8C 10*
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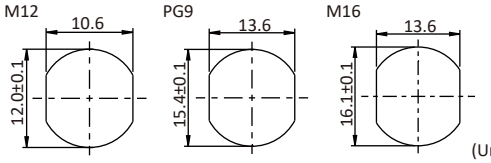
MSSP-03PMMS-SH8001*	MSSP-03PFFS-SH8001*	MSTP-03PMMS-SH8001*	MSTP-03PFFS-SH8001*	MSKP-04PMES-SH8001*	MSKP-04PFDS-SH8001*
M12S-03PMMS-SH8001*	M12S-03PFFS-SH8001	M12T-03PMMS-SH8001*	M12T-03PFFS-SH8001*	M12K-04PMES-SH8001*	M12K-04PFDS-SH8001*
MSSS-03PMMS-SH8001*	MSSS-03PFFS-SH8001*	MSTS-03PMMS-SH8001*	MSTS-03PFFS-SH8001*	MSKS-04PMES-SH8001*	MSKS-04PFDS-SH8001*
SM12S-03PMMS-SH8001*	SM12S-03PFFS-SH8001*	SM12T-03PMMS-SH8001*	SM12T-03PFFS-SH8001*	SM12K-04PMES-SH8001*	SM12K-04PFDS-SH8001*
SMSSS-03PMMS-SH8001*	SMSSS-03PFFS-SH8001*	SMSTS-03PMMS-SH8001*	SMSTS-03PFFS-SH8001*	SMSKS-04PMES-SH8001*	SMSKS-04PFDS-SH8001*
MSSP-03PMMS-SH8002*	MSSP-03PFFS-SH8002*	MSTP-03PMMS-SH8002*	MSTP-03PFFS-SH8002 *	MSKP-04PMES-SH8002*	MSKP-04PFDS-SH8002 *
M12S-03PMMS-SH8002*	M12S-03PFFS-SH8002*	M12T-03PMMS-SH8002*	M12T-03PFFS-SH8002 *	M12K-04PMES-SH8002*	M12K-04PFDS-SH8002 *
MSSS-03PMMS-SH8002*	MSSS-03PFFS-SH8002*	MSTS-03PMMS-SH8002*	MSTS-03PFFS-SH8002 *	MSKS-04PMES-SH8002*	MSKS-04PFDS-SH8002 *
SM12S-03PMMS-SH8002*	SM12S-03PFFS-SH8002 *	SM12T-03PMMS-SH8002*	SM12T-03PFFS-SH8002*	SM12K-04PMES-SH8002*	SM12K-04PFDS-SH8002*
SMSSS-03PMMS-SH8002*	SMSSS-03PFFS-SH8002 *	SMSTS-03PMMS-SH8002*	SMSTS-03PFFS-SH8002*	SMSKS-04PMES-SH8002*	SMSKS-04PFDS-SH8002*
MSSP-03PMMS-SH8B 10*	MSSP-03PFFS-SH8B 10*	MSTP-03PMMS-SH8B 10*	MSTP-03PFFS-SH8B 10*	MSKP-04PMES-SH8B 10*	MSKP-04PFDS-SH8B 10*
M12S-03PMMS-SH8B 10*	M12S-03PFFS-SH8B 10	M12T-03PMMS-SH8B 10*	M12T-03PFFS-SH8B 10*	M12K-04PMES-SH8B 10*	M12K-04PFDS-SH8B 10*
MSSS-03PMMS-SH8B 10*	MSSS-03PFFS-SH8B 10*	MSTS-03PMMS-SH8B 10*	MSTS-03PFFS-SH8B 10*	MSKS-04PMES-SH8B 10*	MSKS-04PFDS-SH8B 10*
SM12S-03PMMS-SH8B 10*	SM12S-03PFFS-SH8B 10*	SM12T-03PMMS-SH8B 10*	SM12T-03PFFS-SH8B 10*	SM12K-04PMES-SH8B 10*	SM12K-04PFDS-SH8B 10*
SMSSS-03PMMS-SH8B 10*	SMSSS-03PFFS-SH8B 10*	SMSTS-03PMMS-SH8B 10*	SMSTS-03PFFS-SH8B 10*	SMSKS-04PMES-SH8B 10*	SMSKS-04PFDS-SH8B 10*

Panel Cut-Out



(Unit: mm)

Assemble Style

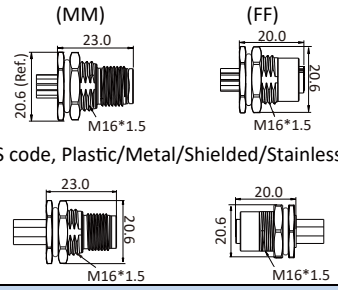
Solder
(S) Receptacle

Number of Contacts	4 (3+PE)	
Coding	M	
Rated Voltage (AC/DC)	630V	
Nominal current	8A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	Male Power / Female Ground	Female Power / Male Ground

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

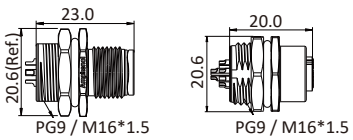
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

M16 x 1.5			
(L, M code, Plastic/Metal/Shielded/Stainless)	Plastic	MSMP-04P**ME**S-SF8C10*	MSMP-04P**FD**S-SF8C10*
	Metal Nut	M12M-04P**ME**S-SF8C10*	M12M-04P**FD**S-SF8C10*
	Shielded	MSMS-04P**ME**S-SF8C10*	MSMS-04P**FD**S-SF8C10*
(S code, Plastic/Metal/Shielded/Stainless)	Stainless	SM12M-04P**ME**S-SF8C10*	SM12M-04P**FD**S-SF8C10*
	Stainless Shielded	SMSMS-04P**ME**S-SF8C10*	SMSMS-04P**FD**S-SF8C10*



M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

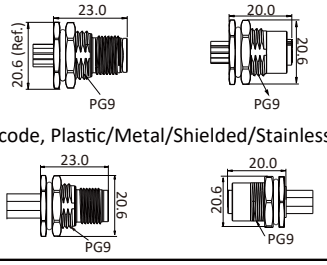
PG9			
(L, M, S code Plastic/Metal/Shielded/Stainless)	Plastic	Solder Pins	MSMP-04P**ME**S-SH8001*	MSMP-04P**FD**S-SH8001*
	Metal Nut	Solder Pins	M12M-04P**ME**S-SH8001*	M12M-04P**FD**S-SH8001*
	Shielded	Solder Pins	MSMS-04P**ME**S-SH8001*	MSMS-04P**FD**S-SH8001*
	Stainless	Solder Pins	SM12M-04P**ME**S-SH8001*	SM12M-04P**FD**S-SH8001*
	Stainless Shielded	Solder Pins	SMSMS-04P**ME**S-SH8001*	SMSMS-04P**FD**S-SH8001*
M16 x 1.5			
	Plastic	Solder Pins	MSMP-04P**ME**S-SH8002*	MSMP-04P**FD**S-SH8002*
	Metal Nut	Solder Pins	M12M-04P**ME**S-SH8002*	M12M-04P**FD**S-SH8002*
	Shielded	Solder Pins	MSMS-04P**ME**S-SH8002*	MSMS-04P**FD**S-SH8002*
	Stainless	Solder Pins	SM12M-04P**ME**S-SH8002*	SM12M-04P**FD**S-SH8002*
	Stainless Shielded	Solder Pins	SMSMS-04P**ME**S-SH8002*	SMSMS-04P**FD**S-SH8002*



M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

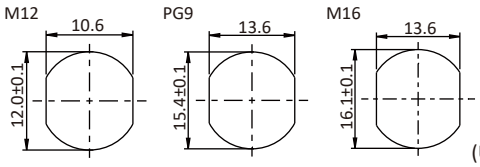
PG9			
(L, M code, Plastic/Metal/Shielded/Stainless)	Plastic	MSMP-04P**ME**S-SH8B10*	MSMP-04P**FD**S-SH8B10*
	Metal Nut	M12M-04P**ME**S-SH8B10*	M12M-04P**FD**S-SH8B10*
	Shielded	MSMS-04P**ME**S-SH8B10*	MSMS-04P**FD**S-SH8B10*
(S code, Plastic/Metal/Shielded/Stainless)	Stainless	SM12M-04P**ME**S-SH8B10*	SM12M-04P**FD**S-SH8B10*
	Stainless Shielded	SMSMS-04P**ME**S-SH8B10*	SMSMS-04P**FD**S-SH8B10*



* Upon Request

4 (3+FE)		4		4 (3+PE)	
L		L		S	
63V		63V		630V	
12A		16A		12A	
Male Power / Female Ground	Female Power / Male Ground	MM	FF	MM	FF
MSLP-04PMES-SF8C10*	MSLP-04PFDS-SF8C10*	MSLP-04PMMS-SF8C10*	MSLP-04PFFS-SF8C10*	MSSP-04PMMS-SF8C10*	MSSP-04PFFS-SF8C10*
M12L-04PMES-SF8C10*	M12L-04PFDS-SF8C10*	M12L-04PMMS-SF8C10*	M12L-04PFFS-SF8C10*	M12S-04PMMS-SF8C10	M12S-04PFFS-SF8C10
MSLS-04PMES-SF8C10*	MSLS-04PFDS-SF8C10*	MSLS-04PMMS-SF8C10*	MSLS-04PFFS-SF8C10*	MSSS-04PMMS-SF8C10*	MSSS-04PFFS-SF8C10*
SM12L-04PMES-SF8C10*	SM12L-04PFDS-SF8C10*	SM12L-04PMMS-SF8C10*	SM12L-04PFFS-SF8C10*	SM12S-04PMMS-SF8C10*	SM12S-04PFFS-SF8C10*
SMSLS-04PMES-SF8C10*	SMSLS-04PFDS-SF8C10*	SMSLS-04PMMS-SF8C10*	SMSLS-04PFFS-SF8C10*	SMSSS-04PMMS-SF8C10*	SMSSS-04PFFS-SF8C10*
MSLP-04PMES-SH8001*	MSLP-04PFDS-SH8001*	MSLP-04PMMS-SH8001*	MSLP-04PFFS-SH8001*	MSSP-04PMMS-SH8001*	MSSP-04PFFS-SH8001*
M12L-04PMES-SH8001*	M12L-04PFDS-SH8001*	M12L-04PMMS-SH8001*	M12L-04PFFS-SH8001*	M12S-04PMMS-SH8001	M12S-04PFFS-SH8001*
MSLS-04PMES-SH8001*	MSLS-04PFDS-SH8001*	MSLS-04PMMS-SH8001*	MSLS-04PFFS-SH8001*	MSSS-04PMMS-SH8001*	MSSS-04PFFS-SH8001*
SM12L-04PMES-SH8001*	SM12L-04PFDS-SH8001*	SM12L-04PMMS-SH8001*	SM12L-04PFFS-SH8001*	SM12S-04PMMS-SH8001*	SM12S-04PFFS-SH8001*
SMSLS-04PMES-SH8001*	SMSLS-04PFDS-SH8001*	SMSLS-04PMMS-SH8001*	SMSLS-04PFFS-SH8001*	SMSSS-04PMMS-SH8001*	SMSSS-04PFFS-SH8001*
MSLP-04PMES-SH8002*	MSLP-04PFDS-SH8002*	MSLP-04PMMS-SH8002*	MSLP-04PFFS-SH8002*	MSSP-04PMMS-SH8002*	MSSP-04PFFS-SH8002*
M12L-04PMES-SH8002*	M12L-04PFDS-SH8002*	M12L-04PMMS-SH8002*	M12L-04PFFS-SH8002*	M12S-04PMMS-SH8002	M12S-04PFFS-SH8002
MSLS-04PMES-SH8002*	MSLS-04PFDS-SH8002*	MSLS-04PMMS-SH8002*	MSLS-04PFFS-SH8002*	MSSS-04PMMS-SH8002*	MSSS-04PFFS-SH8002*
SM12L-04PMES-SH8002*	SM12L-04PFDS-SH8002*	SM12L-04PMMS-SH8002*	SM12L-04PFFS-SH8002*	SM12S-04PMMS-SH8002*	SM12S-04PFFS-SH8002*
SMSLS-04PMES-SH8002*	SMSLS-04PFDS-SH8002*	SMSLS-04PMMS-SH8002*	SMSLS-04PFFS-SH8002*	SMSSS-04PMMS-SH8002*	SMSSS-04PFFS-SH8002*
MSLP-04PMES-SH8B10*	MSLP-04PFDS-SH8B10*	MSLP-04PMMS-SH8B10*	MSLP-04PFFS-SH8B10*	MSSP-04PMMS-SH8B10*	MSSP-04PFFS-SH8B10*
M12L-04PMES-SH8B10*	M12L-04PFDS-SH8B10*	M12L-04PMMS-SH8B10*	M12L-04PFFS-SH8B10*	M12S-04PMMS-SH8B10	M12S-04PFFS-SH8B10
MSLS-04PMES-SH8B10*	MSLS-04PFDS-SH8B10*	MSLS-04PMMS-SH8B10*	MSLS-04PFFS-SH8B10*	MSSS-04PMMS-SH8B10*	MSSS-04PFFS-SH8B10*
SM12L-04PMES-SH8B10*	SM12L-04PFDS-SH8B10*	SM12L-04PMMS-SH8B10*	SM12L-04PFFS-SH8B10*	SM12S-04PMMS-SH8B10*	SM12S-04PFFS-SH8B10*
SMSLS-04PMES-SH8B10*	SMSLS-04PFDS-SH8B10*	SMSLS-04PMMS-SH8B10*	SMSLS-04PFFS-SH8B10*	SMSSS-04PMMS-SH8B10*	SMSSS-04PFFS-SH8B10*

Panel Cut-Out



(Unit: mm)

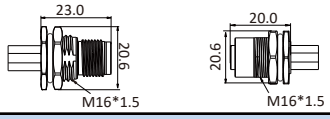
Assemble Style

Solder
(S) Receptacle

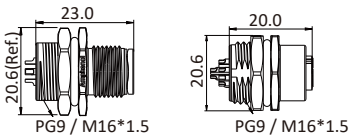
Number of Contacts	4	
Coding	T	
Rated Voltage (AC/DC)	63V	
Nominal current	12A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	MM	FF

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

(10) Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

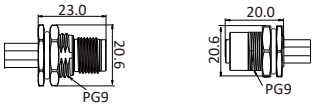
	M16 x 1.5		
(K, L, M code, Plastic/Metal/Shielded/Stainless) (MM) (FF) (T code, Plastic/Metal/Shielded/Stainless) 	Plastic	MSTP-04P**MM**S-SF8C(10)*	MSTP-04P**FF**S-SF8C(10)*
	Metal Nut	M12T-04P**MM**S-SF8C(10)	M12T-04P**FF**S-SF8C(10)
	Shielded	MSTS-04P**MM**S-SF8C(10)*	MSTS-04P**FF**S-SF8C(10)*
	Stainless	SM12T-04P**MM**S-SF8C(10)*	SM12T-04P**FF**S-SF8C(10)*
	Stainless Shielded	SMSTS-04P**MM**S-SF8C(10)*	SMSTS-04P**FF**S-SF8C(10)*

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

	PG9			
(K, L, M, T code Plastic/Metal/Shielded/Stainless) (MM) (FF) 	Plastic	Solder Pins	MSTP-04P**MM**S-SH8001*	MSTP-04P**FF**S-SH8001*
	Metal Nut	Solder Pins	M12T-04P**MM**S-SH8001*	M12T-04P**FF**S-SH8001*
	Shielded	Solder Pins	MSTS-04P**MM**S-SH8001*	MSTS-04P**FF**S-SH8001*
	Stainless	Solder Pins	SM12T-04P**MM**S-SH8001*	SM12T-04P**FF**S-SH8001*
	Stainless Shielded	Solder Pins	SMSTS-04P**MM**S-SH8001*	SMSTS-04P**FF**S-SH8001*
	M16 x 1.5			
	Plastic	Solder Pins	MSTP-04P**MM**S-SH8002*	MSTP-04P**FF**S-SH8002*
	Metal Nut	Solder Pins	M12T-04P**MM**S-SH8002*	M12T-04P**FF**S-SH8002*
	Shielded	Solder Pins	MSTS-04P**MM**S-SH8002*	MSTS-04P**FF**S-SH8002*
	Stainless	Solder Pins	SM12T-04P**MM**S-SH8002*	SM12T-04P**FF**S-SH8002*
	Stainless Shielded	Solder Pins	SMSTS-04P**MM**S-SH8002*	SMSTS-04P**FF**S-SH8002*

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

(10) Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

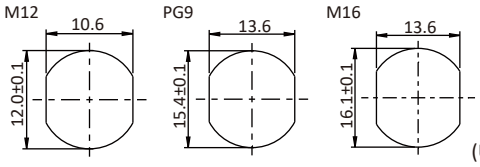
	PG9		
(K, L, M code, Plastic/Metal/Shielded/Stainless) (MM) (FF) (T code, Plastic/Metal/Shielded/Stainless) 	Plastic	MSTP-04P**MM**S-SH8B(10)*	MSTP-04P**FF**S-SH8B(10)*
	Metal Nut	M12T-04P**MM**S-SH8B(10)	M12T-04P**FF**S-SH8B(10)
	Shielded	MSTS-04P**MM**S-SH8B(10)*	MSTS-04P**FF**S-SH8B(10)*
	Stainless	SM12T-04P**MM**S-SH8B(10)*	SM12T-04P**FF**S-SH8B(10)*
	Stainless Shielded	SMSTS-04P**MM**S-SH8B(10)*	SMSTS-04P**FF**S-SH8B(10)*

* Upon Request

M12 K, L, M-Code Bulkhead / Receptacle With Wires, Hexagonal Flange, Front & Rear Fastened

5 (4+PE)		5 (4+PE)		5 (4+FE)	
K		M		L	
630V		630V		63V	
16A		8A		16A	
Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground
MSKP-05P**ME**S-SF8C10*	MSKP-05P**FD**S-SF8C10*	MSMP-05P**ME**S-SF8C10*	MSMP-05P**FD**S-SF8C10*	MSLP-05P**ME**S-SF8C10*	MSLP-05P**FD**S-SF8C10*
M12K-05P**ME**S-SF8C10*	M12K-05P**FD**S-SF8C10*	M12M-05P**ME**S-SF8C10*	M12M-05P**FD**S-SF8C10*	M12L-05P**ME**S-SF8C10*	M12L-05P**FD**S-SF8C10*
MSKS-05P**ME**S-SF8C10*	MSKS-05P**FD**S-SF8C10*	MSMS-05P**ME**S-SF8C10*	MSMS-05P**FD**S-SF8C10*	MSLS-05P**ME**S-SF8C10*	MSLS-05P**FD**S-SF8C10*
SM12K-05P**ME**S-SF8C10*	SM12K-05P**FD**S-SF8C10*	SM12M-05P**ME**S-SF8C10*	SM12M-05P**FD**S-SF8C10*	SM12L-05P**ME**S-SF8C10*	SM12L-05P**FD**S-SF8C10*
SMSKS-05P**ME**S-SF8C10*	SMSKS-05P**FD**S-SF8C10*	SMSMS-05P**ME**S-SF8C10*	SMSMS-05P**FD**S-SF8C10*	SMSLS-05P**ME**S-SF8C10*	SMSLS-05P**FD**S-SF8C10*
MSKP-05P**ME**S-SH8001*	MSKP-05P**FD**S-SH8001*	MSMP-05P**ME**S-SH8001*	MSMP-05P**FD**S-SH8001*	MSLP-05P**ME**S-SH8001*	MSLP-05P**FD**S-SH8001*
M12K-05P**ME**S-SH8001*	M12K-05P**FD**S-SH8001*	M12M-05P**ME**S-SH8001*	M12M-05P**FD**S-SH8001*	M12L-05P**ME**S-SH8001*	M12L-05P**FD**S-SH8001*
MSKS-05P**ME**S-SH8001*	MSKS-05P**FD**S-SH8001*	MSMS-05P**ME**S-SH8001*	MSMS-05P**FD**S-SH8001*	MSLS-05P**ME**S-SH8001*	MSLS-05P**FD**S-SH8001*
SM12K-05P**ME**S-SH8001*	SM12K-05P**FD**S-SH8001*	SM12M-05P**ME**S-SH8001*	SM12M-05P**FD**S-SH8001*	SM12L-05P**ME**S-SH8001*	SM12L-05P**FD**S-SH8001*
SMSKS-05P**ME**S-SH8001*	SMSKS-05P**FD**S-SH8001*	SMSMS-05P**ME**S-SH8001*	SMSMS-05P**FD**S-SH8001*	SMSLS-05P**ME**S-SH8001*	SMSLS-05P**FD**S-SH8001*
MSKP-05P**ME**S-SH8002*	MSKP-05P**FD**S-SH8002*	MSMP-05P**ME**S-SH8002*	MSMP-05P**FD**S-SH8002*	MSLP-05P**ME**S-SH8002*	MSLP-05P**FD**S-SH8002*
M12K-05P**ME**S-SH8002*	M12K-05P**FD**S-SH8002*	M12M-05P**ME**S-SH8002*	M12M-05P**FD**S-SH8002*	M12L-05P**ME**S-SH8002*	M12L-05P**FD**S-SH8002*
MSKS-05P**ME**S-SH8002*	MSKS-05P**FD**S-SH8002*	MSMS-05P**ME**S-SH8002*	MSMS-05P**FD**S-SH8002*	MSLS-05P**ME**S-SH8002*	MSLS-05P**FD**S-SH8002*
SM12K-05P**ME**S-SH8002*	SM12K-05P**FD**S-SH8002*	SM12M-05P**ME**S-SH8002*	SM12M-05P**FD**S-SH8002*	SM12L-05P**ME**S-SH8002*	SM12L-05P**FD**S-SH8002*
SMSKS-05P**ME**S-SH8002*	SMSKS-05P**FD**S-SH8002*	SMSMS-05P**ME**S-SH8002*	SMSMS-05P**FD**S-SH8002*	SMSLS-05P**ME**S-SH8002*	SMSLS-05P**FD**S-SH8002*
MSKP-05P**ME**S-SH8B10*	MSKP-05P**FD**S-SH8B10*	MSMP-05P**ME**S-SH8B10*	MSMP-05P**FD**S-SH8B10*	MSLP-05P**ME**S-SH8B10*	MSLP-05P**FD**S-SH8B10*
M12K-05P**ME**S-SH8B10*	M12K-05P**FD**S-SH8B10*	M12M-05P**ME**S-SH8B10*	M12M-05P**FD**S-SH8B10*	M12L-05P**ME**S-SH8B10*	M12L-05P**FD**S-SH8B10*
MSKS-05P**ME**S-SH8B10*	MSKS-05P**FD**S-SH8B10*	MSMS-05P**ME**S-SH8B10*	MSMS-05P**FD**S-SH8B10*	MSLS-05P**ME**S-SH8B10*	MSLS-05P**FD**S-SH8B10*
SM12K-05P**ME**S-SH8B10*	SM12K-05P**FD**S-SH8B10*	SM12M-05P**ME**S-SH8B10*	SM12M-05P**FD**S-SH8B10*	SM12L-05P**ME**S-SH8B10*	SM12L-05P**FD**S-SH8B10*
SMSKS-05P**ME**S-SH8B10*	SMSKS-05P**FD**S-SH8B10*	SMSMS-05P**ME**S-SH8B10*	SMSMS-05P**FD**S-SH8B10*	SMSLS-05P**ME**S-SH8B10*	SMSLS-05P**FD**S-SH8B10*

Panel Cut-Out



(Unit: mm)

Assemble Style

Solder
(S) Receptacle

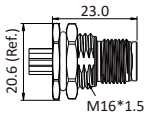
Number of Contacts	6 (5+PE)	
Coding	M	
Rated Voltage (AC/DC)	630V	
Nominal current	8A	
Pin Assignment **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	Male Power / Female Ground	Female Power / Male Ground

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **FRONT** Fastened Nut

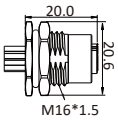
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

M16 x 1.5

(MM)



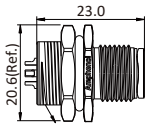
(FF)



Plastic	MSMP-06P**ME**S-SF8C10*	MSMP-06P**FD**S-SF8C10*
Metal Nut	M12M-06P**ME**S-SF8C10*	M12M-06P**FD**S-SF8C10*
Shielded	MSMS-06P**ME**S-SF8C10*	MSMS-06P**FD**S-SF8C10*
Stainless	SM12M-06P**ME**S-SF8C10*	SM12M-06P**FD**S-SF8C10*
Stainless Shielded	SMSMS-06P**ME**S-SF8C10*	SMSMS-06P**FD**S-SF8C10*

M12 Bulkhead / Receptacle, Hexagonal Flange, **REAR** Fastened Nut

(MM)



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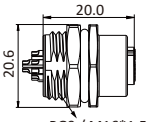


PG9

Plastic	Solder Pins	MSMP-06P**ME**S-SH8001*	MSMP-06P**FD**S-SH8001*
Metal Nut	Solder Pins	M12M-06P**ME**S-SH8001*	M12M-06P**FD**S-SH8001*
Shielded	Solder Pins	MSMS-06P**ME**S-SH8001*	MSMS-06P**FD**S-SH8001*
Stainless	Solder Pins	SM12M-06P**ME**S-SH8001*	SM12M-06P**FD**S-SH8001*
Stainless Shielded	Solder Pins	SMSMS-06P**ME**S-SH8001*	SMSMS-06P**FD**S-SH8001*

M16 x 1.5

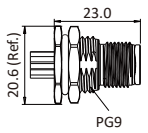
Plastic	Solder Pins	MSMP-06P**ME**S-SH8002*	MSMP-06P**FD**S-SH8002*
Metal Nut	Solder Pins	M12M-06P**ME**S-SH8002*	M12M-06P**FD**S-SH8002*
Shielded	Solder Pins	MSMS-06P**ME**S-SH8002*	MSMS-06P**FD**S-SH8002*
Stainless	Solder Pins	SM12M-06P**ME**S-SH8002*	SM12M-06P**FD**S-SH8002*
Stainless Shielded	Solder Pins	SMSMS-06P**ME**S-SH8002*	SMSMS-06P**FD**S-SH8002*

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

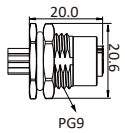
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

PG9

(MM)



(FF)



Plastic	MSMP-06P**ME**S-SH8B10*	MSMP-06P**FD**S-SH8B10*
Metal Nut	M12M-06P**ME**S-SH8B10*	M12M-06P**FD**S-SH8B10*
Shielded	MSMS-06P**ME**S-SH8B10*	MSMS-06P**FD**S-SH8B10*
Stainless	SM12M-06P**ME**S-SH8B10*	SM12M-06P**FD**S-SH8B10*
Stainless Shielded	SMSMS-06P**ME**S-SH8B10*	SMSMS-06P**FD**S-SH8B10*

* Upon Request

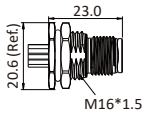
Number of Contacts	2	
Coding	L	
Rated Voltage (AC/DC)	63V	
Nominal current	16A	
Pin Assignment **MM**: Male Connector Male Contact **FF**: Female Connector Female Contact	MM	FF

M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

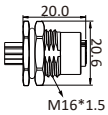
10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

M16 x 1.5

(MM)



(FF)

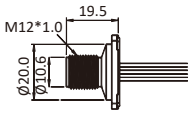


Plastic	MSLP-02P**MM**S-SH8C10*	MSLP-02P**FF**S-SH8C10*
Metal Nut	M12L-02P**MM**S-SH8C10*	M12L-02P**FF**S-SH8C10*
Shielded	MSLS-02P**MM**S-SH8C10*	MSLS-02P**FF**S-SH8C10*
Stainless	SM12L-02P**MM**S-SH8C10*	SM12L-02P**FF**S-SH8C10*
Stainless Shielded	SMSLS-02P**MM**S-SH8C10*	SMSLS-02P**FF**S-SH8C10*

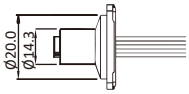
M12 Bulkhead / Receptacle With UL PVC Wires, 25mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(Male)



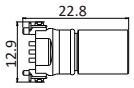
(Female)



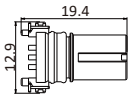
Shielded	MSLS-02P**MM**S-SS8E10*	MSLS-02P**FF**S-SS8E10*
Stainless	SM12L-02P**MM**S-SS8E10*	SM12L-02P**FF**S-SS8E10*
Stainless Shielded	SMSLS-02P**MM**S-SS8E10*	SMSLS-02P**FF**S-SS8E10*

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

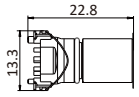
Male (Unshielded)



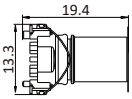
Female (Unshielded)



Male (Shielded)



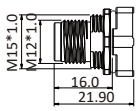
Female (Shielded)



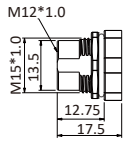
Unshielded	THR Straight	M12L-02P**MM**P-EE0001	M12L-02P**FF**P-EE0001
	THR Right Angle	M12L-02P**MM**R-EE0001*	M12L-02P**FF**R-EE0001*
	SMD Straight	-	-
Shielded	THR Straight	MSLS-02P**MM**P-EE0001*	MSLS-02P**FF**P-EE0001*
	THR Right Angle	MSLS-02P**MM**R-EE0001*	MSLS-02P**FF**R-EE0001*
	SMD Straight	-	-

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

APPM-AAAMA012-003



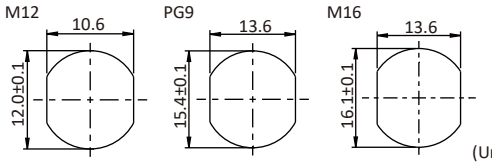
APPM-AAAFA012-003



Front Fastened, THR Male	APP**M**-AAA**M**A012-003
Front Fastened, SMD Male	-
Front Fastened, THR Female	APP**M**-AAA**F**A012-003
Front Fastened, SMD Female	-
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	-
Rear Fastened, THR Female	-
Rear Fastened, SMD Female	-

* Upon Request

Panel Cut-Out



(Unit: mm)

Number of Contacts	2	
Coding	T	
Rated Voltage (AC/DC)	63V	
Nominal current	12A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	MM	FF

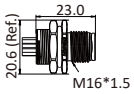
M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

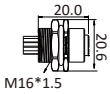
M16 x 1.5

(K, L, M code, Plastic/Metal/Shielded/Stainless)

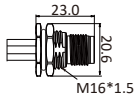
(MM)

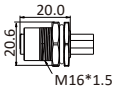


(FF)



(T code, Plastic/Metal/Shielded/Stainless)



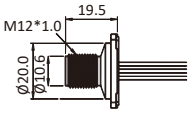


Plastic	MSTP-02P**MM**S-SH8C10*	MSTP-02P**FF**S-SH8C10*
Metal Nut	M12T-02P**MM**S-SH8C10*	M12T-02P**FF**S-SH8C10*
Shielded	MSTS-02P**MM**S-SH8C10*	MSTS-02P**FF**S-SH8C10*
Stainless	SM12T-02P**MM**S-SH8C10*	SM12T-02P**FF**S-SH8C10*
Stainless Shielded	SMSTS-02P**MM**S-SH8C10*	SMSTS-02P**FF**S-SH8C10*

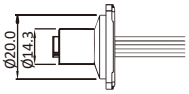
M12 Bulkhead / Receptacle With UL PVC Wires, 25mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(Male)



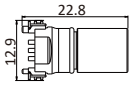
(Female)



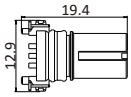
Shielded	MSTS-02P**MM**S-SS8E10*	MSTS-02P**FF**S-SS8E10*
Stainless	SM12T-02P**MM**S-SS8E10*	SM12T-02P**FF**S-SS8E10*
Stainless Shielded	SMSTS-02P**MM**S-SS8E10*	SMSTS-02P**FF**S-SS8E10*

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

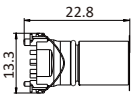
Male (Unshielded)



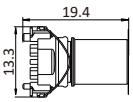
Female (Unshielded)



Male (Shielded)



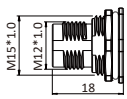
Female (Shielded)



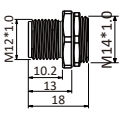
Unshielded	THR Straight	M12T-02P**MM**P-EE0001	M12T-02P**FF**P-EE0001
	THR Right Angle	M12T-02P**MM**R-EE0001*	M12T-02P**FF**R-EE0001*
	SMD Straight	M12T-02P**MM**T-EE0001*	M12T-02P**FF**T-EE0001*
Shielded	THR Straight	MSTS-02P**MM**P-EE0001*	MSTS-02P**FF**P-EE0001*
	THR Right Angle	MSTS-02P**MM**R-EE0001*	MSTS-02P**FF**R-EE0001*
	SMD Straight	MSTS-02P**MM**T-EE0001*	MSTS-02P**FF**T-EE0001*

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

APPM-AAAMA012-001



APPM-AAAMA012-002



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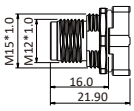
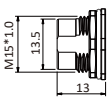


APPM-AAAFA012-001



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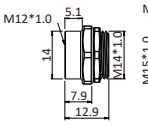

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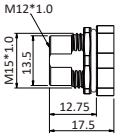

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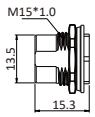
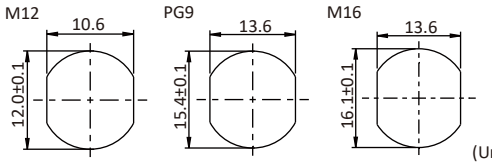


Front Fastened, THR Male	APP**M**-AAA**M**A012-006
Front Fastened, SMD Male	APP**M**-AAA**M**A012-001
Front Fastened, THR Female	APP**M**-AAA**F**A012-014
Front Fastened, SMD Female	APP**M**-AAA**F**A012-001
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	APP**M**-AAA**M**A012-002
Rear Fastened, THR Female	APP**M**-AAA**F**A012-013
Rear Fastened, SMD Female	APP**M**-AAA**F**A012-002

* Upon Request

3 (2+PE)		3 (2+PE)		3 (2+FE)	
K		M		L	
630V		630V		63V	
16A		8A		16A	
Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground
MSKP-03P**ME**S-SH8C10*	MSKP-03P**FD**S-SH8C10*	MSMP-03P**ME**S-SH8C10*	MSMP-03P**FD**S-SH8C10*	MSLP-03P**ME**S-SH8C10*	MSLP-03P**FD**S-SH8C10*
M12K-03P**ME**S-SH8C10*	M12K-03P**FD**S-SH8C10*	M12M-03P**ME**S-SH8C10*	M12M-03P**FD**S-SH8C10*	M12L-03P**ME**S-SH8C10*	M12L-03P**FD**S-SH8C10*
MSKS-03P**ME**S-SH8C10*	MSKS-03P**FD**S-SH8C10*	MSMS-03P**ME**S-SH8C10*	MSMS-03P**FD**S-SH8C10*	MSLS-03P**ME**S-SH8C10*	MSLS-03P**FD**S-SH8C10*
SM12K-03P**ME**S-SH8C10*	SM12K-03P**FD**S-SH8C10*	SM12M-03P**ME**S-SH8C10*	SM12M-03P**FD**S-SH8C10*	SM12L-03P**ME**S-SH8C10*	SM12L-03P**FD**S-SH8C10*
SMSKS-03P**ME**S-SH8C10*	SMSKS-03P**FD**S-SH8C10*	SMSMS-03P**ME**S-SH8C10*	SMSMS-03P**FD**S-SH8C10*	SMSLS-03P**ME**S-SH8C10*	SMSLS-03P**FD**S-SH8C10*
MSKS-03P**ME**S-SS8E10*	MSKS-03P**FD**S-SS8E10*	MSMS-03P**ME**S-SS8E10*	MSMS-03P**FD**S-SS8E10*	MSLS-03P**ME**S-SS8E10*	MSLS-03P**FD**S-SS8E10*
SM12K-03P**ME**S-SS8E10*	SM12K-03P**FD**S-SS8E10*	SM12M-03P**ME**S-SS8E10*	SM12M-03P**FD**S-SS8E10*	SM12L-03P**ME**S-SS8E10*	SM12L-03P**FD**S-SS8E10*
SMSKS-03P**ME**S-SS8E10*	SMSKS-03P**FD**S-SS8E10*	SMSMS-03P**ME**S-SS8E10*	SMSMS-03P**FD**S-SS8E10*	SMSLS-03P**ME**S-SS8E10*	SMSLS-03P**FD**S-SS8E10*
M12K-03P**ME**P-EE0001*	M12K-03P**FD**P-EE0001*	M12M-03P**ME**P-EE0001*	M12M-03P**FD**P-EE0001*	M12L-03P**ME**P-EE0001*	M12L-03P**FD**P-EE0001*
M12K-03P**ME**R-EE0001*	M12K-03P**FD**R-EE0001*	M12M-03P**ME**R-EE0001*	M12M-03P**FD**R-EE0001*	M12L-03P**ME**R-EE0001*	M12L-03P**FD**R-EE0001*
-	-	M12M-03P**MM**T-EE0001*	M12M-03P**FF**T-EE0001*	-	-
MSKS-03P**ME**P-EE0001*	MSKS-03P**FD**P-EE0001*	MSMS-03P**ME**P-EE0001*	MSMS-03P**FD**P-EE0001*	MSLS-03P**ME**P-EE0001*	MSLS-03P**FD**P-EE0001*
MSKS-03P**ME**R-EE0001*	MSKS-03P**FD**R-EE0001*	MSMS-03P**ME**R-EE0001*	MSMS-03P**FD**R-EE0001*	MSLS-03P**ME**R-EE0001*	MSLS-03P**FD**R-EE0001*
-	-	MSMS-03P**MM**T-EE0001*	MSMS-03P**FF**T-EE0001*	-	-
APP**M**-AAA**M**A012-003		APP**M**-AAA**M**A012-003		APP**M**-AAA**M**A012-003	
-		-		-	
APP**M**-AAA**F**A012-003		APP**M**-AAA**F**A012-003		APP**M**-AAA**F**A012-003	
-		-		-	
-		-		-	
-		-		-	
-		-		-	
-		-		-	

Panel Cut-Out



(Unit: mm)

Number of Contacts	3	
Coding	L	
Rated Voltage (AC/DC)	63V	
Nominal current	16A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	MM	FF

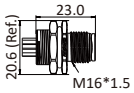
M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

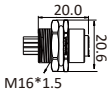
M16 x 1.5

(K, L code, Plastic/Metal/Shielded/Stainless)

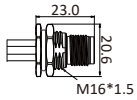
(MM)

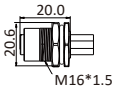


(FF)



(S, T code, Plastic/Metal/Shielded/Stainless)



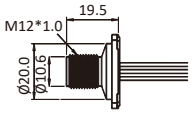


Plastic	MSLP-03P**MM**S-SH8C10*	MSLP-03P**FF**S-SH8C10*
Metal Nut	M12L-03P**MM**S-SH8C10*	M12L-03P**FF**S-SH8C10*
Shielded	MSLS-03P**MM**S-SH8C10*	MSLS-03P**FF**S-SH8C10*
Stainless	SM12L-03P**MM**S-SH8C10*	SM12L-03P**FF**S-SH8C10*
Stainless Shielded	SMSLS-03P**MM**S-SH8C10*	SMSLS-03P**FF**S-SH8C10*

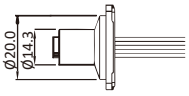
M12 Bulkhead / Receptacle With UL PVC Wires, 25mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(Male)



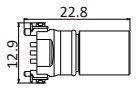
(Female)



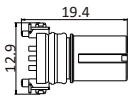
Shielded	MSLS-03P**MM**S-SS8E10*	MSLS-03P**FF**S-SS8E10*
Stainless	SM12L-03P**MM**S-SS8E10*	SM12L-03P**FF**S-SS8E10*
Stainless Shielded	SMSLS-03P**MM**S-SS8E10*	SMSLS-03P**FF**S-SS8E10*

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

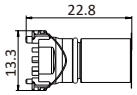
Male (Unshielded)



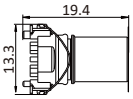
Female (Unshielded)



Male (Shielded)



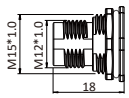
Female (Shielded)



Unshielded	THR Straight	M12L-03P**MM**P-EE0001*	M12L-03P**FF**P-EE0001*
	THR Right Angle	M12L-03P**MM**R-EE0001*	M12L-03P**FF**R-EE0001*
	SMD Straight	-	-
Shielded	THR Straight	MSLS-03P**MM**P-EE0001*	MSLS-03P**FF**P-EE0001*
	THR Right Angle	MSLS-03P**MM**R-EE0001*	MSLS-03P**FF**R-EE0001*
	SMD Straight	-	-

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

APPM-AAAMA012-001



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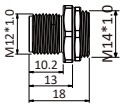

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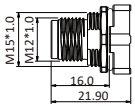

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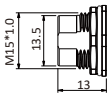

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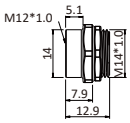

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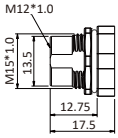
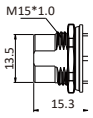


APPM-AAAFA012-014

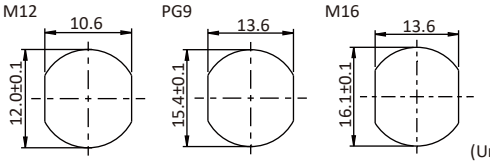


Front Fastened, THR Male	APP**M**-AAA**M**A012-003
Front Fastened, SMD Male	-
Front Fastened, THR Female	APP**M**-AAA**F**A012-003
Front Fastened, SMD Female	-
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	-
Rear Fastened, THR Female	-
Rear Fastened, SMD Female	-

* Upon Request

3 (2+PE)		3		4 (3+PE)	
S		T		K	
630V		63V		630V	
12A		12A		16A	
MM	FF	MM	FF	Male Power / Female Ground	Female Power / Male Ground
MSSP-03P**MM**S-SH8C10*	MSSP-03P**FF**S-SH8C10*	MSTP-03P**MM**S-SH8C10*	MSTP-03P**FF**S-SH8C10*	MSKP-04P**ME**S-SH8C10*	MSKP-04P**FD**S-SH8C10*
M12S-03P**MM**S-SH8C10*	M12S-03P**FF**S-SH8C10	M12T-03P**MM**S-SH8C10*	M12T-03P**FF**S-SH8C10*	M12K-04P**ME**S-SH8C10*	M12K-04P**FD**S-SH8C10*
MSSS-03P**MM**S-SH8C10*	MSSS-03P**FF**S-SH8C10*	MSTS-03P**MM**S-SH8C10*	MSTS-03P**FF**S-SH8C10*	MSKS-04P**ME**S-SH8C10*	MSKS-04P**FD**S-SH8C10*
SM12S-03P**MM**S-SH8C10*	SM12S-03P**FF**S-SH8C10*	SM12T-03P**MM**S-SH8C10*	SM12T-03P**FF**S-SH8C10*	SM12K-04P**ME**S-SH8C10*	SM12K-04P**FD**S-SH8C10*
SMSSS-03P**MM**S-SH8C10*	SMSSS-03P**FF**S-SH8C10*	SMSTS-03P**MM**S-SH8C10*	SMSTS-03P**FF**S-SH8C10*	SMSKS-04P**ME**S-SH8C10*	SMSKS-04P**FD**S-SH8C10*
MSSS-03P**MM**S-SS8E10*	MSSS-03P**FF**S-SS8E10*	MSTS-03P**MM**S-SS8E10*	MSTS-03P**FF**S-SS8E10*	MSKS-04P**ME**S-SS8E10*	MSKS-04P**FD**S-SS8E10*
SM12S-03P**MM**S-SS8E10*	SM12S-03P**FF**S-SS8E10*	SM12T-03P**MM**S-SS8E10*	SM12T-03P**FF**S-SS8E10*	SM12K-04P**ME**S-SS8E10*	SM12K-04P**FD**S-SS8E10*
SMSSS-03P**MM**S-SS8E10*	SMSSS-03P**FF**S-SS8E10*	SMSTS-03P**MM**S-SS8E10*	SMSTS-03P**FF**S-SS8E10*	SMSKS-04P**ME**S-SS8E10*	SMSKS-04P**FD**S-SS8E10*
M12S-03P**MM**P-EE0001*	M12S-03P**FF**P-EE0001*	M12T-03P**MM**P-EE0001*	M12T-03P**FF**P-EE0001*	M12K-04P**ME**P-EE0001*	M12K-04P**FD**P-EE0001*
M12S-03P**MM**R-EE0001*	M12S-03P**FF**R-EE0001*	M12T-03P**MM**R-EE0001*	M12T-03P**FF**R-EE0001*	M12K-04P**ME**R-EE0001*	M12K-04P**FD**R-EE0001*
-	-	M12T-03P**MM**T-EE0001*	M12T-03P**FF**T-EE0001*	-	-
MSSS-03P**MM**P-EE0001*	MSSS-03P**FF**P-EE0001*	MSTS-03P**MM**P-EE0001*	MSTS-03P**FF**P-EE0001*	MSKS-04P**ME**P-EE0001*	MSKS-04P**FD**P-EE0001*
MSSS-03P**MM**R-EE0001*	MSSS-03P**FF**R-EE0001*	MSTS-03P**MM**R-EE0001*	MSTS-03P**FF**R-EE0001*	MSKS-04P**ME**R-EE0001*	MSKS-04P**FD**R-EE0001*
-	-	MSTS-03P**MM**T-EE0001*	MSTS-03P**FF**T-EE0001*	-	-
APP**M**-AAA**M**A012-006		APP**M**-AAA**M**A012-006		APP**M**-AAA**M**A012-003	
-		APP**M**-AAA**M**A012-001		-	
APP**M**-AAA**F**A012-014		APP**M**-AAA**F**A012-014		APP**M**-AAA**F**A012-003	
-		APP**M**-AAA**F**A012-001		-	
-		-		-	
-		APP**M**-AAA**M**A012-002		-	
APP**M**-AAA**F**A012-013		APP**M**-AAA**F**A012-013		-	
-		APP**M**-AAA**F**A012-002		-	

Panel Cut-Out



(Unit: mm)

Number of Contacts	4 (3+PE)	
Coding	M	
Rated Voltage (AC/DC)	630V	
Nominal current	8A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	Male Power / Female Ground	Female Power / Male Ground

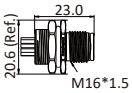
M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

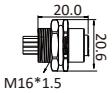
M16 x 1.5

(L, M code, Plastic/Metal/Shielded/Stainless)

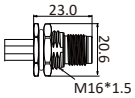
(MM)

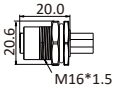


(FF)



(S code, Plastic/Metal/Shielded/Stainless)



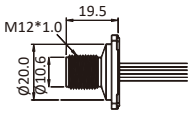


Plastic	MSMP-04P**ME**S-SH8C10*	MSMP-04P**FD**S-SH8C10*
Metal Nut	M12M-04P**ME**S-SH8C10*	M12M-04P**FD**S-SH8C10*
Shielded	MSMS-04P**ME**S-SH8C10*	MSMS-04P**FD**S-SH8C10*
Stainless	SM12M-04P**ME**S-SH8C10*	SM12M-04P**FD**S-SH8C10*
Stainless Shielded	SMSMS-04P**ME**S-SH8C10*	SMSMS-04P**FD**S-SH8C10*

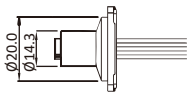
M12 Bulkhead / Receptacle With UL PVC Wires, 25mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(Male)



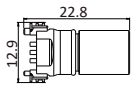
(Female)



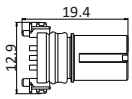
Shielded	MSMS-04P**ME**S-SS8E10*	MSMS-04P**FD**S-SS8E10*
Stainless	SM12M-04P**ME**S-SS8E10*	SM12M-04P**FD**S-SS8E10*
Stainless Shielded	SMSMS-04P**ME**S-SS8E10*	SMSMS-04P**FD**S-SS8E10*

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

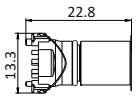
Male (Unshielded)



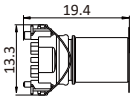
Female (Unshielded)



Male (Shielded)



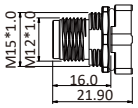
Female (Shielded)



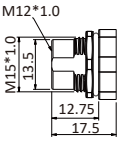
Unshielded	THR Straight	M12M-04P**ME**P-EE0001*	M12M-04P**FD**P-EE0001*
	THR Right Angle	M12M-04P**ME**R-EE0001*	M12M-04P**FD**R-EE0001*
	SMD Straight	M12M-04P**MM**T-EE0001*	M12M-04P**FF**T-EE0001*
Shielded	THR Straight	MSMS-04P**ME**P-EE0001*	MSMS-04P**FD**P-EE0001*
	THR Right Angle	MSMS-04P**ME**R-EE0001*	MSMS-04P**FD**R-EE0001*
	SMD Straight	MSMS-04P**MM**T-EE0001*	MSMS-04P**FF**T-EE0001*

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

APPM-AAAMA012-003



APPM-AAAFA012-003



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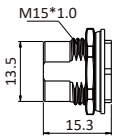
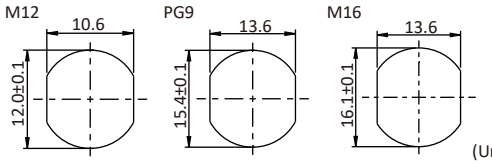


Front Fastened, THR Male	APP**M**-AAA**M**A012-003
Front Fastened, SMD Male	-
Front Fastened, THR Female	APP**M**-AAA**F**A012-003
Front Fastened, SMD Female	-
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	-
Rear Fastened, THR Female	-
Rear Fastened, SMD Female	-

* Upon Request

4 (3+FE)		4		4 (3+PE)	
L		L		S	
63V		63V		630V	
12A		16A		12A	
Male Power / Female Ground	Female Power / Male Ground	MM	FF	MM	FF
MSLP-04P**ME**S-SH8C10*	MSLP-04P**FD**S-SH8C10*	MSLP-04P**MM**S-SH8C10*	MSLP-04P**FF**S-SH8C10*	MSSP-04P**MM**S-SH8C10*	MSSP-04P**FF**S-SH8C10*
M12L-04P**ME**S-SH8C10*	M12L-04P**FD**S-SH8C10*	M12L-04P**MM**S-SH8C10*	M12L-04P**FF**S-SH8C10*	M12S-04P**MM**S-SH8C10	M12S-04P**FF**S-SH8C10
MSLS-04P**ME**S-SH8C10*	MSLS-04P**FD**S-SH8C10*	MSLS-04P**MM**S-SH8C10*	MSLS-04P**FF**S-SH8C10*	MSSS-04P**MM**S-SH8C10*	MSSS-04P**FF**S-SH8C10*
SM12L-04P**ME**S-SH8C10*	SM12L-04P**FD**S-SH8C10*	SM12L-04P**MM**S-SH8C10*	SM12L-04P**FF**S-SH8C10*	SM12S-04P**MM**S-SH8C10*	SM12S-04P**FF**S-SH8C10*
SMSLS-04P**ME**S-SH8C10*	SMSLS-04P**FD**S-SH8C10*	SMSLS-04P**MM**S-SH8C10*	SMSLS-04P**FF**S-SH8C10*	SMSSS-04P**MM**S-SH8C10*	SMSSS-04P**FF**S-SH8C10*
MSLS-04P**ME**S-SS8E10*	MSLS-04P**FD**S-SS8E10*	MSLS-04P**MM**S-SS8E10*	MSLS-04P**FF**S-SS8E10*	MSSS-04P**MM**S-SS8E10*	MSSS-04P**FF**S-SS8E10*
SM12L-04P**ME**S-SS8E10*	SM12L-04P**FD**S-SS8E10*	SM12L-04P**MM**S-SS8E10*	SM12L-04P**FF**S-SS8E10*	SM12S-04P**MM**S-SS8E10*	SM12S-04P**FF**S-SS8E10*
SMSLS-04P**ME**S-SS8E10*	SMSLS-04P**FD**S-SS8E10*	SMSLS-04P**MM**S-SS8E10*	SMSLS-04P**FF**S-SS8E10*	SMSSS-04P**MM**S-SS8E10*	SMSSS-04P**FF**S-SS8E10*
M12L-04P**ME**P-EE0001*	M12L-04P**FD**P-EE0001*	M12L-04P**MM**P-EE0001*	M12L-04P**FF**P-EE0001*	M12S-04P**MM**P-EE0001	M12S-04P**FF**P-EE0001*
M12L-04P**ME**R-EE0001*	M12L-04P**FD**R-EE0001*	M12L-04P**MM**R-EE0001*	M12L-04P**FF**R-EE0001*	M12S-04P**MM**R-EE0001*	M12S-04P**FF**R-EE0001*
-	-	-	-	-	-
MSLS-04P**ME**P-EE0001*	MSLS-04P**FD**P-EE0001*	MSLS-04P**MM**P-EE0001*	MSLS-04P**FF**P-EE0001*	MSSS-04P**MM**P-EE0001*	MSSS-04P**FF**P-EE0001*
MSLS-04P**ME**R-EE0001*	MSLS-04P**FD**R-EE0001*	MSLS-04P**MM**R-EE0001*	MSLS-04P**FF**R-EE0001*	MSSS-04P**MM**R-EE0001*	MSSS-04P**FF**R-EE0001*
-	-	-	-	-	-
APP**M**-AAA**M**A012-003		APP**M**-AAA**M**A012-003		APP**M**-AAA**M**A012-006	
-		-		-	
APP**M**-AAA**F**A012-003		APP**M**-AAA**F**A012-003		APP**M**-AAA**F**A012-014	
-		-		-	
-		-		-	
-		-		-	
-		-		APP**M**-AAA**F**A012-013	
-		-		-	

Panel Cut-Out



Number of Contacts	4	
Coding	T	
Rated Voltage (AC/DC)	63V	
Nominal current	12A	
Pin Assignment **MM** : Male Connector Male Contact **FF** : Female Connector Female Contact **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	MM	FF

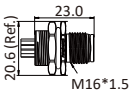
M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

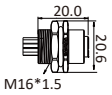
M16 x 1.5

(K, L, M code, Plastic/Metal/Shielded/Stainless)

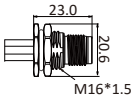
(MM)

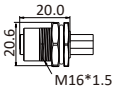


(FF)



(T code, Plastic/Metal/Shielded/Stainless)



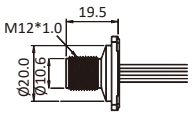


Plastic	MSTP-04P**MM**S-SH8C10*	MSTP-04P**FF**S-SH8C10*
Metal Nut	M12T-04P**MM**S-SH8C10	M12T-04P**FF**S-SH8C10
Shielded	MSTS-04P**MM**S-SH8C10*	MSTS-04P**FF**S-SH8C10*
Stainless	SM12T-04P**MM**S-SH8C10*	SM12T-04P**FF**S-SH8C10*
Stainless Shielded	SMSTS-04P**MM**S-SH8C10*	SMSTS-04P**FF**S-SH8C10*

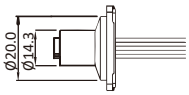
M12 Bulkhead / Receptacle With UL PVC Wires, 25mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

(Male)



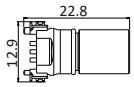
(Female)



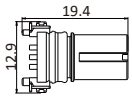
Shielded	MSTS-04P**MM**S-SS8E10*	MSTS-04P**FF**S-SS8E10*
Stainless	SM12T-04P**MM**S-SS8E10*	SM12T-04P**FF**S-SS8E10*
Stainless Shielded	SMSTS-04P**MM**S-SS8E10*	SMSTS-04P**FF**S-SS8E10*

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

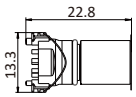
Male (Unshielded)



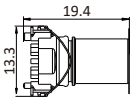
Female (Unshielded)



Male (Shielded)



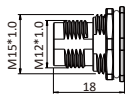
Female (Shielded)



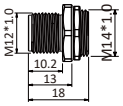
Unshielded	THR Straight	M12T-04P**MM**P-EE0001*	M12T-04P**FF**P-EE0001*
	THR Right Angle	M12T-04P**MM**R-EE0001*	M12T-04P**FF**R-EE0001*
	SMD Straight	M12T-04P**MM**T-EE0001*	M12T-04P**FF**T-EE0001*
Shielded	THR Straight	MSTS-04P**MM**P-EE0001*	MSTS-04P**FF**P-EE0001*
	THR Right Angle	MSTS-04P**MM**R-EE0001*	MSTS-04P**FF**R-EE0001*
	SMD Straight	MSTS-04P**MM**T-EE0001*	MSTS-04P**FF**T-EE0001*

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

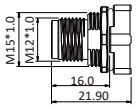
APPM-AAAMA012-001



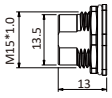
APPM-AAAMA012-002



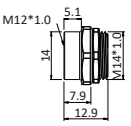
APPM-AAAMA012-003



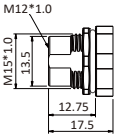
APPM-AAAFA012-001



APPM-AAAFA012-002



APPM-AAAFA012-003



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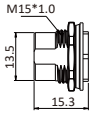
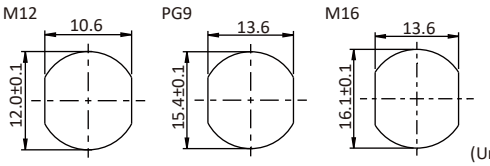


Front Fastened, THR Male	APP**M**-AAA**M**A012-006
Front Fastened, SMD Male	APP**M**-AAA**M**A012-001
Front Fastened, THR Female	APP**M**-AAA**F**A012-014
Front Fastened, SMD Female	APP**M**-AAA**F**A012-001
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	APP**M**-AAA**M**A012-002
Rear Fastened, THR Female	APP**M**-AAA**F**A012-013
Rear Fastened, SMD Female	APP**M**-AAA**F**A012-002

* Upon Request

5 (4+PE)		5 (4+PE)		5 (4+FE)	
K		M		L	
630V		630V		63V	
16A		8A		16A	
Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground	Male Power / Female Ground	Female Power / Male Ground
MSKP-05P**ME**S-SH8C10*	MSKP-05P**FD**S-SH8C10*	MSMP-05P**ME**S-SH8C10*	MSMP-05P**FD**S-SH8C10*	MSLP-05P**ME**S-SH8C10*	MSLP-05P**FD**S-SH8C10*
M12K-05P**ME**S-SH8C10*	M12K-05P**FD**S-SH8C10*	M12M-05P**ME**S-SH8C10*	M12M-05P**FD**S-SH8C10*	M12L-05P**ME**S-SH8C10*	M12L-05P**FD**S-SH8C10*
MSKS-05P**ME**S-SH8C10*	MSKS-05P**FD**S-SH8C10*	MSMS-05P**ME**S-SH8C10*	MSMS-05P**FD**S-SH8C10*	MSLS-05P**ME**S-SH8C10*	MSLS-05P**FD**S-SH8C10*
SM12K-05P**ME**S-SH8C10*	SM12K-05P**FD**S-SH8C10*	SM12M-05P**ME**S-SH8C10*	SM12M-05P**FD**S-SH8C10*	SM12L-05P**ME**S-SH8C10*	SM12L-05P**FD**S-SH8C10*
SMSKS-05P**ME**S-SH8C10*	SMSKS-05P**FD**S-SH8C10*	SMSMS-05P**ME**S-SH8C10*	SMSMS-05P**FD**S-SH8C10*	SMSLS-05P**ME**S-SH8C10*	SMSLS-05P**FD**S-SH8C10*
MSKS-05P**ME**S-SS8E10*	MSKS-05P**FD**S-SS8E10*	MSMS-05P**ME**S-SS8E10*	MSMS-05P**FD**S-SS8E10*	MSLS-05P**ME**S-SS8E10*	MSLS-05P**FD**S-SS8E10*
SM12K-05P**ME**S-SS8E10*	SM12K-05P**FD**S-SS8E10*	SM12M-05P**ME**S-SS8E10*	SM12M-05P**FD**S-SS8E10*	SM12L-05P**ME**S-SS8E10*	SM12L-05P**FD**S-SS8E10*
SMSKS-05P**ME**S-SS8E10*	SMSKS-05P**FD**S-SS8E10*	SMSMS-05P**ME**S-SS8E10*	SMSMS-05P**FD**S-SS8E10*	SMSLS-05P**ME**S-SS8E10*	SMSLS-05P**FD**S-SS8E10*
M12K-05P**ME**P-EE0001	M12K-05P**FD**P-EE0001*	M12M-05P**ME**P-EE0001*	M12M-05P**FD**P-EE0001*	M12L-05P**ME**P-EE0001*	M12L-05P**FD**P-EE0001
M12K-05P**ME**R-EE0001*	M12K-05P**FD**R-EE0001*	M12M-05P**ME**R-EE0001*	M12M-05P**FD**R-EE0001*	M12L-05P**ME**R-EE0001*	M12L-05P**FD**R-EE0001*
-	-	M12M-05P**MM**T-EE0001*	M12M-05P**FF**T-EE0001*	-	-
MSKS-05P**ME**P-EE0001*	MSKS-05P**FD**P-EE0001*	MSMS-05P**ME**P-EE0001*	MSMS-05P**FD**P-EE0001*	MSLS-05P**ME**P-EE0001*	MSLS-05P**FD**P-EE0001*
MSKS-05P**ME**R-EE0001*	MSKS-05P**FD**R-EE0001*	MSMS-05P**ME**R-EE0001*	MSMS-05P**FD**R-EE0001*	MSLS-05P**ME**R-EE0001*	MSLS-05P**FD**R-EE0001*
-	-	MSMS-05P**MM**T-EE0001*	MSMS-05P**FF**T-EE0001*	-	-
APP**M**-AAA**M**A012-003		APP**M**-AAA**M**A012-003		APP**M**-AAA**M**A012-003	
-		-		-	
APP**M**-AAA**F**A012-003		APP**M**-AAA**F**A012-003		APP**M**-AAA**F**A012-003	
-		-		-	
-		-		-	
-		-		-	
-		-		-	
-		-		-	

Panel Cut-Out



(Unit: mm)

Number of Contacts	6 (5+PE)	
Coding	M	
Rated Voltage (AC/DC)	630V	
Nominal current	8A	
Pin Assignment **ME** : Male Connector Male PWD + Female GND **FD** : Female Connector Female PWD + Male GND	Male Power / Female Ground	Female Power / Male Ground

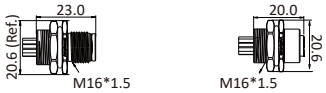
M12 Bulkhead / Receptacle With UL PVC Wires, Hexagonal Flange, **REAR** Fastened Nut

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

M16 x 1.5

(Plastic/Metal/Shielded/Stainless)

(MM) (FF)

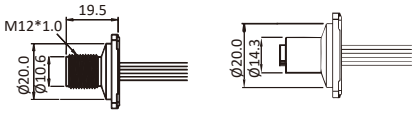


Plastic	MSMP-06P**ME**S-SH8C10*	MSMP-06P**FD**S-SH8C10*
Metal Nut	M12M-06P**ME**S-SH8C10*	M12M-06P**FD**S-SH8C10*
Shielded	MSMS-06P**ME**S-SH8C10*	MSMS-06P**FD**S-SH8C10*
Stainless	SM12M-06P**ME**S-SH8C10*	SM12M-06P**FD**S-SH8C10*
Stainless Shielded	SMSMS-06P**ME**S-SH8C10*	SMSMS-06P**FD**S-SH8C10*

M12 Bulkhead / Receptacle With UL PVC Wires, 25mm **SQUARE** Flange with 4 x M3 Mounting Holes Screws

10 Wire Length: (**10**) 100mm ~ (**95**) 950mm (per 50mm) | (**A0**) 1,000mm ~ (**A5**) 1,500mm (Per 100mm) | Standard Lengths: (**25**) 250mm and (**50**) 500mm

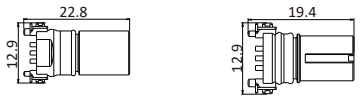
(Male) (Female)



Shielded	MSMS-06P**ME**S-SS8E10*	MSMS-06P**FD**S-SS8E10*
Stainless	SM12M-06P**ME**S-SS8E10*	SM12M-06P**FD**S-SS8E10*
Stainless Shielded	SMSMS-06P**ME**S-SS8E10*	SMSMS-06P**FD**S-SS8E10*

M12 Two-piece, Through Hole Reflow (THR) And SMD Contact Carriers

Male (Unshielded) Female (Unshielded)

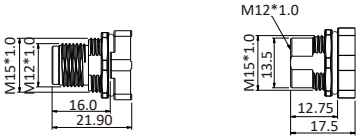


Male (Shielded) Female (Shielded)

Unshielded	THR Straight	M12M-06P**ME**P-EE0001*	M12M-06P**FD**P-EE0001*
	THR Right Angle	M12M-06P**ME**R-EE0001*	M12M-06P**FD**R-EE0001*
	SMD Straight	M12M-06P**MM**T-EE0001*	M12M-06P**FF**T-EE0001*
Shielded	THR Straight	MSMS-06P**ME**P-EE0001*	MSMS-06P**FD**P-EE0001*
	THR Right Angle	MSMS-06P**ME**R-EE0001*	MSMS-06P**FD**R-EE0001*
	SMD Straight	MSMS-06P**MM**T-EE0001*	MSMS-06P**FF**T-EE0001*

M12 Two-piece, Housing Screw Connections For Through Hole Reflow (THR) And SMD Contact Carriers

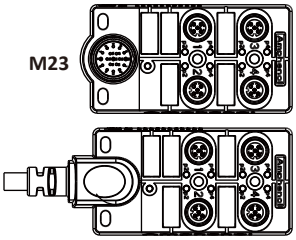
APPM-AAAMA012-003 APPM-AAAFA012-003



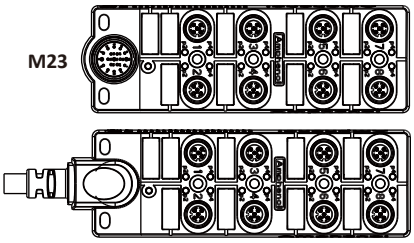
Front Fastened, THR Male	APP**M**-AAA**M**A012-003
Front Fastened, SMD Male	-
Front Fastened, THR Female	APP**M**-AAA**F**A012-003
Front Fastened, SMD Female	-
Rear Fastened, THR Male	-
Rear Fastened, SMD Male	-
Rear Fastened, THR Female	-
Rear Fastened, SMD Female	-

* Upon Request

Distribution Box



4 Port



8 Port

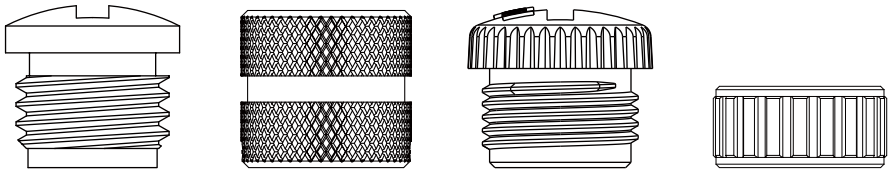
⑩ Cable Length = **(01)** 1M ~ **(99)** 99M

Coding	Nominal Current	No. of Contacts	Port	M12	
				Without Cable	With Cable
A	**4A**	05	4	DB12-5A4M23-DPS7001	DB12-5A4CAB-DPS7B ⑩
			8	DB12-5A8M23-DPS7001	DB12-5A8CAB-DPS7B ⑩

*** Upon Request**

Accessories

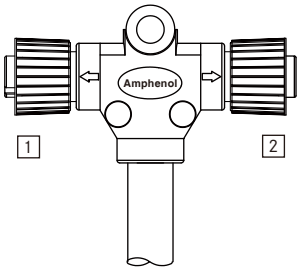
Waterproof Cap



M8 (For Female) M10.5 (For Male) M12 (For Female) M23 (For Male)

Size	Mating Pair	Mating Gender	Material	Attachment	Screw Thread
M8	Overmolded with Cable	Female	Plastic	With Lead	CAP-WBBFSPC1
		Female	Plastic	Cap Only	CAP-WBBFSMA1
	Receptacle and Overmolded with Cable	Male	Plastic	Cap Only	CAP-WBBMSMA1
		Female	Plastic	Cap Only	CAP-WBBFSMA1
M10.5	Receptacle and Overmolded with Cable	Male	Metal	Cap Only	CAP-WBCMSMA2
M12 A / B / D / I K / L / S / T / X	Receptacle	Male	Metal	With Chain	CAP-WBDMSPB2
		Male	Plastic	With Lead	CAP-WBDMQPC1
		Female	Metal	With Chain	CAP-WBDFSPB1
		Female	Metal	With Lead	CAP-WBDFSPC1
	Receptacle and Overmolded with Cable	Male	Plastic	Cap Only	CAP-WBDMSMA1
		Male	Metal	Cap Only	CAP-WBDMSMA2
		Female	Plastic	Cap Only	CAP-WBDFSMA1
		Female	Metal	Cap Only	CAP-WBDFSMA2
M23	Receptacle	Male	Metal	Cap Only	CAP-WBHMSMA1

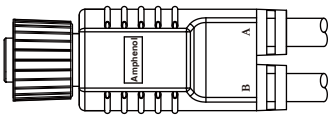
M12 T-Cable



⑩ Cable Length = **(01)** 1M ~ **(99)** 99M

Type	Type	Nominal Current	② No. of Contacts	Male To Male	Female To Female	Male To Female
Metal	A-Code	4A	03, 04, 05	SS-②②00-MM0-TSA⑩	SS-②②00-FF0-TSA⑩	SS-②②00-MF0-TSA⑩
		2A	06, 08			
	B-Code	4A	05	SB-②②00-MM0-TSA⑩	SB-②②00-FF0-TSA⑩	SB-②②00-MF0-TSA⑩
	D-Code	4A	04	SD-②②00-MM0-TSA⑩	SD-②②00-FF0-TSA⑩	SD-②②00-MF0-TSA⑩
	I-Style	4A	05	SI-②②00-KK0-TSA⑩	SI-②②00-ZZ0-TSA⑩	SI-②②00-KZ0-TSA⑩
Plastic	A-Code	4A	03, 04, 05	PS-②②00-MM0-TSA⑩	PS-②②00-FF0-TSA⑩	PS-②②00-MF0-TSA⑩
		2A	06, 08			
	B-Code	4A	05	PB-②②00-MM0-TSA⑩	PB-②②00-FF0-TSA⑩	PB-②②00-MF0-TSA⑩
	D-Code	4A	04	PD-②②00-MM0-TSA⑩	PD-②②00-FF0-TSA⑩	PD-②②00-MF0-TSA⑩
	I-Style	4A	05	PI-②②00-KK0-TSA⑩	PI-②②00-ZZ0-TSA⑩	PI-②②00-KZ0-TSA⑩

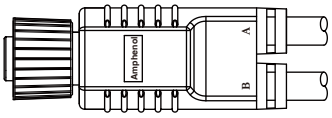
M12 Y-Cable Plastic



⑩ Cable Length = **(01)** 1M ~ **(99)** 99M

Type	Nominal Current	② No. of Contacts	Male	Female
A-Code	4A	03, 04, 05	PS-②0000-M00-YSB⑩*	PS-②0000-F00-YSB⑩*
	2A	06, 08		
B-Code	4A	05	PB-②0000-M00-YSB⑩*	PB-②0000-F00-YSB⑩*
D-Code	4A	04	PD-②0000-M00-YSB⑩*	PD-②0000-F00-YSB⑩*
I-Style	4A	05	PI-②0000-K00-YSB⑩*	PI-②0000-Z00-YSB⑩*
			PI-②0000-M00-YSB⑩*	PI-②0000-F00-YSB⑩*

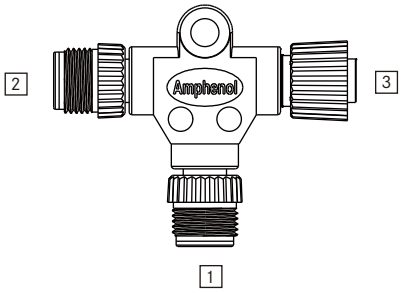
M12 Y-Cable Metal



⑩ Cable Length = **(01)** 1M ~ **(99)** 99M

Type	Nominal Current	② No. of Contacts	Male	Female
A-Code	4A	03, 04, 05	SS-②0000-M00-YSB⑩	SS-②0000-F00-YSB⑩
	2A	06, 08		
B-Code	4A	05	SB-②0000-M00-YSB⑩	SB-②0000-F00-YSB⑩
D-Code	4A	04	SD-②0000-M00-YSB⑩	SD-②0000-F00-YSB⑩
I-Style	4A	05	SI-②0000-K00-YSB⑩	SI-②0000-Z00-YSB⑩
			SI-②0000-M00-YSB⑩	SI-②0000-F00-YSB⑩

M12 T-Adaptor Plastic



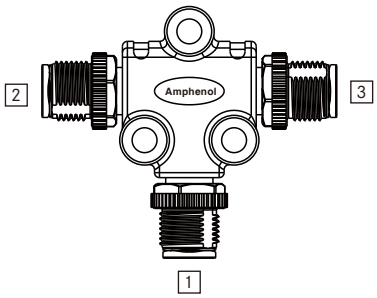
Choose Connector / Contact Gender:
⑤ For connector 1
⑥ For connector 2
⑦ For connector 3

A/B/D Code
M: Male + Male
F: Female + Female
I Style
K: Connector (Male) + Contact (Male+Female)
Z: Connector (Female) + Contact (Male+Female)

Type	Nominal Current	② No. of Contacts	Part Number
A-Code	4A	03, 04, 05	PS-②②②-⑤⑥⑦-TS001
	2A	06, 08	
	1.5A	10, 12	
B-Code	4A	05	PB-②②②-⑤⑥⑦-TS001*
D-Code	4A	04	PD-②②②-⑤⑥⑦-TS001*
I-Style	4A	05	PI-②②②-⑤⑥⑦-TS001*

* Upon Request

M12 T-Adaptor Metal

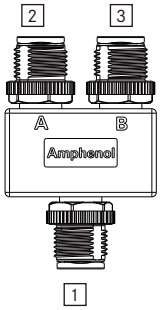


Choose Connector / Contact Gender:
- 5 For connector 1
- 6 For connector 2
- 7 For connector 3

A/B/D Code
M: Male + Male
F: Female + Female
I Style
K: Connector (Male) + Contact (Male+Female)
Z: Connector (Female) + Contact (Male+Female)

Type	Nominal Current	2 No. of Contacts	Part Number
A-Code	4A	03, 04, 05	TA-A2 5-A2 6-A2 7-01
	2A	06, 08	
	1.5A	10, 12	
B-Code	4A	05	TA-B2 5-B2 6-B2 7-01*
D-Code	4A	04	TA-D2 5-D2 6-D2 7-01*
I-Style	4A	05	SI-050505-5 6 7-TS001*

M12 Y-Adaptor Plastic

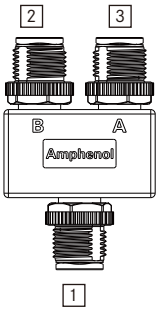


Choose Connector / Contact Gender:
- 5 For connector 1
- 6 For connector 2
- 7 For connector 3

A/B/D Code
M: Male + Male
F: Female + Female
I Style
K: Connector (Male) + Contact (Male+Female)
Z: Connector (Female) + Contact (Male+Female)

Type	Nominal Current	2 No. of Contacts	Part Number
A-Code	4A	03, 04, 05	PS-2 2 2-5 6 7-YS001*
	2A	06, 08	
	1.5A	10, 12	
B-Code	4A	05	PB-2 2 2-5 6 7-YS001*
D-Code	4A	04	PD-2 2 2-5 6 7-YS001*
I-Style	4A	05	PI-050505-5 6 7-YS001*

M12 Y-Adaptor Metal



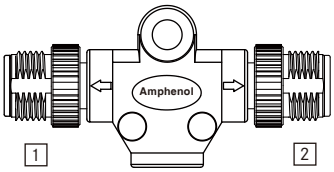
Choose Connector / Contact Gender:
- 5 For connector 1
- 6 For connector 2
- 7 For connector 3

A/B/D Code
M: Male + Male
F: Female + Female
I Style
K: Connector (Male) + Contact (Male+Female)
Z: Connector (Female) + Contact (Male+Female)

Type	Nominal Current	2 No. of Contacts	Part Number
A-Code	4A	03, 04, 05	YA-A2 5-A2 6-A2 7-01
	2A	06, 08	
	1.5A	10, 12	
B-Code	4A	05	YA-B2 5-B2 6-B2 7-01
D-Code	4A	04	YA-D2 5-D2 6-D2 7-01*
I-Style	4A	05	SI-050505-5 6 7-YS001

* Upon Request

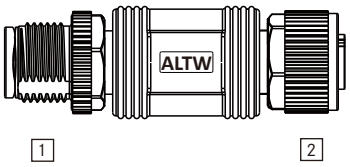
M12 I-Adaptor Plastic



Choose Connector / Contact Gender:
6 For connector 1
7 For connector 2
A/B/D Code
M: Male + Male
F: Female + Female
I Style
K: Connector (Male) + Contact (Male+Female)
Z: Connector (Female) + Contact (Male+Female)

Type	Nominal Current	2 No. of Contacts	Part Number
A-Code	4A	03, 04, 05	PS-00 2 2 -0 6 7 -IS001
	2A	06, 08	
	1.5A	10, 12	
B-Code	4A	05	PB-00 2 2 -0 6 7 -IS001*
D-Code	4A	04	PD-00 2 2 -0 6 7 -IS001*
I-Style	4A	05	PI-000505-0 6 7 -IS001*

M12 I-Adaptor Metal

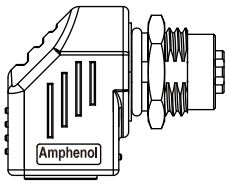


Choose Connector / Contact Gender:
6 For connector 1
7 For connector 2
A/B/D Code
M: Male + Male
F: Female + Female
I Style
K: Connector (Male) + Contact (Male+Female)
Z: Connector (Female) + Contact (Male+Female)

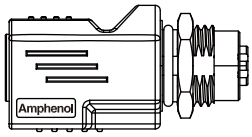
Type	Nominal Current	2 No. of Contacts	Part Number
A-Code	4A	03, 04, 05	IA-A 2 5 -A 2 6 -0000-01
	2A	06, 08	
	1.5A	10, 12	
B-Code	4A	05	IA-B 2 5 -B 2 6 -0000-01*
D-Code	4A	04	IA-D 2 5 -D 2 6 -0000-01*
I-Style	4A	05	SI-000505-0 6 7 -IS001*

M12 To RJ45 Adaptor

D Code

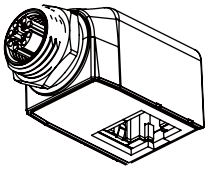


Right Angle

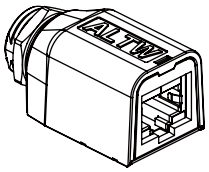


Straight

X Code



Right Angle

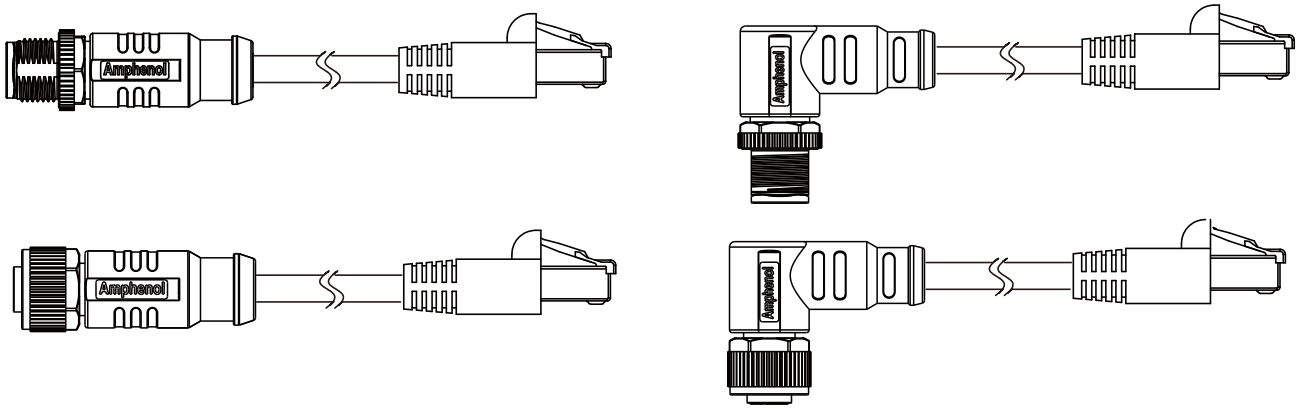


Straight

Type	Nominal Current	No. of Contacts	Gender	Straight / Right Angle	Part Number
D-Code	4A	04	Female	Straight	RJS-12D04FF-LS8001
				Right Angle	RJS-12D04FF-RS8001
			Male	Straight	RJS-12D04FM-LS8001
				Right Angle	RJS-12D04FM-RS8001
X-Code	0.5A	08	Female	Straight	RJS-12X08FF-LS7001
				Right Angle	RJS-12X08FF-RS7001

* Upon Request

M12 to RJ45 Cable



Straight

Right Angle

⑩ Cable Length = **(A05)** 0.5M, **(001)** 1M ~ **(040)** 40M

Type	Nominal Current	No. of Contacts	③ Gender	Straight / Right Angle	Part Number
A-Code	2A	08	M (Male) / F (Female)	Straight	MSAS08③L-SPBML-SE⑩
				Right Angle	MSAS08③R-SPBML-SE⑩
D-Code	4A	04	M (Male) / F (Female)	Straight	MSDS04③L-SPBML-SE⑩
				Right Angle	MSDS04③R-SPBML-SE⑩
X-Code	0.5A	08	M (Male) / F (Female)	Straight	MSXS08③L-SPBML-SX⑩
			M (Male)	Straight	MSXS08③L-SPBML-PX⑩
			M (Male) / F (Female)	Right Angle	MSXS08③R-SPBML-SX⑩

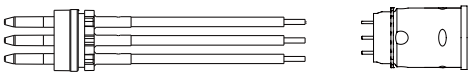
MPronto-12 Kit - Unrivaled Push-Pull Connector For Self-Assembly

- ✓ Design Your Products With The Excellent MPronto-12 Kit. You Can Get All Benefits of MPronto-12.
- ✓ With The MPronto-12 Kit, You Still Can Use Any Materials & Do Your Own Cable Assembly.

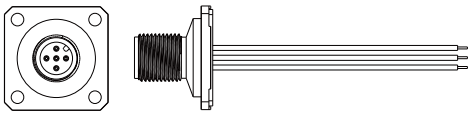
				Non-Shielded	Shielded
	Type	No. of Contacts	Gender	Part Number	Part Number
Solder Type	A-Code	03	Male	APPM-A03MAPAN-AS1*	APPM-A03MAPAS-AS1*
		04	Male	APPM-A04MAPAN-AS1*	APPM-A04MAPAS-AS1*
		05	Male	APPM-A05MAPAN-AS1	APPM-A05MAPAS-AS1*
		06	Male	APPM-A06MAPAN-AS1*	APPM-A06MAPAS-AS1*
		08	Male	APPM-A08MAPAN-AS1	APPM-A08MAPAS-AS1*
		10	Male	APPM-A10MAPAN-AS1*	APPM-A10MAPAS-AS1*
		12	Male	APPM-A12MAPAN-AS1	APPM-A12MAPAS-AS1*
		17	Male	APPM-A17MAPAN-AS1	APPM-A17MAPAS-AS1*
	B-Code	05	Male	APPM-A05MAPAN-BS1	APPM-A05MAPAS-BS1*
	D-Code	04	Male	APPM-A04MAPAN-DS1	APPM-A04MAPAS-DS1*
	X-Code	08	Male	-	APPM-A08MAPAS-XS1
Crimp Type	A-Code	03	Male	APPM-A03MAPAN-AC1*	APPM-A03MAPAS-AC1*
		04	Male	APPM-A04MAPAN-AC1*	APPM-A04MAPAS-AC1*
		05	Male	APPM-A05MAPAN-AC1*	APPM-A05MAPAS-AC1*
		06	Male	APPM-A06MAPAN-AC1*	APPM-A06MAPAS-AC1*
		08	Male	APPM-A08MAPAN-AC1*	APPM-A08MAPAS-AC1*
	B-Code	05	Male	APPM-A05MAPAN-BC1*	APPM-A05MAPAS-BC1*
	D-Code	04	Male	APPM-A04MAPAN-DC1*	APPM-A04MAPAS-DC1*
	X-Code	08	Male	-	APPM-A08MAPAS-XC1*

Customization - Upon Request

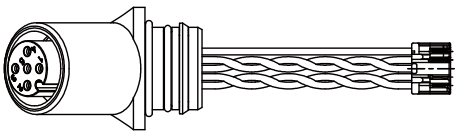
1. M8 / M12 Sensor Insert



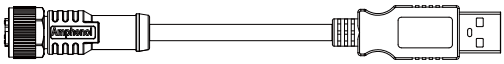
2. Square Receptacle



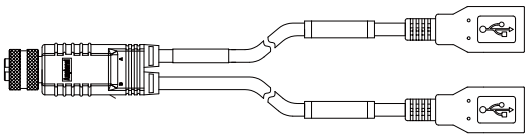
3. Metal Injection Molding



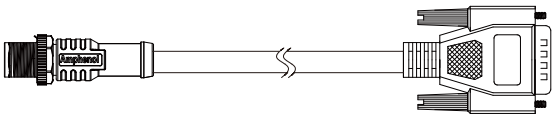
4. M12 To USB Plug



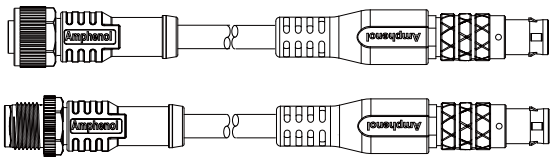
5. M12 To USB Jack Splitter



6. M12 To D-Sub

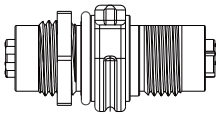


7. M12 To FLOS (FLOS+)

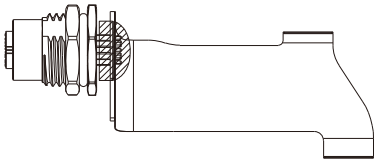


8. M8 To X-Lok

9. M12 Receptacle Feedthrough

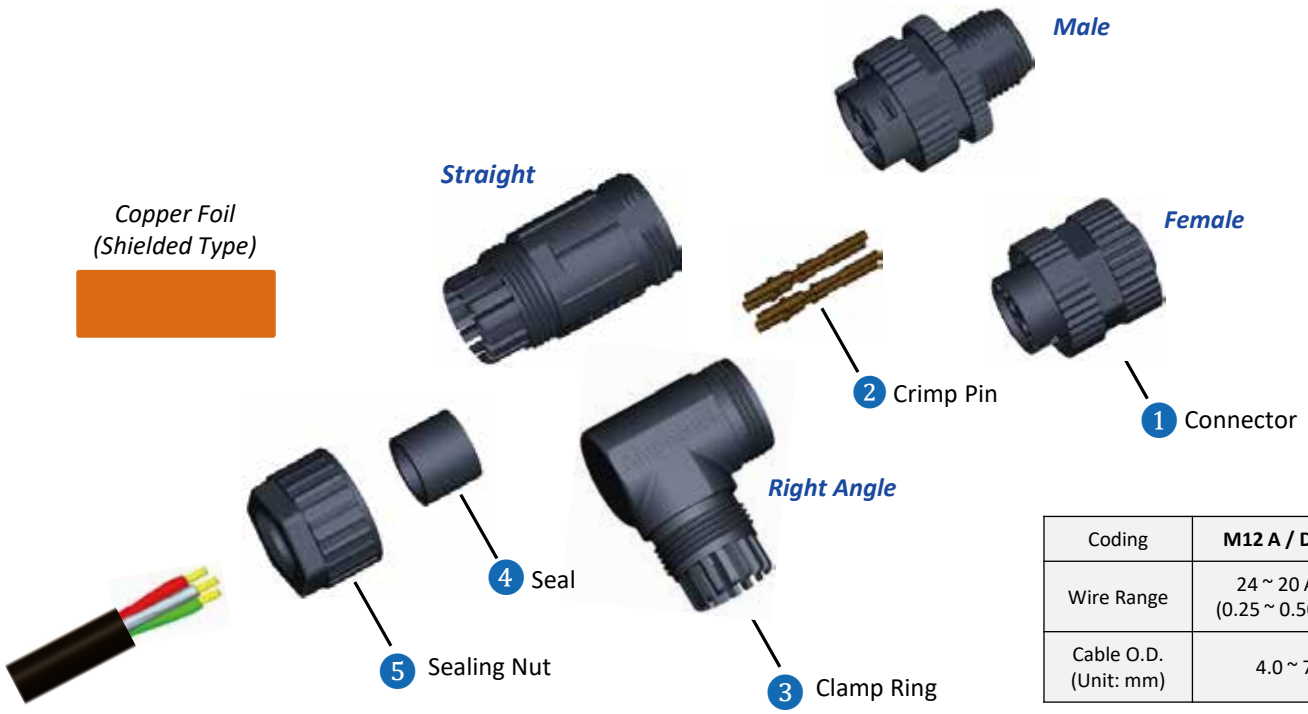


10. With FPC Termination



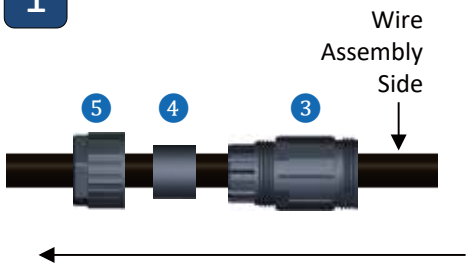
Assembly Instruction

Crimp Type



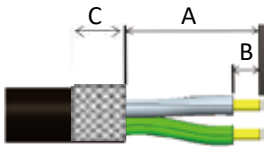
Coding	M12 A / D Code
Wire Range	24 ~ 20 AWG (0.25 ~ 0.50 mm²)
Cable O.D. (Unit: mm)	4.0 ~ 7.5

1



Follow the order from 5 to 3 and put components through cable accordingly, no need to assemble here.

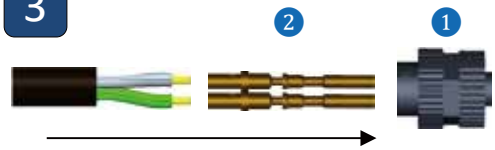
2



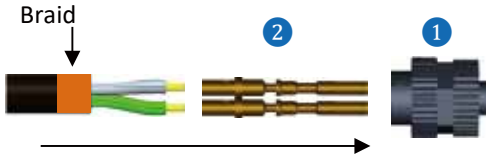
	Unit: mm
(A) Jacket	18.0 ~ 20.0
(B) Insulation	4.0 ~ 5.0
(C) *Fold Braid (Shielded Type)*	4.0 ~ 5.0

Follow suggested stripping length of **(A)** Jacket, **(B)** Insulation, **(C)** Fold Braid *(For shielded type).*

3

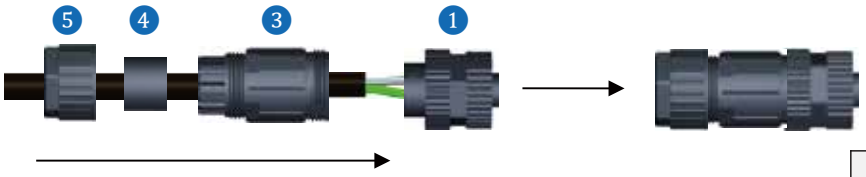


Terminate conductors onto crimp contacts and insert them into 1 until you hear click sound.



(For shielded type, follow the instruction above and wrap the braid with copper foil).

4



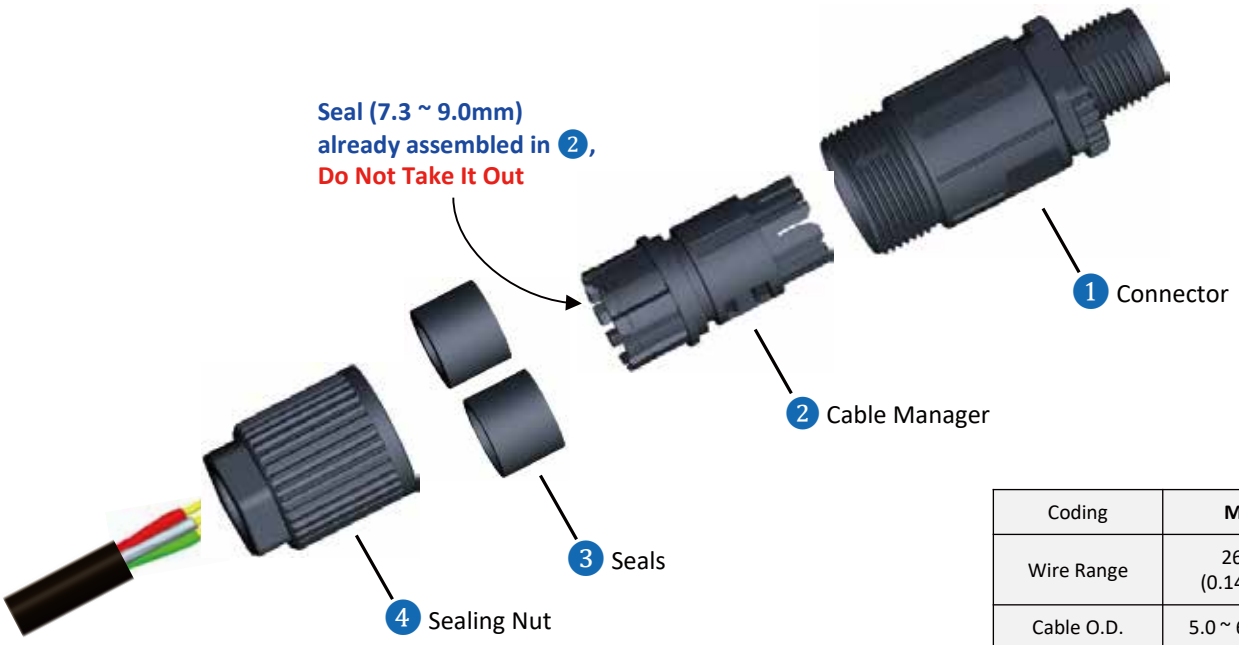
Follow the order 3 → 1, 4 → 3, 5 → 1 to assemble all components. And tighten 1 & 3, 3 & 5 with suggested torque force.

	1 & 3	3 & 5
Torque Force (Unit: kgf-cm)	3.0 ~ 4.0	6.0 ~ 8.0

Tips For Re-working

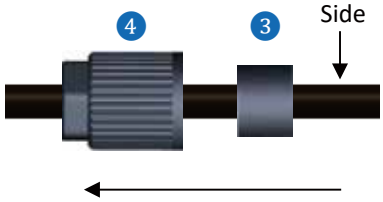
Pull cable while pressing the latches on the housing (red arrow) to disassemble housing & terminals. Assemble housing with 1 then start to re-work from **STEP 3**.

Assembly Instruction IDC Type



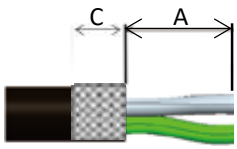
Coding	M12 X Code
Wire Range	26 ~ 22 AWG (0.14 ~ 0.34 mm²)
Cable O.D. (Unit: mm)	5.0 ~ 6.0 (Black Seal) 6.1 ~ 7.2 (Gray Seal)

1

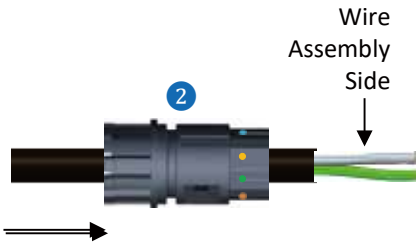


Choose 3 according to your cable O.D. and follow the order from 4 to 3 and put components through cable accordingly , no need to assemble here.

2

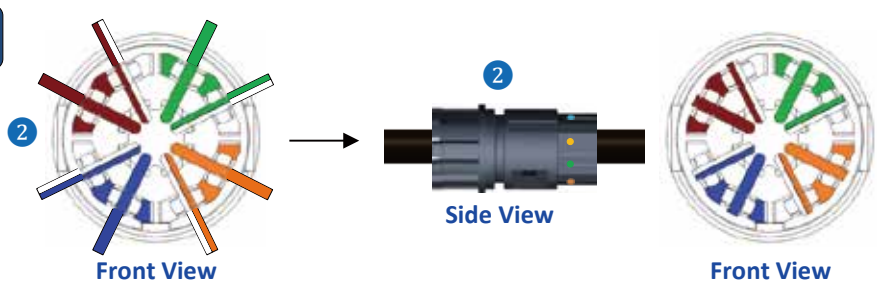


	Unit: mm
(A) Jacket	30.0 ~ 31.0
(C) Fold Braid	4.0 ~ 5.0



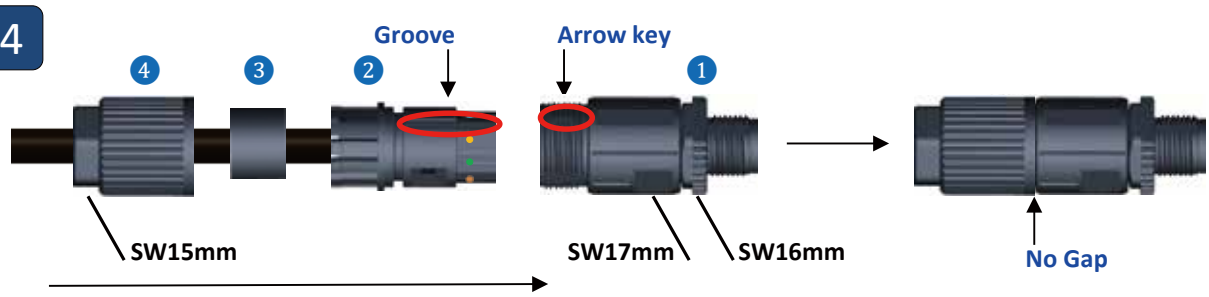
Follow suggested stripping length of **(A)** Jacket and **(C)** fold braid. Then insert cable through 2 until you cannot push cable further.

3



Rotate the cable and adjust the wire position by the color coding on 2, and place wires on cable holder accordingly. Cut off all the exceeding wires and the remaining wires should be less than 0.2mm.

4



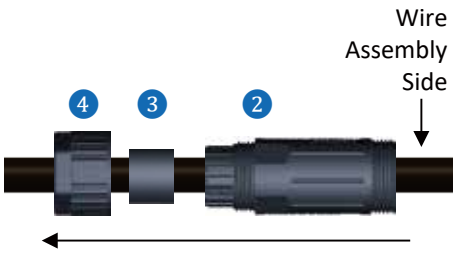
Follow the order 2 → 1, 3 → 2, 4 → 1 to assemble all components, make sure **Arrow Key** on 1 and **Groove** on 2 are aligned (See red circle). Tighten 4 onto 1 and leave no gap.

Assembly Instruction

Push-in Type

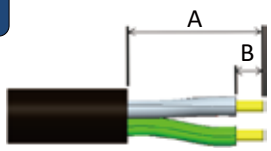
Coding	**M12 A Code**
Wire Range	24 ~ 22AWG (0.25 ~ 0.34 mm²)
Cable O.D. (Unit: mm)	4.0 ~ 7.5

1



Follow the order from 4 to 2 and put components through cable accordingly, no need to assemble here.

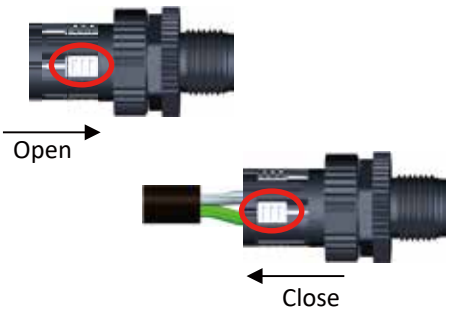
2



	Unit: mm
(A) Jacket	18.0 ~ 20.0
(B) Insulation	7.0 ~ 8.0

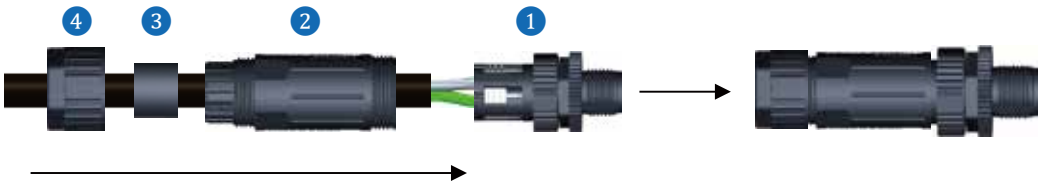
Follow suggested stripping length of **(A)** Jacket, **(B)** Insulation.

3



Make sure all latches are open (See figure above). Insert wires until the conductors are completely covered, and push latches backward to close.

4

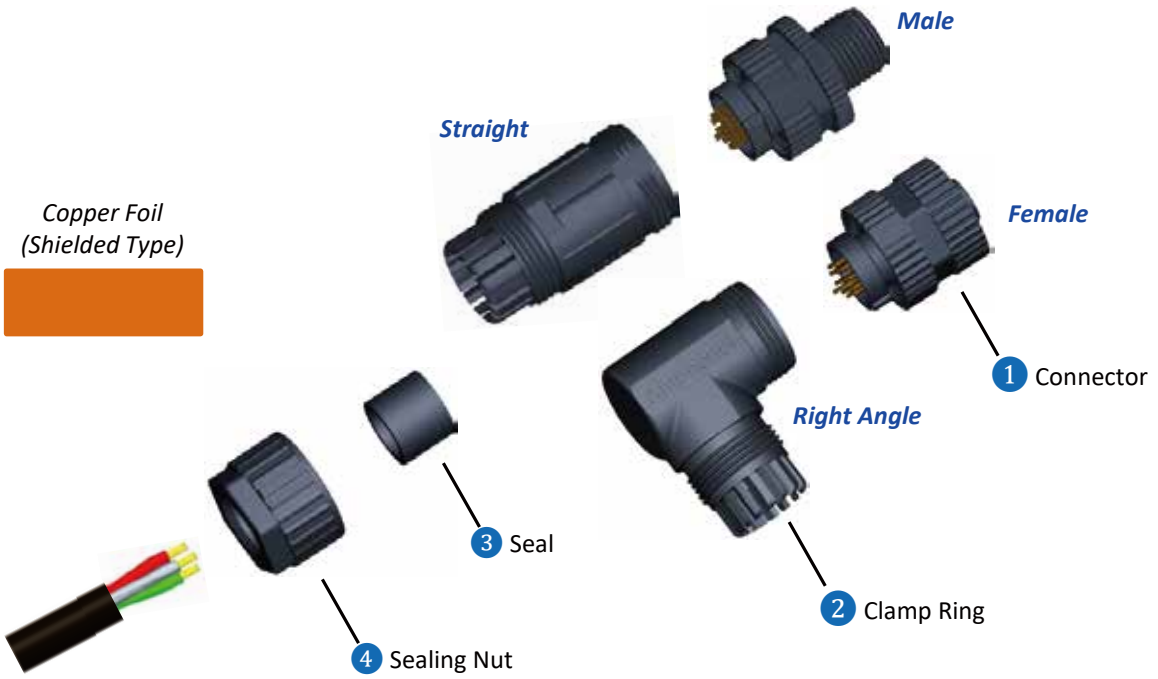


Follow the order 2 → 1, 3 → 2, 4 → 2 to assemble all components. And tighten 1 & 2, 2 & 4 with suggested torque force.

	1 & 2	2 & 4
Torque Force (Unit: kgf-cm)	3.0 ~ 4.0	6.0 ~ 8.0

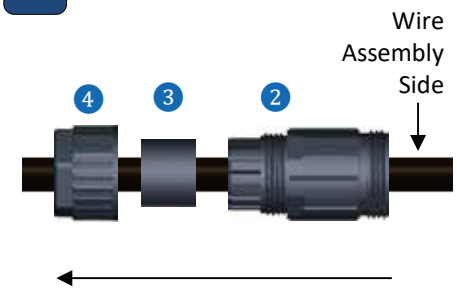
Assembly Instruction

Solder Type



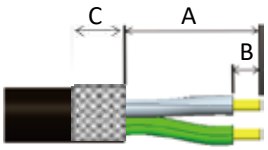
Coding	M12 A / B / D Code	M12 A Code	
Contact #	3 ~ 5 Pin	6 ~ 8 Pin	10 ~ 12 Pin
Wire Range	22 ~ 20 AWG (0.34 ~ 0.50 mm²)	24 ~ 22 AWG (0.25 ~ 0.34 mm²)	26 ~ 24 AWG (0.14 ~ 0.25 mm²)
Cable O.D. (Unit: mm)	4.5 ~ 6.5	4.5 ~ 6.5	4.0 ~ 8.0

1



Follow the order from 4 to 2 and put components through cable accordingly, no need to assemble here.

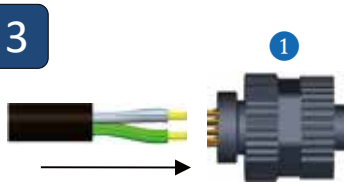
2



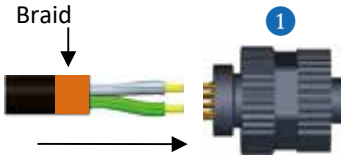
	Unit: mm
(A) Jacket	14.0 ~ 18.0
(B) Insulation	3.0 ~ 4.0
(C) *Fold Braid (Shielded Type)*	3.0 ~ 4.0

Follow suggested stripping length of **(A)** Jacket, **(B)** Insulation, **(C)** Fold Braid *(For shielded type).*

3

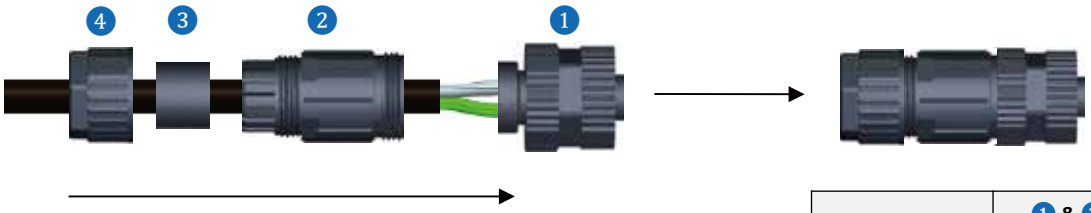


Solder wires onto contacts.



(For shielded type, follow the instruction above and wrap the braid with copper foil).

4



Follow the order 2 → 1, 3 → 2, 4 → 2 to assemble all components. And tighten 1 & 2, 2 & 4 with suggested torque force.

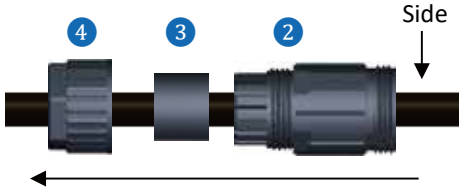
	1 & 2	2 & 4
Torque Force (Unit: kgf-cm)	3.0 ~ 4.0	6.0 ~ 8.0

Assembly Instruction

Screw-in Type

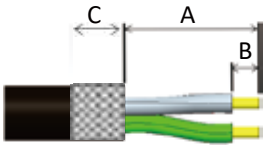
Coding	M8 A Code	M12 A / B / D Code	M12 A Code	M12 S / T Code	M12 K / L Code
Contact #	3 ~ 4 Pin	3 ~ 5 Pin	6 ~ 8 Pin	4 Pin	5 Pin
Wire Range	24 ~ 22 AWG (0.25 ~ 0.34 mm²)	22 ~ 20 AWG (0.34 ~ 0.50 mm²)	26 ~ 24 AWG (0.14 ~ 0.25 mm²)	20 ~ 16 AWG (0.50 ~ 1.50 mm²)	16 ~ 14 AWG (1.50 ~ 2.50 mm²)
Cable O.D. (Unit: mm)	4.5 ~ 6.5	4.5 ~ 6.5	4.5 ~ 8.0	8.0 ~ 10.0	8.0 ~ 10.0 (Black Seal) 10.1 ~ 12.0 (Gray Seal) 12.1 ~ 14.0 (Black Seal)

1



Follow the order from 4 to 2 and put components through cable accordingly, no need to assemble here.

2

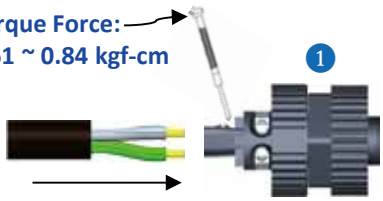


Follow suggested stripping length of **(A)** Jacket, **(B)** Insulation, **(C)** Fold Braid *(For shielded type).*

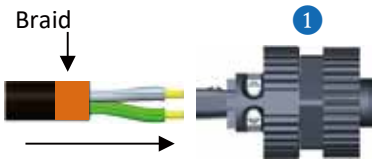
	M8	M12 A / B / D Code	M12 S / T Code	M12 K / L Code
(A) Jacket	8.0 ~ 12.0	14.0 ~ 18.0	28.0 ~ 32.0	29.0 ~ 31.0
(B) Insulation	3.0 ~ 4.0	5.0 ~ 6.0	8.0 ~ 9.0	5.0 ~6.0
(C) *Fold Braid (Shielded Type)*	-	*5.0 ~ 6.0*	-	-

3

Torque Force: 0.61 ~ 0.84 kgf-cm

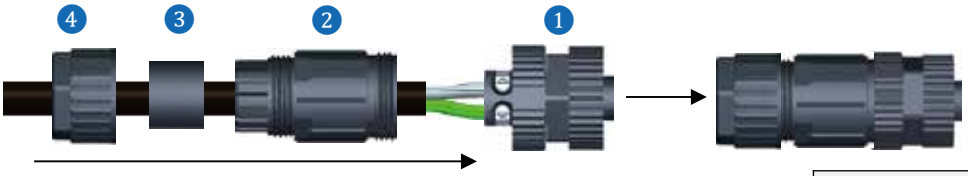


Insert wires into contacts until the conductors are completely covered. Then tighten the screw by screw driver.



(For shielded type, follow the instruction above and wrap the braid with copper foil).

4



Follow the order 2 → 1, 3 → 2, 4 → 2 to assemble all components. And tighten 1 & 2, 2 & 4 with suggested torque force.

	1 & 2	2 & 4
Torque Force (Unit: kgf-cm)	3.0 ~ 4.0	6.0 ~ 8.0

Cable List

Item No.	Jacket	Color	UL No.	Cable Specification	Cable OD	Copper Index (kg/km)	Weight (kg/km)
WCA00011181	PVC	Black	SJTW	12AWG*2C+Filler	10.70	60.80	163.10
WCA00011226	PVC	Black	SJTW	12AWG*3C	11.20	89.60	222.90
WCA00011182	PVC	Black	SJTW	12AWG*3C+Filler	11.70	89.85	207.67
WCA00011243	PVC	Black	UL2464	12AWG*3C+Filler	10.00	90.00	164.40
WCA00011242	PVC	Black	UL2464	12AWG*4C+Filler	11.00	120.40	228.70
WCA00012002	PVC	Black	SJTW	12AWG*4C+Filler	12.30	122.00	293.00
WCA00011183	PVC	Black	SJTW	12AWG*5C+Filler	13.60	149.50	328.90
WCA00010846	PVC	Black	UL1277,UL1581&UL83	14AWG*3C	9.70	53.80	134.20
WCA0485XX01	PVC	Black	UL2464	14AWG*3C+Talcum	7.00	55.80	100.10
WCA00011884	PU	Black	UL20234	14AWG*5C+Filler+Paper	10.00	115.70	180.00
WCA00012012	PU	Black	UL20234	14AWG*5C+Filler+Paper	10.00	115.70	180.00
WCA00011201	PVC	Black	UL21388	16AWG*2C+AL/Mylar	8.20	23.80	60.20
WCA00011206	PVC	Black	SJTW	16AWG*2C+Filler	8.20	24.25	85.10
WCA0264UV01	PVC	Black	UL2464	16AWG*2C+Talcum	5.80	23.80	57.70
WCA00010942	PVC	Black	UL2464	16AWG*2C+Talcum	7.80	24.20	95.00
WCA00010625	PVC	Black	UL2464	16AWG*3C+AL.Mylar+Drain	7.50	46.80	96.60
WCA00011202	PVC	Black	UL21388	16AWG*3C+AL/Mylar	8.60	35.70	71.50
WCA0579UV01	PVC	Black	UL2464	16AWG*3C+Drain+AL.Mylar	7.50	46.70	97.90
WCA00011207	PVC	Black	SJTW	16AWG*3C+Filler	8.60	36.02	105.21
WCA0285UV01	PVC	Black	UL2464	16AWG*4C+AL.Mylar	7.50	47.60	99.90
WCA00011203	PVC	Black	UL21388	16AWG*4C+AL/Mylar	9.30	47.60	88.40
WCA00011208	PVC	Black	SJTW	16AWG*4C+Filler	9.30	49.00	131.50
WCA00011204	PVC	Black	UL21388	16AWG*5C+AL/Mylar	10.70	59.40	99.80
WCA0263UV01	PVC	Black	UL2464	16AWG*5C+Talcum	7.80	59.50	108.80
WCA00011205	PVC	Black	UL21388	16AWG*6C+AL/PET	11.70	71.30	123.30
WCA0582UV01	PVC	Black	UL2464	16AWG*6C+Filler+Drain+AL.Mylar	9.50	82.10	153.60
WCA0583UV01	PVC	Black	UL2464	16AWG*7C+Drain+AL.Mylar	9.50	93.60	175.70
WCA00011299	PVC	Black	UL2464	18AWG*10C	9.00	77.00	145.00
WCE00010070-43	PVC	Black	UL21996	18AWG*2C+Talcum	3.4*5.3	14.82	36.97
WCE00010074-43	PVC	White	UL21996	18AWG*2C+Talcum	3.4*5.3	14.82	36.97
WCA00010897	PVC	Black	UL1277, UL15, 81&UL83	18AWG*3C	8.50	21.30	81.93
WCA00011209	PVC	Black	SJTW	18AWG*3C+Filler	8.00	21.30	81.93
WCA00010898	PVC	Black	UL1277, UL15, 81&UL83	18AWG*4C	9.20	35.00	125.00
WCE00010071-43	PVC	Black	UL21996	18AWG*4C+Talcum	3.4*9.2	29.64	68.14
WCE00010075-43	PVC	White	UL21996	18AWG*4C+Talcum	3.4*9.2	29.64	68.14
WCA00011240	PVC	Black	UL2464	20AWG*10C+AL.Mylar+Filler	9.00	48.00	116.40
WCA00011192	PVC	Black	UL21388	20AWG*10C+AL/Mylar	8.50	48.00	109.70
WCA00011436	PVC	Black	UL2464	20AWG*12C+AL.Mylar+Filler	9.00	57.60	125.10
WCA00011193	PVC	Black	UL21388	20AWG*12C+AL/Mylar	8.50	57.60	121.70
WCA00011200	PVC	Black	UL21388	20AWG*14C+AL/Mylar	8.50	67.20	130.60
WCA0470XX01	PVC	Black	UL2464	20AWG*14C+Braid	9.50	87.90	161.30
WCA0153XX01	PVC	Black	UL2464	20AWG*18C+AL.Mylar	9.50	86.40	154.20
WCA00011581-43	PVC	Black	UL 21996	20AWG*2C	5.20	9.40	34.02
WCA00011194	PVC	Black	UL21388	20AWG*18C+AL/Mylar	10.00	86.40	174.70
WCA00010781	PVC	Black	UL2464	20AWG*2C+AL.Mylar+Braid	5.50	17.70	41.60
WCA00011184	PVC	Black	UL21388	20AWG*2C+AL/Mylar	5.50	9.60	27.40
WCA0124UV01	PVC	Black	UL2464	20AWG*2C+Drain+AL.Mylar	5.80	14.40	48.40
WCE00010072-43	PVC	Black	UL21996	20AWG*2C+Talcum	3.2*5.0	14.10	41.45
WCE00010076-43	PVC	White	UL21996	20AWG*2C+Talcum	3.2*5.0	14.10	41.45
WCA00011580-43	PVC	Black	UL 21996	20AWG*3C	5.50	14.10	41.45
WCA0489UV01	PVC	Black	UL2464	20AWG*3C+AL.Mylar	5.00	14.40	39.30
WCA00010602	PVC	Black	UL2464	20AWG*3C+AL.Mylar+Braid+Drain	5.50	29.20	61.90
WCA00011185	PVC	Black	UL21388	20AWG*3C+AL/Mylar	5.50	14.40	43.70
WCA00011548-43	PVC	Black	UL 21996	20AWG*4C	6.00	18.80	48.46
WCA00011186	PVC	Black	UL21388	20AWG*4C+AL/Mylar	6.00	19.20	51.40
WCA0575UV01	PVC	Black	UL2464	20AWG*4C+Drain+AL.Mylar	5.50	24.00	52.10
WCE00010073-43	PVC	Black	UL21996	20AWG*4C+Talcum	3.2*8.5	18.80	53.34
WCE00010077-43	PVC	White	UL21996	20AWG*4C+Talcum	3.2*8.5	18.80	53.34
WCA00011187	PVC	Black	UL21388	20AWG*5C+AL/Mylar	6.20	24.00	59.20
WCA0576UV01	PVC	Black	UL2464	20AWG*5C+Drain+AL.Mylar	6.00	28.80	62.70
WCA00011188	PVC	Black	UL21388	20AWG*6C+AL/Mylar	6.80	28.80	71.80
WCA0577UV01	PVC	Black	UL2464	20AWG*6C+Drain+AL.Mylar	6.50	33.60	76.80
WCA00011189	PVC	Black	UL21388	20AWG*7C+AL/Mylar	6.80	33.60	75.80
WCA00010049	PVC	Black	UL2464	20AWG*7C+Drain+AL.Mylar	6.50	38.40	74.80
WCA00010550	PVC	Black	UL2464	20AWG*8C+AL.Mylar+Drain+Filler	6.80	43.00	86.00

Cable List

Item No.	Jacket	Color	UL No.	Cable Specification	Cable OD	Copper Index (kg/km)	Weight (kg/km)
WCA00011190	PVC	Black	UL21388	20AWG*8C+AL/Mylar	7.20	38.40	87.00
WCA00011489-28	PVC	Black	UL2464	20AWG*9C+AL.Mylar+Drain	7.40	48.50	101.80
WCA00011191	PVC	Black	UL21388	20AWG*9C+AL/Mylar	7.60	43.20	97.30
WCA00010868	PVC	Black	UL2464	22AWG*2C+Talcum	4.20	6.20	24.60
WCA00011339	PVC	Yellow	UL2517	22AWG*3C	4.50	9.00	31.50
WCA00011343	PU	Black	UL20549	22AWG*3C	3.80	9.00	26.00
WCA00011459-28	PVC	Black	UL2517	22AWG*3C	4.50	9.30	31.00
WCA00010063	PU	Black	NONUL	22AWG*3C+Talcum	4.50	9.00	26.40
WCA0570UV01	PVC	Black	UL2464	22AWG*3C+Talcum	5.00	9.30	35.20
WCA00011340	PVC	Yellow	UL2517	22AWG*4C	4.80	11.70	40.00
WCA00011344	PU	Black	UL20549	22AWG*4C	4.00	12.00	31.80
WCA00011460-28	PVC	Black	UL2517	22AWG*4C	4.80	12.00	38.00
WCA00011813-01	PVC	Black	UL2517	22AWG*4C+AL.Mylar+Braid	5.30	22.00	46.00
WCA00011872	PU	Black	UL20549	22AWG*4C+AL.Mylar+Braid+Paper	5.30	22.00	48.00
WCA00010062	PU	Black	NONUL	22AWG*4C+Insulation	4.80	12.00	29.40
WCA0571UV01	PVC	Black	UL2464	22AWG*4C+Talcum	5.00	12.40	38.60
WCA00011341	PVC	Yellow	UL2517	22AWG*5C	5.10	15.50	43.80
WCA00011687-01	PVC	Black	UL2517	22AWG*5C+AL.Mylar+Filler+Braid	5.70	26.00	58.00
WCA00011345	PU	Black	UL20549	22AWG*5C+Filler	4.40	15.00	43.50
WCA00011461-28	PVC	Black	UL2517	22AWG*5C+Filler	5.10	15.00	43.00
WCA00011870	PU	Black	UL20549	22AWG*5C+Filler+AL.Mylar+Braid+Paper	5.70	26.00	51.00
WCA00012245	PU	Black	UL20549	22AWG*5C+Filler+Paper	5.60	19.00	51.00
WCA00010061	PU	Black	NONUL	22AWG*5C+Filler+Talcum+Paper	5.00	15.50	38.50
WCA0352XX02	PU	Black	NONUL	22AWG*5C+Talcum	5.00	15.50	47.50
WCA0521UV01	PVC	Black	UL2464	22AWG*5C+Talcum	5.50	15.50	47.50
WCA0556UV01	PVC	Black	UL2464	24AWG*10C+Drain+AL.Mylar	6.50	22.00	63.80
WCA0557UV01	PVC	Black	UL2464	24AWG*12C+Drain+AL.Mylar	7.00	26.00	72.30
WCA0558UV01	PVC	Black	UL2464	24AWG*14C+Drain+AL.Mylar	7.00	30.00	77.10
WCA0465UV01	PVC	Black	UL2464	24AWG*15C+Drain+AL.Mylar	7.00	32.00	77.60
WCA0560UV01	PVC	Black	UL2464	24AWG*18C+Drain+AL.Mylar	8.00	38.00	100.70
WCA0284UV01	PVC	Black	UL2464	24AWG*25C+Drain+AL.Mylar	9.00	51.90	130.90
WCA0072UV01	PVC	Black	UL2464	24AWG*2C+Drain+AL.Mylar	4.20	6.00	24.00
WCA0027UV01	PVC	Black	UL2464	24AWG*2C+Talcum	4.20	4.00	22.70
WCA00010114	PVC	Black	UL2464	24AWG*37C+Drain+AL/Mylar	9.50	74.00	153.20
WCA00011746-03	PVC	Black	UL2517	24AWG*3C+AL.Mylar+Braid	4.60	13.10	31.30
WCA0549UV01	PVC	Black	UL2464	24AWG*3C+Drain+AL.Mylar	4.50	8.00	29.00
WCA0006UV01	PVC	Black	UL2464	24AWG*3C+Talcum	4.50	6.00	27.70
WCA00011726-03	PVC	Black	UL2517	24AWG*4C+AL.Mylar+Braid	5.00	16.40	38.50
WCA0219UV01	PVC	Black	UL2464	24AWG*4C+Drain+AL.Mylar	5.80	10.00	45.60
WCA0036UV01	PVC	Black	UL2464	24AWG*4C+Talcum	5.00	8.00	32.40
WCA00011584-43	PVC	Black	UL 21996	24AWG*5C	5.50	9.88	41.20
WCA0551UV01	PVC	Black	UL2464	24AWG*5C+Drain+AL.Mylar	5.00	12.00	37.00
WCA0229UV01	PVC	Black	UL2464	24AWG*5C+Talcum	5.00	10.00	34.40
WCA00011583-43	PVC	Black	UL 21996	24AWG*6C	5.80	11.86	45.21
WCA00011214	PVC	Black	UL2464	24AWG*6C+AL.Mylar	5.00	12.00	39.40
WCA0217UV01	PVC	Black	UL2464	24AWG*6C+Drain+AL.Mylar	5.80	14.00	45.00
WCA00011479-28	PVC	Black	UL2517	24AWG*6C+Filler	5.00	12.00	40.00
WCA00012067	PVC	Black	UL21388	24AWG*6C+Filler+AL.Mylar	5.20	11.40	35.40
WCA00011421	PVC	Yellow	UL2517	24AWG*6C+Filler+Talcum	5.00	17.60	49.20
WCA00011422	PU	Black	UL20549	24AWG*6C+Filler+Talcum	5.00	13.00	34.00
WCA0087UV01	PVC	Black	UL2464	24AWG*7C+Drain+AL/Mylar	5.80	16.00	51.00
WCA00011342	PVC	Yellow	UL2517	24AWG*8C	5.50	15.50	48.00
WCA00011346	PU	Black	UL20549	24AWG*8C	4.80	15.50	35.00
WCA00011462-28	PVC	Black	UL2517	24AWG*8C	5.50	15.50	48.00
WCA00011698-01	PVC	Black	UL2517	24AWG*8C+AL.Mylar+Filler+Braid	5.80	27.00	60.00
WCA0003UV01	PVC	Black	UL2464	24AWG*8C+Drain+AL/Mylar	5.50	18.00	45.70
WCA00012066	PVC	Black	UL21388	24AWG*8C+Filler+AL.Mylar	5.60	15.20	43.40
WCA00011814-01	PU	Black	UL20549	24AWG*8C+Filler+AL.Mylar+Braid+Paper	5.80	26.00	51.00
WCA00012341	PU	Black	UL20549	24AWG*8C+Filler+Paper	6.70	19.00	65.00
WCA0203UV01	PVC	Black	UL2464	24AWG*8C+Talcum	5.50	16.00	45.30
WCA0528UV01	PVC	Black	UL2464	24AWG*9C+Drain+AL.Mylar	6.00	20.00	54.80
WCA0540UV01	PVC	Black	UL2464	26AWG*6C+Drain+AL.Mylar	5.00	9.80	33.70
WCA0543UV01	PVC	Black	UL2464	26AWG*10C+Drain+AL.Mylar	6.00	15.00	50.30
WCA00011400	PU	Black	UL20549	26AWG*10C+Filler	6.00	14.00	48.00
WCA00011401	PVC	Yellow	UL2517	26AWG*10C+Filler	6.00	14.00	52.00

Cable List

Item No.	Jacket	Color	UL No.	Cable Specification	Cable OD	Copper Index (kg/km)	Weight (kg/km)
WCA00011463-01	PVC	Black	UL2517	26AWG*10C+Filler	6.00	14.00	52.00
WCA00011380	PU	Black	UL20549	26AWG*12C	6.00	16.00	47.00
WCA00011402	PVC	Yellow	UL2517	26AWG*12C	6.00	17.00	54.00
WCA00011464-01	PVC	Black	UL2517	26AWG*12C	6.00	17.00	55.00
WCA00011782-01	PVC	Black	UL2517	26AWG*12C+AL.Mylar+Braid	6.40	25.00	63.00
WCA00011871	PU	Black	UL20549	26AWG*12C+AL.Mylar+Braid+Paper	6.40	28.00	60.00
WCA0544UV01	PVC	Black	UL2464	26AWG*12C+Drain+AL.Mylar	6.00	17.60	53.10
WCA0545UV01	PVC	Black	UL2464	26AWG*15C+Drain+AL.Mylar	6.50	21.50	58.70
WCA00012148	PU	Black	UL20549	26AWG*17C+Filler	7.00	23.00	63.00
WCA00012173	PVC	Yellow	UL2517	26AWG*17C+Filler	7.00	24.00	73.00
WCA00012149	PVC	Black	UL2517	26AWG*17C+Filler	7.00	24.00	68.00
WCA00012151	PVC	Black	UL2517	26AWG*17C+Filler+AL.Mylar+Braid	7.50	40.00	91.00
WCA00012150	PU	Black	UL20549	26AWG*17C+Filler+AL.Mylar+Braid+Paper	7.50	39.00	80.00
WCA00010045	PVC	Black	UL2464	26AWG*22C+Drain+AL.Mylar	7.50	29.90	78.10
WCA0546UV01	PVC	Black	UL2464	26AWG*26C+Drain+AL.Mylar	8.00	35.80	91.30
WCA0449UV01	PVC	Black	UL2464	26AWG*31C+Drain+AL.Mylar	9.00	42.30	117.40
WCA0481UV01	PVC	Black	UL2464	26AWG*3C+Drain+AL.Mylar	4.00	5.20	22.40
WCA0547UV01	PVC	Black	UL2464	26AWG*44C+Drain+AL.Mylar	10.50	59.20	157.10
WCA0487UV01	PVC	Black	UL2464	26AWG*4C+Drain+AL.Mylar	4.80	7.20	30.80
WCA0486UV01	PVC	Black	UL2464	26AWG*5C+Drain+AL.Mylar	4.80	8.50	33.00
WCA00011480-01	PU	Black	-	CAT.5E 22AWG*2P+Drain+Filler+AL.Mylar	6.20	14.00	44.00
WCA00011527-17	LSZH	Green	-	CAT.6A S/FTP 26AWG*4P+AL/Polyester+Braid	6.60	17.99	47.08
WCA00010840	PVC	Black	-	CAT5E FTP 24AWG*4P+Mylar+D+AL.Mylar	6.50	17.97	47.34
WCA0373XX01	PVC	Beige	-	CAT5E FTP 24AWG*4P+Mylar+D+AL.Mylar	6.00	18.00	41.80
WCA0664UV01	PVC	Black	-	CAT5E FTP 24AWG*4P+Mylar+D+AL/Mylar	6.50	18.00	52.30
WCA0459XX01	PVC	Beige	-	CAT5E S-FTP 24AWG*4P+Mylar+AL.Mylar+D+B	6.10	30.97	55.00
WCA0663UV01	PVC	Black	-	CAT5E UTP 24AWG*4P	6.00	16.00	49.40
WCA00011688-03	PVC	Yellow	-	CL2 22AWG*2C+AL.Mylar+Drain+Braid	5.80	16.70	49.80
WCA0611XX01	PVC	Black	-	SJTW 14AWG*3C	9.50	56.70	154.50
WCA00010369	PVC	Black	-	STOOW 16AWG*4C	10.60	49.00	181.00
WCA00010899	PVC	Black	UL1277,UL1581,UL83	14AWG*3C+16AWG*1C	10.30	68.48	172.00
WCA00011252	PU	Black	UL20549	18AWG*2C+22AWG*4C+Filler+Paper	6.00	27.50	63.00
WCA00011253	PU	Black	UL20549	18AWG*2C+22AWG*6C+Filler+Paper	7.40	33.60	83.00
WCA00011254	PU	Black	UL20549	18AWG*2C+22AWG*8C+Filler+Paper	8.20	40.00	98.00
WCA00011582-43	PVC	Black	UL 21996	20AWG*2C+20AWG*3C	6.00	15.33	50.21
WCA0585UV01	PVC	Black	UL2464	24AWG*4C+20AWG*2C+Drain+AL.Mylar	6.00	22.40	57.40
WCA0042UV01	PVC	Black	UL2464	24AWG*6C+20AWG*2C+Drain+AL.Mylar	6.00	26.20	58.50
WCA0584UV01	PVC	Black	UL2464	26AWG*6C+24AWG*2C+Drain+AL.Mylar	5.50	13.70	42.80
WCA0365UV01	PVC	Black	-	28AWG*1P+24AWG*2C+AL.Mylar+Drain+Braid (USB2.0)	5.00	11.90	35.10
WCA00012165	PVC	Black	UL2725	28AWG*1P+28AWG*2C+AL.Mylar+Drain+Braid	3.80	10.00	21.00
WCA0691XX01	PVC	Black	UL2725	28AWG*1P+28AWG*3C+AL.Mylar+Drain+Braid	3.80	10.40	23.20
WCA00010259	PVC	Black	UL20276	[(18AWG*1P+AL)+(16AWG*1P+AL)]+Drain+AL+Braid	10.00	73.00	152.00
WCA00011922	PVC	Black	UL21996	(20AWG*1P+Drain+AL.Mylar)+16AWG*3C+Filler+AL.Mylar	8.50	50.61	115.27
WCA00010258	PVC	Black	-	[(22AWG+1P+AL)+(18AWG+1P+AL)]+Drain+AL.Mylar+Braid	7.00	42.00	80.00
WCA00010876	PVC	Black	UL2586	(24AWG*1P+A)*2C+16AWG*3C+EA	10.00	47.00	128.00
WCA00010257	PVC	Black	-	[(24AWG+1P+AL)+(22AWG+1P+AL)]+Drain+AL.Mylar+Braid	6.00	27.00	58.00
WCA00011350	PVC	Black	-	[(24AWG+1P+AL)+(22AWG+1P+AL)]+Drain+AL.Mylar+Braid	6.70	29.70	65.80
WCA00010437	PVC	Gray	-	[(24AWG+1P+AL)+(22AWG+1P+AL)]+Drain+Braid+Mylar	7.10	14.80	69.80
WCA00010080	PVC	Black	UL2464	(24AWG*25C+Mylar)+24AWG*25C+Drain+Al.Mylar	12.00	110.00	285.00
WCA00010710	PVC	Black	UL2464	(24AWG*2P+Drain+AL)+16AWG*3C+Filler+Paper	12.00	45.70	179.10
WCA00011923	PVC	Black	UL21996	(24AWG*2P+Drain+AL.Mylar)+12AWG*3C+Filler+AL.Mylar	11.50	99.97	187.20
WCA00010635	PVC	Black	UL2464	(24AWG*4P+Drain+AL)+16AWG*3C+Filler+Paper	11.00	41.70	149.70
WCA00010264	PVC	Black	UL20276	(26AWG*1P+Drain+AL.Mylar)*4C+26AWG*1P+26AWG*5C+AL.Mylar+Braid	8.50	45.50	94.30
WCA00011530-43	PVC	Black	UL21996	(26AWG*2P+AL.Mylar)+16AWG*2C+Filler+AL.Mylar	9.30	28.54	106.26
WCA00011531-43	PVC	Black	UL21996	(26AWG*2P+Drain+AL.Mylar)+16AWG*3C+Filler+AL.Mylar	11.00	41.58	146.60
WCA00011532-43	PVC	Black	UL21996	(26AWG*4P+Drain+AL.Mylar)+12AWG*3C+Filler+AL.Mylar	13.50	101.34	269.21
WCA00012137	PVC	Black	UL2725	(28AWG*1P+DAM)*2+28AWG*1P+28AWG*2C+Filler+AL.Mylar+Drain+Braid	6.00	21.80	48.20
WCA00010095	PVC	Black	UL20276	(28AWG*1P+Drain+AL+Mylar)*4C+(1P+3C)*28AWG+AL+Braid	7.30	33.90	73.70
WCA00010097	PVC	Black	UL20276	(28AWG*1P+Drain+AL+Mylar)*7C+28AWG*1P+28AWG*3C+AL+Braid	8.50	41.40	90.90
WCA00010081	PVC	Black	UL2464	[(28AWG*28C+Mylar)+28AWG*22C+Mylar]+28AWG*28C+Drain+AL	13.00	63.70	238.40
WCA00010096	PVC	Black	UL20276	[3COAX+(28AWG*1P+Drain+AL.Mylar+Mylar)*4+28AWG*1P+28AWG*6C]+AL.Mylar+Braid	8.50	53.50	93.10
WCA00010098	PVC	Black	UL20276	[3COAX+(28AWG*1P+Drain+AL+Mylar)*7+28AWG*1P+28AWG*6C]+AL+Braid	10.00	71.00	145.50
WCA00011960	PU	Black	UL20233	5C*2.5mm²+Filler+Paper	10.20	116.00	191.00
WCA00011175	PU	Black	UL20549	8C*0.34mm²+3C*1.0mm²+Filler	8.60	54.00	116.00
WCA00011176	PU	Black	UL20549	16C*0.34mm²+3C*1.0mm²+Filler	9.70	79.00	161.00

Power-limited Circuit Cable

Specifications

- Rated Voltage: 300V
- Temperature Range: FEP: 70˚C
  PVC: 60˚C, 75˚C
- Test Voltage: 900V AC at 2 seconds
- Conductor Range: 28AWG ~ 10AWG
- Conductor Material Available: Standard Bare Copper
- Insulator Material Available: FEP/PVC
- Jacket Material: FEP/PVC
- O.D. Tolerance: > Ø17.8 mm

(UL) E489959-N CLXX XX AWG XX°C 300V

CLXX: UL13 Cable Type
- Plenum Rated: (2P), (3P)
- Riser Rated: (2R), (3R)
- General Rated: (2), (3)
- Residential Rated: (2X), (3X)

XX°C: Temperature Rating
- FEP: (70)
- PVC: (60), (75)

Features & Applications:

Type	Fire Resistance Level	UL Standard	CSA	Application
CL3P CL2P	Plenum Rated (Highest)	UL 910, CMP	FT6	· Ducts or plenums air handling space
CL3R CL2R	Riser Rated	UL 1666, CMR	-	· Vertical shafts in non-plenum areas · Cable runs through more than one floor
CL3 CL2	General Purpose Rated	UL 1685, CMG/CM	FT4	· Power-limited circuit cable in non-plenum areas · Cable runs within one floor
CL3X CL2X	Residential Rated (Lowest)	VW-1, CMX	-	· Enclosed in non-plenum raceway or noncombustible tubing · Cable runs within one floor

Notes: UL File Number E489959; round or flat cable available

Find Our Standard Products

Part Number		WCA00011262	WCA00011263	WCA00011435	WCA00011282	WCA00011283*	WCA00011272	WCA00011324
Cable Type		CL3P	CL3P	CL3P	CL3P	CL3P	CL3P	CL3P
Conductor	AWG	10	16	16	16	16	18	22
	No.	2	2	2	8	16	2	2
	Dia.	2.6	1.3	1.3	1.3	1.3	1.02	0.64
Insulation	Nom. Thick.	0.25mm	0.27mm	0.27mm	0.27mm	0.27mm	0.27mm	0.25mm
	Nom. Dia.	3.5±0.1mm	2.00±0.1mm	2.00±0.1mm	2.00±0.1mm	2.00±0.1mm	1.62±0.10mm	1.12±0.05mm
Jacket	Nom. Thick.	0.8mm	0.58mm	0.58mm	0.69mm	0.56mm	0.42mm	0.46mm
	Nom. Dia.	8.8±0.3mm	5.2±0.3mm	5.2±0.3mm	8.0±0.3mm	11.0±0.5mm	4.4±0.15mm	3.4±0.15mm
Conductor Resistance at 20˚C (Max.)		3.41Ω/km	13.7Ω/km	13.7Ω/km	13.7Ω/km	13.7Ω/km	21.9Ω/km	55.4Ω/km

* Upon Request

Other cable types and customization are available upon request.

UL 21996 Multiple-Conductor Cable Using Non-Integral Jacket

Specifications

- Rated Voltage: 300V
- Temperature Range: -40˚C ~ 105˚C
- Test Voltage: 2000V AC at 1 minute
- Wet Temperature Rating: 60˚C (Max.)
- Conductor Range: 30AWG ~ 10AWG
- Conductor Material Available: Tinned Copper
- Insulator Material Available: FEP/PVC
- Shielding Material Available: AL/Mylar: Coverage 100%, Overlap 25% (Min.)
  Braid: Tinned Copper, Overlap 65% (Min.)
  Spiral: Tinned Copper, Overlap 90% (Min.)
- Jacket Material: PVC
- O.D. Tolerance: > Ø17.8 mm
- Impedance: 100Ω ~ 120Ω ±15Ω

E489039-D AWM 21996 XX AWG -40℃ 105℃ 300V VW-1 AWM I/II A/B -40℃ 105℃ 300V FT1 Sun Res Wet 60℃ Cable

Application

Internal wiring and external interconnection of electronic equipment. Suitable for outdoor use.

Features

- Reference standard: UL Subject 758, UL 1581 & CSA C22.2 No.210.2
- Lead free PVC jacket
- Wide temperature range
- Sunlight resistant
- Passes UL VW-1(horizontal) & CSA FT1 (vertical) flammability tests
- Round or flat cable available
- Mixture, individual or paired conductors available
- UL File Number: E489039

Find Our Standard Products

Single Insulated Conductor Cable

Part Number		WCA00011581-43	WCA00011580-43	WCA00011548-43	WCA00011584-43	WCA00011583-43
Conductor	AWG	20	20	20	24	24
	No.	2	3	4	5	6
	Dia.	0.942mm	0.942mm	0.942mm	0.609mm	0.609mm
Insulation	Nom. Thick.	0.38mm	0.38mm	0.38mm	0.35mm	0.35mm
	Nom. Dia.	1.70±0.10mm	1.70±0.10mm	1.70±0.10mm	1.30±0.07mm	1.30±0.07mm
Shield	Style	-	-	-	-	Paper
	Overlap	-	-	-	-	25%
Conductor Resistance at 20˚C (Max.)		34.6 / km	34.6 / km	34.6 / km	93.0 / km	93.0 / km
Jacket	Nom. Thick.	0.98mm	0.92mm	0.95mm	0.92mm	0.95mm
	Nom. Dia.	5.2±0.15mm	5.5±0.20mm	6.0±0.20mm	5.5±0.20mm	5.8±0.20mm

UL 21996 Multiple-Conductor Cable Using Non-Integral Jacket

Multi-conductor Cable

Part Number		WCA00011532-43		WCA00011530-43		WCA00011531-43		WCA00011582-43	
Component		A	B	A	B	A	B	A	B
Conductor	AWG	12	26	16	26	16	26	20	24
	No.	3	4	2	2	2	2	2	3
	Dia.	2.365mm	0.480mm	1.490mm	0.480mm	1.490mm	0.480mm	0.942mm	0.609mm
Insulation	Nom. Thick.	0.46mm	0.46mm	0.40mm	0.46mm	0.40mm	0.46mm	0.38mm	0.35mm
	Nom. Dia.	3.30±0.15mm	1.40±0.10mm	2.30±0.10mm	1.40±0.10mm	2.30±0.10mm	1.40±0.10mm	1.70±0.10mm	1.30±0.07mm
Shield	Style	-	Al. Mylar	-	Al. Mylar	-	Al. Mylar	-	Paper
	Overlap	-	25%	-	25%	-	25%	-	25%
Drain	AWG	-	26	-	-	-	26	-	-
	Dia.	-	0.480mm	-	-	-	0.480mm	-	-
Conductor Resistance at 20˚C (Max.)		5.54 / km	148.0 / km	13.7 / km	148.0 / km	13.7 / km	148.0 / km	34.6 / km	93.0 / km
Jacket	Nom. Thick.	1.65mm		1.65mm		1.65mm		0.9mm	
	Nom. Dia.	13.5±0.40mm		9.3±0.25mm		11.0±0.30mm		6.0±0.20mm	
Impedance		120±15		120±15		120±15		-	

Customization is available upon request.

UL 21388 Jacket Cable

Specifications

- Rated Voltage: 300V
- Temperature Range: ~ 80˚C
- Test Voltage: 2000V AC at 1 minute
- Conductor Range: 30AWG ~ 10AWG
- Conductor Material Available: Tinned Copper
- Insulator Material Available: FEP/PVC/PE
- Shielding Material Available: AL/Mylar: Coverage 100%, Overlap 25% (Min.)
  Braid: Tinned Copper, Overlap 65% (Min.)
  Spiral: Tinned Copper, Overlap 90% (Min.)
- Jacket Material: PVC
- O.D. Tolerance: > Ø17.8 mm
- Impedance: 100Ω ~ 120Ω ±15Ω

E489039-D AWM 21388 XX AWG 80°C 300V VW-1 AWM I/II A/B 80°C 300V FT1 Sun Res Cable

Application

Internal wiring and external interconnection of electronic equipment. Suitable for outdoor use.

Features

- Reference standard: UL Subject 758, UL1581 & CSA C22.2 No.210.2
- Lead free PVC jacket
- Wide temperature range
- Sunlight resistant
- Passes UL VW-1(horizontal) & CSA FT1 (vertical) flammability tests
- Round or flat cable available
- Mixture, individual or paired conductors available
- UL File Number: E489039

Find Our Standard Products

Part Number		WCA00011201	WCA00011202	WCA00011203	WCA00011204	WCA00011205	WCA00011184
Conductor	AWG	16	16	16	16	16	20
	No.	2	3	4	5	6	2
	Dia.	1.496mm	1.496mm	1.496mm	1.496mm	1.496mm	0.953mm
Insulation	Nom. Thick.	0.23mm	0.23mm	0.23mm	0.23mm	0.23mm	0.23mm
	Nom. Dia.	2.10±0.10mm	2.10±0.10mm	2.10±0.10mm	2.10±0.10mm	2.10±0.10mm	1.50±0.10mm
Shield	Style	Al. Mylar	Al. Mylar	Al. Mylar	Al. Mylar	Al. Mylar	Al. Mylar
	Overlap	25%	25%	25%	25%	25%	25%
Jacket	Nom. Thick.	0.76mm	0.76mm	0.76mm	0.76mm	0.76mm	0.76mm
	Nom. Dia.	6.00±0.20mm	6.50±0.20mm	6.80±0.20mm	7.60±0.20mm	8.40±0.20mm	5.50±0.20mm
Conductor Resistance at 20˚C (Max.)		14.7 / km	14.7 / km	14.7 / km	14.7 / km	14.7 / km	36.7 / km

UL 21388 Jacket Cable

Find Our Standard Products

Part Number		WCA00011185	WCA00011186	WCA00011187	WCA00011188	WCA00011189	WCA00011190
Conductor	AWG	20	20	20	20	20	20
	No.	3	4	5	6	7	8
	Dia.	0.953mm	0.953mm	0.953mm	0.953mm	0.953mm	0.953mm
Insulation	Nom. Thick.	0.23mm	0.23mm	0.23mm	0.23mm	0.23mm	0.23mm
	Nom. Dia.	1.50±0.10mm	1.50±0.10mm	1.50±0.10mm	1.50±0.10mm	1.50±0.10mm	1.50±0.10mm
Shield	Style	Al. Mylar	Al. Mylar	Al. Mylar	Al. Mylar	Al. Mylar	Al. Mylar
	Overlap	25%	25%	25%	25%	25%	25%
Jacket	Nom. Thick.	0.76mm	0.76mm	0.76mm	0.76mm	0.76mm	0.76mm
	Nom. Dia.	5.50±0.20mm	6.00±0.20mm	6.20±0.20mm	6.80±0.20mm	6.80±0.20mm	7.20±0.20mm
Conductor Resistance at 20˚C (Max.)		36.7 / km	36.7 / km	36.7 / km	36.7 / km	36.7 / km	36.7 / km

Part Number		WCA00011191	WCA00011192	WCA00011193	WCA00011200	WCA00011194
Conductor	AWG	20	20	20	20	20
	No.	9	10	12	14	18
	Dia.	0.953mm	0.953mm	0.953mm	0.953mm	0.953mm
Insulation	Nom. Thick.	0.23mm	0.23mm	0.23mm	0.23mm	0.23mm
	Nom. Dia.	1.50±0.10mm	1.50±0.10mm	1.50±0.10mm	1.50±0.10mm	1.50±0.10mm
Shield	Style	Al. Mylar	Al. Mylar	Al. Mylar	Al. Mylar	Al. Mylar
	Overlap	25%	25%	25%	25%	25%
Jacket	Nom. Thick.	0.76mm	0.76mm	0.76mm	0.76mm	0.76mm
	Nom. Dia.	7.60±0.20mm	8.50±0.25mm	8.50±0.25mm	8.50±0.20mm	10.0±0.30mm
Conductor Resistance at 20˚C (Max.)		36.7 / km	36.7 / km	36.7 / km	36.7 / km	36.7 / km

Customization is available upon request.

UL 2464 Multiple-Conductor Cable Using Non-Integral Jacket

Specifications

- Rated Voltage: 300V
- Temperature Range: ~ 80˚C
- Test Voltage: 2000V AC at 1 minute
- Conductor Range: 30AWG ~ 10AWG
- Conductor Material Available: Tinned Copper
- Insulator Material Available: FEP/PVC/PE
- Shielding Material Available: AL/Mylar: Coverage 100%, Overlap 25% (Min.)
  Braid: Tinned Copper, Overlap 65% (Min.)
  Spiral: Tinned Copper, Overlap 90% (Min.)
- Jacket Material: PVC
- O.D. Tolerance: > Ø17.8 mm
- Impedance: 100Ω ~ 120Ω ±15Ω

E489039-D AWM 2464 XX AWG 80°C 300V VW-1 c AWM I/II A/B 80°C 300V FT1 Cable

Application

Internal wiring and external interconnection of electronic equipment. Suitable for outdoor use.

Features

- Reference standard: UL Subject 758, UL1581 & CSA C22.2 No.210.2
- Lead free PVC jacket
- Wide temperature range
- Sunlight resistant
- Passes UL VW-1(horizontal) & CSA FT1 (vertical) flammability tests
- Round or flat cable available
- Mixture, individual or paired conductors available
- UL File Number: E489039

FAQ

Question

Our most popular FAQs will help you to easily find the answers you need.

Q: What connectors can be used for power and signal distribution?

A: Ceres, SENSOR, X-Lok, RBL and HS-Lok connectors. For more detailed information and guide, please refer to our "Product Summary Table".

Q: Can ALTW connectors be used in direct burial?

A: No, they are not designed for this type of application. They should be routed inside a conduit or other means of reinforcement if deployed underground.

Q: Can ALTW connectors be used in continuous water immersion?

A: No, there is a limitation for their immersion to water as defined on each IP rating.
Only "Deeptronica" series can be used in permanent immersion.

Q: Why are ALTW connectors called waterproof if they can only be immersed for a certain period? Shouldn't they be called water resistant?

A: As long as the immersion period does not surpass the conditions specified on the IP rating, they can be refered to as waterproof.

Q: What is the Ingress Protection (IP) of ALTW connectors?

A: It ranges from IP65 to IP69K.

Q: Can ALTW connectors be connected/disconnected under load?

A: By default, only connectors for data (RJ45, DVI, HDMI, and USB) can be used in hot-plugging.
Power connectors need to be customized to achieve this.

FAQ

Q: Do ALTW connectors comply with MIL STD?

A: No, ALTW connectors are only evaluated under EIA, IEC and UL standards.

Q: What connectors can be used in high-speed base band data transmission?

A: Ceres, X-Lok, M12 D & X-coded, RJ45, DVI, HDMI, USB and FLOS connectors.

Q: Can ALTW connectors be customized to meet certain requirements?

A: Yes, connectors can be customized to meet customer requirements. If a certification is required, it will be applied. If not, ALTW can provide in-house test reports as a confirmation that the pre-defined specifications have been met.

Q: Do ALTW connectors have ATEX certification?

A: No, ALTW connectors are not yet certified by ATEX.

Q: What is the difference between Oleophobic and Hydrophobic protective vents? What is the main function of the vent?

A: These properties refer to the fluid resistance of the membrane in the vent. Hydrophobic means that the membrane is water repelling, while Oleophobic means the membrane is oil repelling.
They are used in applications that require the balancing of internal and external pressures such as electrical cabinets, wireless access points, control hubs and junction boxes. The trapped air inside the enclosures expands or contracts relative to the heat emitted by the components it encloses and the external ambient temperatures.

If your question is not answered here, please contact
Amphenol LTW Customer Service or browse our website for more information.
www.amphenolltw.com

Scan here to contact us or e-mail us at sales@ltw-tech.com

Lexicon

UV Resistant

Being resistant to ultraviolet light (UV), or sunlight, means being able to withstand or resist the degradation caused by ultraviolet light. UV light causes non-resistant materials and surfaces to fade or discolor.

Flammability

The ability of a chemical to burn or ignite, causing fire or combustion. The degree of difficulty required to cause the combustion of a chemical is quantified through fire testing.
Flammability can be classified as low (least flame-retarded) to high (most flame-retarded). From lowest to highest it is classified as follows:

- HB - horizontal slow burning: Burning rate under 76mm/min for a thickness below 3mm or the burning stops before 100mm
- V-2: Burning stops within 30 seconds on a vertical specimen and drips of flaming particles are allowed
- V-1: Burning stops within 30 seconds on a vertical specimen and drips of particles are allowed as long as they are not inflamed
- V-0: Burning stops within 10 seconds on a vertical specimen and drips of particles are allowed as long as they are not inflamed

IEC

The International Electrotechnical Commission (IEC) is the world's leading organization for the preparation and publication of international standards for all electrical, electronic and related technologies. These are known collectively as “electrotechnology”.

The IEC provides a platform for companies, industries and governments to meet, discuss and develop the international standards they require. All IEC standards are consensus-based and represent the needs of the key stakeholders of every nation participating. Every member country has a vote on what is included into an IEC international standard.

UL 50e

This standard applies to enclosures for electrical equipment intended to be installed and used in non-hazardous locations. It covers additional environmental construction and performance requirements for enclosures.

UL 1863

This standard applies to Safety Communication - circuit Accessories. It covers telecommunications-circuit accessories, such as jack and plug assemblies, quick-connect terminal assemblies, telephone wall plates, telephone extension cords, cross-connect terminal-block assemblies, maintenance terminal modules, terminal enclosures, cable-splice enclosures, network-interface devices, wire-guide assemblies, and connector boxes.

Lexicon

UL 1977

These requirements cover single and multipole connectors intended for factory assembly to copper or copper alloy conductors or printed wiring boards for use in data, signal, control and power applications within and between electrical equipment.

UL 2237

This standard covers multi-point interconnection power cable assemblies. They may consist of power cable assemblies, male or female power cable fittings, panel-mounted power cable/conductor fittings and feeder-tap power cable fittings, referred to as the device in this standard, used with industrial machinery in accordance with the National Fire Protection Association Electrical Standard for Industrial Machinery, NFPA 79 that have system voltages up to and including 1,000 V.

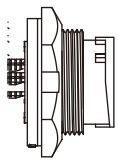
UL 2238

These requirements cover devices intended for inter-connection of equipment, sensors, and actuators in remote-control, signaling, and power-limited circuits. Included are cable assemblies and fittings, feeder-tap cable systems, feed-through connectors, multi-outlet fittings, panel-mount fittings, and splitters. These devices are rated at no more than 60 A and no more than 600 V. These devices are not intended for disconnect means.

LV214

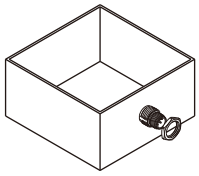
This automotive standard was developed by German car manufacturers Audi, BMW, Daimler, Porsche and Volkswagen. It addresses the ability of terminals to be effectively evaluated by crimp force monitors. The terminals must exhibit certain crimp force to be used in an automotive wire harness.

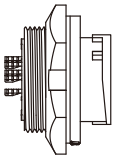
Fasten Style of Nut



Front Fastened

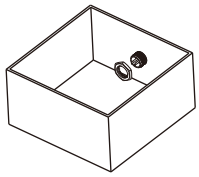
How to Install





Rear Fastened

How to Install



Lexicon

Mating Style

Screw Thread

- Ceres
- RJ45
- Cable Joiner & FICX
- Power
- USB
- M Series
- HDMI
- Cable Gland
- NMEA
- RF
- LED Light Guide
- D-Sub
- DVI
- Vent

2 Points Lock Bayonet

- Ceres
- Power
- USB

3 Points Lock Bayonet

- Ceres
- Power
- RJ45
- Fiber

Push Pull

- M Series
- FLOS & FLOS+
- HS-Lok
- USB

Push Lock With Latches

- RBL
- D-Sub
- SSL

Push Lock

- X-Lok
- USB

Termination Style

PCB 180°

PCB 90°

Solder

Screw In

Crimp

IDC

Push In

SMT

ODVA

ODVA is a global association whose members comprise of world's leading automation companies. ODVA's mission is to advance open, interoperable information and communication technologies in industrial automation. The association recognizes its media independent network protocol, the Common Industrial Protocol or "CIP" – and the network adaptations of CIP – EtherNet/IP, DeviceNet, CompoNet and ControlNet – as its core technology and the primary common interest of its membership.
ODVA's vision is to contribute to the sustainability and prosperity of the global community by transforming the model for information and communication technology in the industrial ecosystem.

NMEA 2000

NMEA 2000 is a protocol used to create a network of electronic devices – mainly marine instruments – on a boat. Various instruments that meet the NMEA 2000 standard are connected to one central cable, known as a backbone. The backbone powers each instrument and relays data among all the instruments on the network. This allows one display unit to show many different types of information and allows the instruments to work together. NMEA 2000 is meant to be "plug and play" to allow devices made by different manufacturers to talk and listen to each other.

Lexicon

Amphenol LTW's IPCS (Intelligent Pre-cabling Systems)

Amphenol LTW Intelligent Pre-Cabling System (IPCS) is your solution for the LED Lighting incorporation in indoor and outdoor applications. With a simplified design and wide flexibility, IPCS solves all your needs for electrical wiring and cabling infrastructure. It also provides large savings in on-site installation time and costs. The concept of IPCS is suitable for ALTW's various connector series, ideal for a large variety of customization.

Amphenol LTW's Power / Data / Hybrid Solutions

We are dedicated to developing interconnect solution to fulfill customer requirements of power or data applications, and as devices increasingly carry more functions in reduced spaces, Hybrid solutions are the answer to space limitation and multi-function. Below is the product series for Power, Data, and Hybrid applications.

0.5A ~ 2A

- Ceres
- X-Lok
- M Series
- D-Sub
- DVI
- HDMI
- USB
- HS-Lok
- FLOS & FLOS+

3A ~ 5A

- Ceres
- X-Lok
- M Series
- D-Sub
- SSL
- RBL
- HS-Lok
- FLOS & FLOS+
- NMEA 2000
- USB

6A ~ 10A

- Ceres
- X-Lok
- M Series
- Power
- Mini
- RBL
- FLOS & FLOS+
- NMEA 2000
- USB
- Cable Joiner & FICX

11A ~ 20A

- Ceres
- X-Lok
- M Series
- Power
- Mini
- RBL
- FLOS & FLOS+
- Cable Joiner & FICX

25A ~ 30A

- M Series
- FLOS & FLOS+
- Power

50A

- X-Lok
- Power

80A

- X-Lok
- Power

120A ~ 150A

- Power

Cross Section Conversion From AWG To mm²

26 AWG	0.14 mm²	16 AWG	1.50 mm²	4 AWG	25.00 mm²
24 AWG	0.25 mm²	14 AWG	2.50 mm²	2 AWG	35.00 mm²
22 AWG	0.34 mm²	12 AWG	4.00 mm²	1 AWG	50.00 mm²
20 AWG	0.50 mm²	10 AWG	6.00 mm²	2/0 AWG	70.00 mm²
18 AWG	0.75 mm²	8 AWG	10.00 mm²		
17 AWG	1.00 mm²	6 AWG	16.00 mm²		

Ingress Protection (IP) Rating Guide

Waterproof Definition

Unmated Waterproof

Standalone waterproof or waterproof is assured even without its counterpart. The water will not go through the inner portion of the exposed connector as it is entirely sealed.

Mated Waterproof

Waterproof is only assured when mated and locked tightly to its counterpart.

1st numeral - solid foreign objects

No protection.	0
Protected against solid foreign objects of 50 mm Ø and greater.	1
Protected against solid foreign objects of 12,5 mm Ø and greater.	2
Protected against solid foreign objects of 2,5 mm Ø and greater. (2.5mm)	3
Protected against solid foreign objects of 1,0 mm Ø and greater. (1.0mm)	4
Dust-protected.	5
Dust-tight.	6

Example:

IP 6 5

Protected against water jets.

Dust-tight.

2nd numeral - water

No protection.	0
Protected against vertically falling water drops.	1
Protected against vertically falling water drops when enclosure tilted up to 15°.	2
Protected against spraying water.	3
Protected against splashing water.	4
Protected against water jets.	5
Protected against powerful water jets.	6
Protected against the effects of temporary immersion in water.	7
Protected against the effects of continuous immersion in water.	8
Protected against high pressure and temperature water jets.	9K

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