

# M16 CONNECTORS

## CIRCULAR CONNECTORS AND TWINTUS

Mechanical Data	Materials and Technical Data
Housing	Copper-Zinc alloy, Die Cast
Housing surface	Nickel plated, Other surface upon request
Inserts	Thermoplastic Polyamide PA 6 (Nylon 6/6), PBT Fire protection class V-0
Contacts	Brass alloy
Contact surface at point of contact	Nickel and gold plated (0.25 µm)
Minimum mating cycles	> 1000 (Sealcon to Sealcon connector)
Seals / O-Rings	Buna-N (Black) / Optional FKM (Green)
Temperature range	-40 °F – 257 °F (-40 °C – 125 °C)
Type of contacts	Crimp, dip-solder (PCB) (for printed circuit boards)
Protection	IP 67 / IP 69K per EN 60 529 (connected), NEMA 4x
Cable diameter range	.08 – .43" (2 - 11 mm)

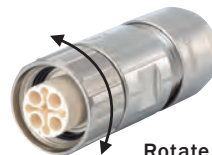
The M16 connector is a favorite in the industry due to the capabilities and performance that is offered all within a compact housing. This connector is available in both signal and power as well as a TWINTUS version. EMI ready options! The M16 connector is ideal for small drives but is very diverse in its application potential.



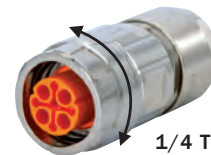
### CONNECTION SYSTEM TYPES

THREADED

TWILOCK



Rotate Tight



1/4 Turn

### Components Needed For A Complete M16 Signal Connector:

- HOUSING (pages 20 - 23)
- INSERT (pages 24 - 26)
- CONTACTS (if crimp contact insert is selected) (page 26)

Electrical Data	3 (3 x 1 mm)		3 (3 x 2 mm)		4 + 3 + PE / 320 V		4 + 3 + PE / 600 V	
Number of positions	3		3		4		4	
Number of contacts	3		3		4		4	
Contact-Ø [mm]	1		2		0.8		1.6	
[mm <sup>2</sup> ] (AWG)	0.14 - 1 (26 - 17)		0.5 - 2.5 (20 - 14)		0.08 - 0.34 (28 - 22)		0.34 - 1.5 (22 - 16)	
Nominal current [A]	8		20		5		16	
Nominal voltage [V~] degree of protection 3	400		400		160		320	
Test voltage (Breakdown voltage) [V~]	2500		2500		1500		2500	
Insulation resistance [MΩ]	> 10 <sup>10</sup>		> 10 <sup>10</sup>		> 10 <sup>10</sup>		> 10 <sup>10</sup>	
Max. contact resistance [mΩ]	3		3		3		3	

Electrical Data	6 + PE		10		12 + 3		18	
Number of positions	7		10		12		3	
Number of contacts	7		10		12		3	
Contact-Ø [mm]	1.25		1		0.8		1.25	
[mm <sup>2</sup> ] (AWG)	0.5 - 1.5 (20 - 16)		.14 - 0.75 (26 - 18)		0.08 - 0.34 (28 - 20)		0.5 - 1.5 (20 - 16)	
Nominal current [A]	16		8		3		10	
Nominal voltage [V~] degree of protection 3	600		160		24		60	
Test voltage (Breakdown voltage) [V~]	2500		1500		1500		2500	
Insulation resistance [MΩ]	> 10 <sup>10</sup>		> 10 <sup>6</sup>		> 10 <sup>10</sup>		> 10 <sup>10</sup>	
Max. contact resistance [mΩ]	3		3		3		3	

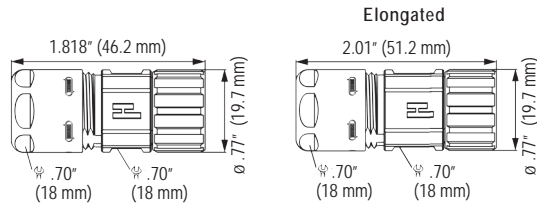
SEE TECHNICAL INFORMATION ON PAGE 80

\*ASSEMBLY INSTRUCTIONS CAN BE FOUND AT WWW.SEALCONUSA.COM OR BY CALLING US AT 1-800-456-9012

# M16 CONNECTORS

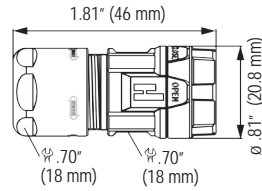
## HOUSINGS

### M16 Straight Connector, EMI, Female Thread / Elongated\*



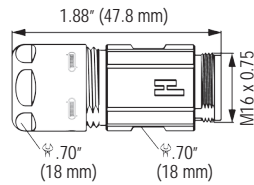
Cable-Ø	Part Number
3 - 6 mm (.11 - .23")	S7.810.300.000
5 - 9 mm (.20 - .35")	S7.810.400.000
8 - 11 mm (.31 - .43")	S7.810.500.000
<b>*Elongated</b>	
3 - 6 mm (.11 - .23")	S7.811.300.000
5 - 9 mm (.20 - .35")	S7.811.400.000
8 - 11 mm (.31 - .43")	S7.811.500.000

### M16 Straight Connector, EMI, Female Thread, TWILOCK - Quick Connect



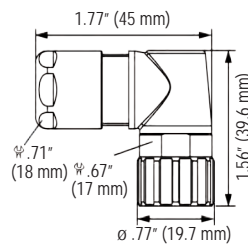
Cable-Ø	Part Number
3 - 6 mm (.11 - .23")	S7.816.300.000
5 - 9 mm (.20 - .35")	S7.816.400.000
8 - 11 mm (.31 - .43")	S7.816.500.000

### M16 Straight Connector, EMI, Male Thread



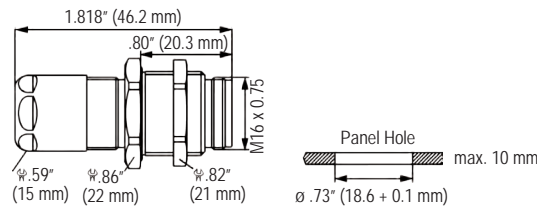
Cable-Ø	Part Number
3 - 6 mm (.11 - .23")	⊗ S7.820.300.000
5 - 9 mm (.20 - .35")	⊗ S7.820.400.000
8 - 11 mm (.31 - .43")	⊗ S7.820.500.000

### M16 Right Angle Connector with Positioning, EMI, Female Thread



Cable-Ø	Part Number
3 - 6 mm (.11 - .23")	S7.831.300.000
5 - 9 mm (.20 - .35")	S7.831.400.000
8 - 11 mm (.31 - .43")	S7.831.500.000

### M16 Panel Connector with Strain Relief, EMI, Single Hole, Male Thread



Cable-Ø	Part Number
<b>Rear Mounting, Single Hole</b>	
2 - 7 mm (.08 - .27")	⊗ S7.852.300.000
5 - 9 mm (.20 - .35")	⊗ S7.852.400.000
Including Hex Locking Nut PG11	

⊗ MATES WITH TWILOCK SYSTEM

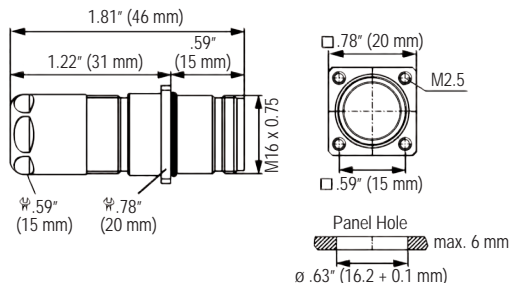
⊗ DOES NOT MATE WITH TWILOCK SYSTEM

M16 Connectors

# M16 CONNECTORS

## HOUSINGS

### M16 Panel Connector with Strain Relief, EMI, Male Thread, Flange

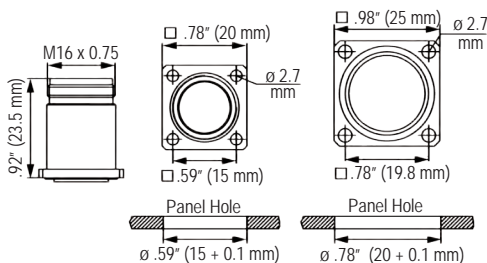


Cable-Ø

Part Number

Rear Mounting, 4 x Threaded M2.5, Flange 20 x 20 mm  
 2 - 7 mm (.08 - .27")..... S7.847.300.000  
 5 - 9 mm (.20 - .35")..... S7.847.400.000

### M16 Panel Connector, Male Thread, Flange



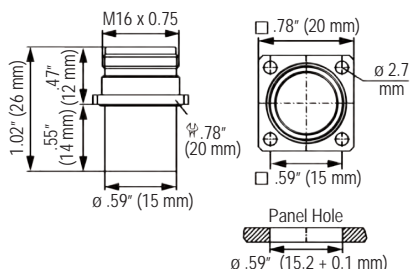
Type

Part Number

Front Mounting, 4 Holes x Ø 2.7 mm, Flange  
 Flange 20 x 20 mm..... S7.840.000.000  
 Flange 25 x 25 mm..... S7.840.100.000

Optional: Flat gasket....STAD1-7P2510

### M16 Panel Connector, Short Version, Male Thread, Flange



Type

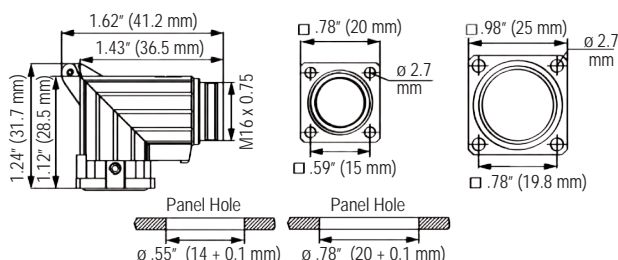
Part Number

Front Mounting, Short version, Flange 20 x 20 mm  
 4 x Holes Ø 2.7 mm..... S7.840.200.000

### M16 Right Angle Panel Connector, Male Thread, Rotatable 300°



Locking Screw at Flange



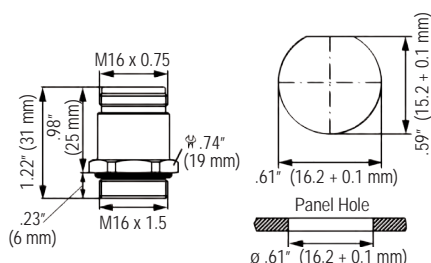
Type

Part Number

300° Rotatable, 4 Holes x Ø 2.7 mm, Flange  
 Flange 20 x 20 mm..... S7.843.000.000  
 Flange 25 x 25 mm..... S7.843.100.000

Optional: Flat gasket....STAD1-7P2510

### M16 Panel Connector, Single Hole, Male Thread, Flange



Type

Part Number

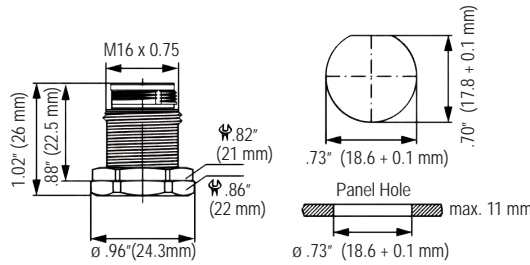
Front Mounting, Single Hole  
 Thread M16 x 1.5..... S7.842.000.000

MATES WITH TWILOK SYSTEM DOES NOT MATE WITH TWILOK SYSTEM

# M16 CONNECTORS

## HOUSINGS

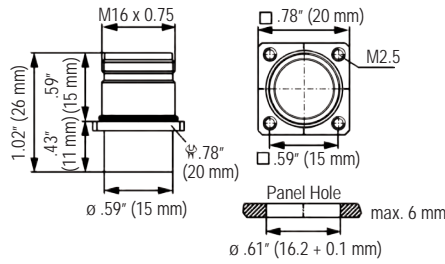
### M16 Panel Connector, Single Hole, Male Thread



Type	Part Number
Rear Mounting, Single Hole Thread M16 x 1.5.....	☉ S7.850.000.000

Including Hex Locking Nut PG11

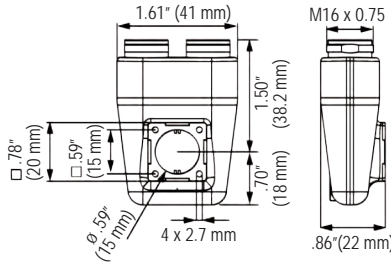
### M16 Panel Connector, Male Thread, Flange



Type	Part Number
Rear Mounting, Flange 20 x 20 mm 4 x Holes Ø 2.5 mm.....	☉ S7.845.000.000

### M16 TWINTUS, Male Thread, Flange/Motor Mount

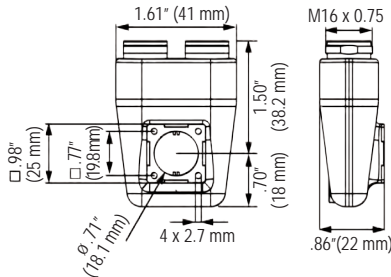
INSERT OPTIONS AVAILABLE ON PAGE 26



Type	Part Number
Motor/Flange Mounting 20x 20 mm Uncoated .....	☉ S7.848.000.000
Surface Nickel Plated .....	☉ S7.848.000.001
Surface Black Conductive.....	☉ S7.848.000.00B

### M16 TWINTUS, Male Thread, Flange/Motor Mount

INSERT OPTIONS AVAILABLE ON PAGE 26



Type	Part Number
Motor/Flange Mounting 25 x 25 mm Uncoated.....	☉ S7.848.100.000
Surface Nickel Plated.....	☉ S7.848.100.001
Surface Black Conductive.....	☉ S7.848.100.00B

☉ MATES WITH TWILOK SYSTEM

☒ DOES NOT MATE WITH TWILOK SYSTEM

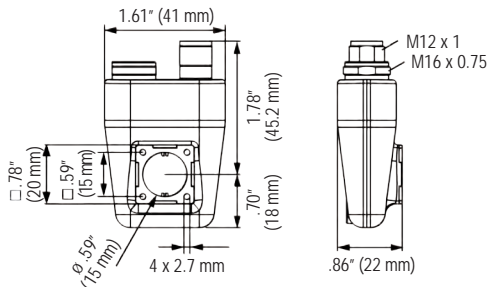
M16 Connectors

# M16 CONNECTORS

## HOUSINGS

### M12/M16 TWINTUS, Male Thread, Flange/Motor Mount

INSERT OPTIONS AVAILABLE ON PAGE 26

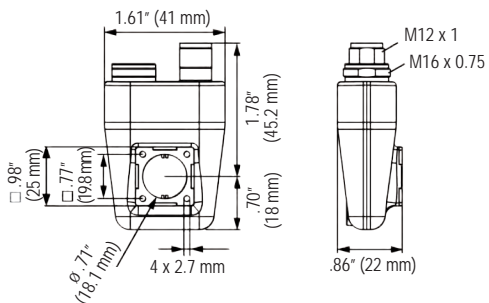


Type	Part Number
<b>Motor/Flange Mounting 20 x 20 mm</b>	
Uncoated .....	☉ S7.848.200.000
Surface Nickel Plated .....	☉ S7.848.200.001
Surface Black Conductive .....	☉ S7.848.200.00B

M12 PORT DOES NOT MATE WITH TWILOCK SYSTEM

### M12/M16 TWINTUS, Male Thread, Flange/Motor Mount

INSERT OPTIONS AVAILABLE ON PAGE 26



Type	Part Number
<b>Motor/Flange Mounting 25 x 25 mm</b>	
Uncoated .....	☉ S7.848.300.000
Surface Nickel Plated .....	☉ S7.848.300.001
Surface Black Conductive .....	☉ S7.848.300.00B

M12 PORT DOES NOT MATE WITH TWILOCK SYSTEM

### M16 Accessories

- Plastic Protective Cap for connectors with Male thread..... S7.000.980.161
- Plastic Protective Cap for connectors with Female thread ..... S7.000.980.162
- Brass Protective Cap for connectors with Female thread ..... S7.010.900.163
- Brass Protective Cap for connectors with Male thread ..... S7.010.900.162
- Adapter Flange for Straight Connectors..... S7.010.900.135
- Conduit Adapter Nylon DN 10..... S7.010.900.200
- Conduit Adapter Nylon DN 12..... S7.010.900.202
- Tool Adapter for tightening or loosening knurled nuts for M12 Power / M16 ..... S7.010.900.191



- Brass Protective Cap with chain for connectors with Female thread Length 70 mm..... S7.010.9S0.705
- Brass Protective Cap with chain for connectors with Male thread Length 70 mm..... S7.010.9S0.704
- Crimp Tool for manual crimping of machined crimp contacts for signal connectors M16 and M23..... S7.000.900.904
- Plastic Protective Cap for TWINTUS TWINTUS M16..... S7.000.848.101
- Plastic Protective Cap for TWINTUS TWINTUS M16 / M12..... S7.000.848.102
- Screw Tool, adjustable 0.5 - 1.7 Nm ..... S7.010.900.190
- Disassembly Tool for crimp contacts 1.25 mm ..... S7.010.900.151

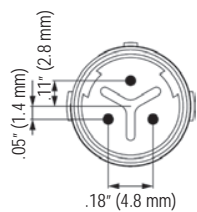
☉ MATES WITH TWILOCK SYSTEM      DOES NOT MATE WITH TWILOCK SYSTEM



# M16 CONNECTORS

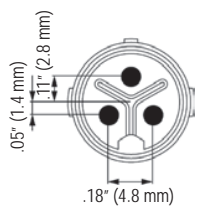
## INSERTS



M16 Connectors

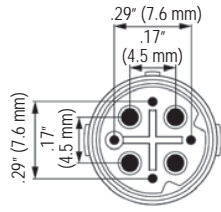
Inserts 3-pole (3 x 1 mm)		Type	Part Number	Part Number
			Pins	Sockets
				
Insert Pin Mating View	Insert Socket Mating View	Insert without contacts.....	S7.003.903.101	S7.003.903.102
		Insert with dip solder contacts		
		Length 10 mm.....	S7.001.903.127	S7.001.903.108
		Insert with dip solder contacts		
		Length 17 mm.....	S7.001.903.137	S7.001.903.118
		<b>Required Contacts</b>		S7.010.901.002
		3 x 1 mm .....	S7.010.901.001	S7.010.901.012





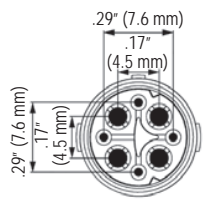
Inserts 3-pole (3 x 2 mm)		Type	Part Number	Part Number
			Pins	Sockets
				
Insert Pin Mating View	Insert Socket Mating View	Insert without contacts.....	S7.003.983.101	S7.003.983.102
		Insert with dip solder contacts		
		Length 10 mm.....	S7.001.983.127	S7.001.983.108
		Insert with dip solder contacts		
		Length 17 mm.....	S7.001.983.137	S7.001.983.118
		<b>Required Contacts</b>		S7.010.982.001
		3 x 2 mm .....	S7.010.982.001	S7.010.982.002



Inserts 8-pole 4+3+PE, 320 V		Type	Part Number	Part Number
			Pins	Sockets
				
Insert Pin Mating View	Insert Socket Mating View	Insert without contacts.....	S7.003.943.101	S7.003.943.102
		Insert RAL 2003 (DESINA orange)		
		without contacts .....	S7.053.943.101	S7.053.943.102
		Insert with dip solder contacts		
		Length 10 mm.....	S7.001.943.127	S7.001.943.108
		Insert with dip solder contacts		
		Length 17 mm.....	S7.001.943.137	S7.001.943.118
		<b>Required Contacts</b>		S7.010.980.801
		4 x 0.8 mm .....	S7.010.980.801	S7.010.980.802
		4 x 1.6 mm .....	S7.010.981.601	S7.010.981.602





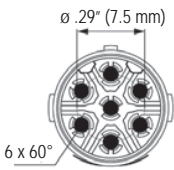
Inserts 8-pole 4+3+PE, 600 V		Type	Part Number	Part Number
			Pins	Sockets
				
Insert Pin Mating View	Insert Socket Mating View	Insert without contacts.....	S7.003.908.101*	S7.003.908.102*
		Insert RAL 2003 (DESINA orange)		
		without contacts .....	S7.053.908.101*	S7.053.908.102*
		Insert with dip solder contacts - Under Development		
		Length 10 mm.....	S7.001.908.127	S7.001.908.108
		Insert with dip solder contacts - Under Development		
		Length 17 mm.....	S7.001.908.137	S7.001.908.118
		<b>Required Contacts</b>		S7.010.980.811
		4 x 0.8 mm .....	S7.010.980.811	S7.010.980.812
		4 x 1.25 mm .....	S7.010.981.211*	S7.010.981.212*

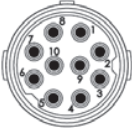
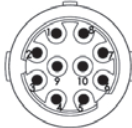
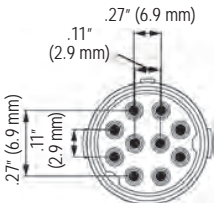




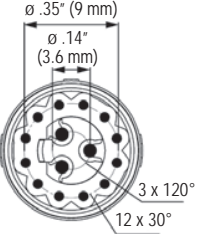
\*INSERTION/REMOVAL TOOL # S7.010.900.151 IS REQUIRED



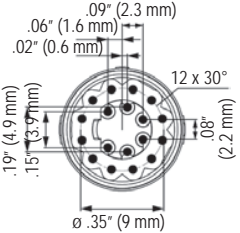
# M16 CONNECTORS

## INSERTS

Inserts 7-pole 6+PE		Type	Part Number	Type	Part Number
			Pins		Sockets
  	Insert Pin Mating View	Insert Socket Mating View	Insert without contacts.....	S7.003.961.101*	S7.003.961.102*
			Insert RAL 2003 (DESINA orange) without contacts .....	S7.053.961.101*	S7.053.961.102*
			Insert with dip solder contacts - Under Development		
		Length 10 mm .....	S7.001.961.127.....	S7.001.961.108	
		Insert with dip solder contacts - Under Development			
		Length 17 mm .....	S7.001.961.137.....	S7.001.961.118	
		<b>Required Contacts</b>			
		7 x 1.25 mm .....	S7.010.981.211*.....	S7.010.981.212*	
*INSERTION/REMOVAL TOOL # S7.010.900.151 IS REQUIRED					

Inserts 10-pole		Type	Part Number	Type	Part Number
			Pins		Sockets
  	Insert Pin Mating View	Insert Socket Mating View	Insert without contacts.....	S7.003.910.101.....	S7.003.910.102
			Insert RAL 2003 (DESINA green) without contacts .....	S7.053.910.101.....	S7.053.910.102
			Insert with dip solder contacts		
		Length 10 mm.....	S7.001.910.127.....	S7.001.910.108	
		Insert with dip solder contacts			
		Length 17 mm.....	S7.001.910.137.....	S7.001.910.118	
		<b>Required Contacts</b>			
		10 x 1 mm .....	S7.010.981.001.....	S7.010.981.002	


Inserts 15-pole 12+3		Type	Part Number	Type	Part Number
			Pins		Sockets
  	Insert Pin Mating View	Insert Socket Mating View	Insert without contacts.....	S7.003.985.101.....	S7.003.985.102
			Insert with dip solder contacts		
			Length 10 mm.....	S7.001.985.127 .....	S7.001.985.108
		Insert with dip solder contacts			
		Length 17 mm.....	S7.001.985.137 .....	S7.001.985.118	
		<b>Required Contacts</b>			
		12 x 0.8 mm .....	S7.010.980.801.....	S7.010.980.802	
		3 x 1.25 mm .....	S7.010.981.201.....	S7.010.981.202	

Inserts 18-pole		Type	Part Number	Type	Part Number
			Pins		Sockets
  	Insert Pin Mating View	Insert Socket Mating View	Insert without contacts.....	S7.003.988.101.....	S7.003.988.102
			Insert RAL 2003 (DESINA green) without contacts .....	S7.053.988.101.....	S7.053.988.102
			Insert with dip solder contacts		
		Length 10 mm.....	S7.001.988.127.....	S7.001.988.108	
		Insert with dip solder contacts			
		Length 17 mm.....	S7.001.988.137.....	S7.001.988.118	
		<b>Required Contacts</b>			
		18 x 0.8 mm .....	S7.010.980.801 .....	S7.010.980.802	


M16 Connectors

# M12/M16 CONNECTORS


















## INSERTS, CONTACTS

Inserts M12 for TWINTUS M16 / M12 (8-pole)	Type	Part Number
		
Insert with solder contacts.....	Pins	SA712-7.001.908.103

Insert Pin Mating View

Inserts M12 for TWINTUS M16 / M12 (12-pole)	Type	Part Number
		
Insert with solder contacts.....	Pins	SA712-7.001.912.103

Insert Pin Mating View

M12/M16 Contacts	Type	Crimp Range	Part Number
	Crimp Pin 0.8 mm, machined.....	0.08 - 0.34 mm <sup>2</sup> (AWG 28 - 22).....	S7.010.980.801
	Crimp Socket 0.8 mm, machined.....	0.08 - 0.34 mm <sup>2</sup> (AWG 28 - 22).....	S7.010.980.802
	Crimp Pin 0.8 mm, machined.....	0.08 - 0.34 mm <sup>2</sup> (AWG 28 - 22).....	S7.010.980.811
	Crimp Socket 0.8 mm, machined.....	0.08 - 0.34 mm <sup>2</sup> (AWG 28 - 22).....	S7.010.980.812
	Crimp Pin 1 mm, machined.....	0.08 - 0.75 mm <sup>2</sup> (AWG 28 - 18).....	S7.010.981.001
	Crimp Socket 1 mm, machined .....	0.08 - 0.75 mm <sup>2</sup> (AWG 28 - 18).....	S7.010.981.002
	Crimp Pin 1 mm, machined.....	0.14 - 1 mm <sup>2</sup> (AWG 26 - 17).....	S7.010.901.001
	Crimp Socket 1 mm, machined.....	0.08 - 0.56 mm <sup>2</sup> (AWG 28 - 20).....	S7.010.901.012
	Crimp Socket 1 mm, machined.....	0.34 - 1 mm <sup>2</sup> (AWG 22 - 17).....	S7.010.901.002
	Crimp Pin 1.25 mm, machined.....	0.5 - 1.5 mm <sup>2</sup> (AWG 20 - 16).....	S7.010.981.201
	Crimp Socket 1.25 mm, machined .....	0.5 - 1.5 mm <sup>2</sup> (AWG 20 - 16).....	S7.010.981.202
	Crimp Pin 1.25 mm, machined.....	0.34 - 1.5 mm <sup>2</sup> (AWG 20 - 16).....	S7.010.981.211
	Crimp Socket 1.25 mm, machined.....	0.34 - 1.5 mm <sup>2</sup> (AWG 20 - 16).....	S7.010.981.212
	Crimp Pin 1.6 mm, machined.....	0.34 - 1.5 mm <sup>2</sup> (AWG 22 - 16).....	S7.010.981.601
	Crimp Socket 1.6 mm, machined.....	0.34 - 1.5 mm <sup>2</sup> (AWG 22 - 16).....	S7.010.981.602
	Crimp Pin 2 mm, machined.....	1.0 - 2.5 mm <sup>2</sup> (AWG 17 - 14).....	S7.010.982.001
	Crimp Socket 2 mm, machined.....	1.0 - 2.5 mm <sup>2</sup> (AWG 17 - 14).....	S7.010.982.002

M16 Connectors