

# M8/M12 CONNECTOR SYSTEM

# TE CONNECTIVITY'S M8 / M12

Connector System for machine industrial automation and control applications provides a solution for the increasing needs of sensor connections that safely and reliably ensures the communication in industrial environments. This connector system also finds applications outside of its traditional industries where a compact reliable connection system with environmental protection is required. TE's solution includes an extensive connector range of PCB headers, cable assemblies and I/O boxes, and provides users with an interface that supports higher bandwidth needs - meeting the requirements of up to 10Gb/s.

TE Connectivity also offers shielded and un-shielded Cat5e and Cat6A cable assembly variants. A predefined offering in length of 1, 3, 5 and 10 meters covers a vast range of customer needs on the market. For rewiring on site a range of field serviceable connectors are provided, allowing versatile systems to be quickly and easily established. Additional styles are available on request including alternative mounting arrangements for panel mount connectors and double ended cable assemblies.



## TE'S INDUSTRIAL COMMUNICATIONS PRODUCTS PLAY A VITAL ROLE IN FACTORY AUTOMATION.

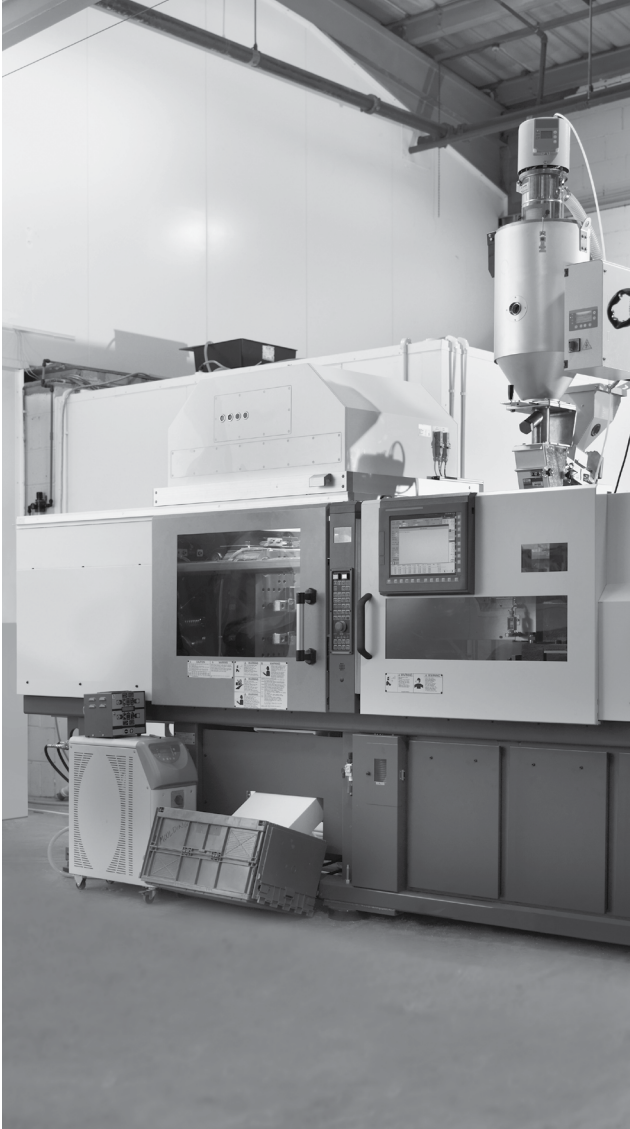
TE's industrial Communications products are widespread throughout today's networked factories, and play a critical role in driving the efficiency of many manufacturing processes. Used extensively in material handling

equipment, our industrial communications solutions are also found throughout the automotive and food and beverage industries, as well as in the many manufacturing applications of industrial robots.

With the development of smaller industrial Ethernet products, TE's solutions are also ideal for vision systems, common in security equipment and mail sortation devices.

# TE M8/M12 CONNECTOR SYSTEM - APPLICATIONS

## MACHINERY



## FACTORY AUTOMATION

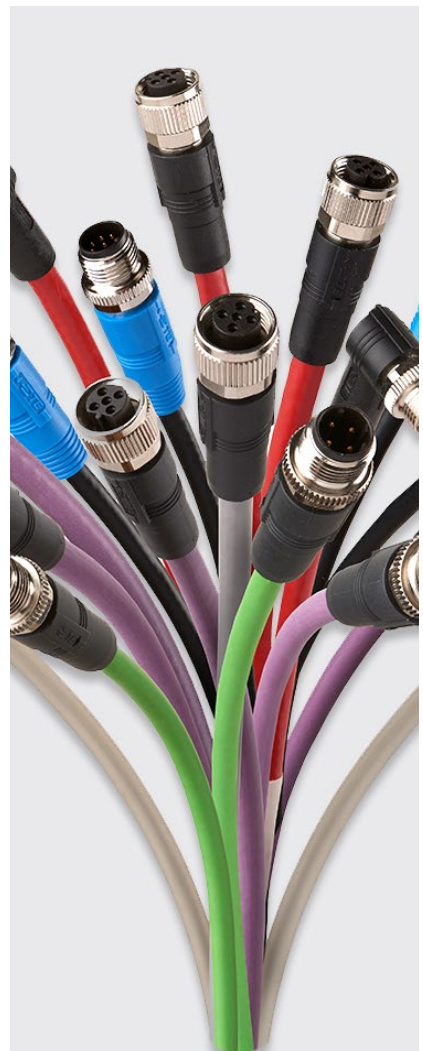


TE's M8/M12 Connector System includes a broad range of straight, angled, LED and multi-position field installable and board connectors that are easily intermateable. Next to cable assemblies for Serial and Bus communication, TE also offers Industrial Ethernet patch cables with overmolded X-coded M12 connectors that are available for future proof applications with up to 10 Gb/s data transmission. Customized cable assemblies offer a solution for your specific needs in different lengths, temperatures or flexibility. When communication simply needs to work in industrial environments, TE's M8/M12 system and complete Industrial Communications portfolio offer proven reliability that meet industry standards. Whether it is for controllers and sensors or robotics and molding machines, the M8/M12 connector system offers you a solution that is time-saving, error-free and without the use of tools.



# CONTENTS

M8/M12 CONNECTORS .....	6
TE Part Number Definition .....	7
M8 Straight Field Installable .....	9
M8 Angled Field Installable .....	10
M8 Panel Mount R/A PCB .....	11
M8 Panel Mount Straight PCB .....	12
M8 Panel Mount Solder Wire .....	13
M8 Panel Mount 200mm Wire .....	14
M12 Straight Field Installable A, B, D Coded.....	15
M12 Panel Mount R/A PCB .....	19
M12 Panel Mount Straight PCB - Rear Mounting .....	21
M12 Panel Mount Straight PCB - Front Mounting.....	22
M12 Panel Mount Solder Wire - Rear Mounting .....	23
M12 Panel Mount Solder Wire - Front Mounting.....	24
M12 Panel Mount 200mm Wire - Front Mounting .....	25
M12 Panel Mount 200mm Wire - Rear Mounting .....	26
M12 Power Solutions .....	27
M12 S, T coded .....	27
M12 X-Coded.....	28
Accessories .....	29
Sensor/Actuator M8/M12 A-Code Cable Assemblies .....	32
M8 3-4Pos Single Ended Cable Assemblies.....	35
M12 A-Code 2-8Pos Single Ended Cable Assemblies.....	37
M8 3-4Pos Double Ended Cable Assemblies.....	39
M12 A-Code 2-8Pos Double Ended Cable Assemblies.....	40
M8 To M12 A-Code 3-4Pos Double Ended Cable Assemblies	42
M8 Cable Specifications.....	44
M12 Cable Specifications.....	45



<b>M12 Fieldbus Cable Assembly Connectivity</b> (Profibus, DeviceNet / CanOpen, CC Link) . . . . .	46
<b>M12 CC-Link A-Code 4Pos Cable Assemblies Single Ended PVC.</b> . . . . .	48
<b>M12 CC-Link A-Code 4Pos Cable Assemblies Double Ended PVC.</b> . . . . .	48
<b>M12 Devicenet A-Code 5Pos Cable Assemblies Single Ended PUR.</b> . . . . .	48
<b>M12 Devicenet A-Code 5Pos Cable Assemblies Double Ended PUR.</b> . . . . .	49
<b>M12 Devicenet A-Code 5Pos Cable Assemblies Single Ended PVC.</b> . . . . .	49
<b>M12 Devicenet A-Code 5Pos Cable Assemblies Double Ended PVC</b> . . . . .	49
<b>M12 Profibus B-Code 2Pos Cable Assemblies Single Ended PUR Torsion</b> . . . . .	50
<b>M12 Profibus B-Code 2Pos Cable Assemblies Double Ended PUR Torsion.</b> . . . . .	50
<b>M12 Profibus B-Code 2Pos Cable Assemblies Single Ended PUR Flex/Drag Chain.</b> . . . . .	50
<b>M12 Profibus B-Code 2Pos Cable Assemblies Double Ended PUR Flex/Drag Chain.</b> . . . . .	51
<b>M12 Industrial Ethernet Cable Assembly Connectivity</b> (Profinet, EtherCAT, Ethernet/IP, SERCOS-III). . . . .	52
<b>M12 Ethernet D-Code 4Pos Cable Assemblies Single Ended Type C PUR.</b> . . . . .	54
<b>M12 Ethernet D-Code 4Pos Cable Assemblies Double Ended Type C PUR.</b> . . . . .	54
<b>M12 Ethernet D-Code 4Pos Cable Assemblies Single Ended Type B FRNC</b> . . . . .	54
<b>M12 Ethernet D-Code 4Pos Cable Assemblies Double Ended Type B FRNC.</b> . . . . .	55
<b>M12 Ethernet D-Code 4Pos Cable Assemblies Single Ended Type B PVC.</b> . . . . .	55
<b>M12 Ethernet D-Code 4Pos Cable Assemblies Double Ended Type B PVC.</b> . . . . .	55
<b>M12 Ethernet D-Code 4Pos Cable Assemblies Single Ended Type B PVC Red.</b> . . . . .	56
<b>M12 Ethernet D-Code 4Pos Cable Assemblies Double Ended Type B PVC Red.</b> . . . . .	57

# M8/M12 CONNECTORS

TE's M8/M12 connectors continues to fill the ongoing needs for sensor connection in Industrial Machinery and Factory Automation. A connection standard for many years, these products also find applications outside of their traditional industries where a compact reliable connection system with environmental protection is required. TE's M8/M12 connector portfolio includes A, B, D, S, T, and X-coded (up to 10 Gb/s) versions to serve various customer needs. The connectors are also available in shielded and unshielded versions, to support Gigabit Ethernet applications.

## M8/M12 – THE CODINGS

A-coding: Actuator-sensor plug connections for DeviceNet, IO link and Profibus



B-coding: Fieldbus connections for Profibus and Interbus



D-coding: Industrial Ethernet, Profinet, Ethernet/IP and EtherCat



S-coding: Motor, Frequency-convertors, motor operated switches, PSUs for Power, 620 V, 12 A



T-coding: Fieldbus comp, passive distribution boxes, motors, PSUs for Power, 63 V, 12 A



X-coding: Cat6A, high-speed 10Gbit rugged industrial Ethernet applications IEC 61076-2-109



Ambient temperature for M8:  
-40 °C to 85 °C

Ambient temperature for M12:  
-40 °C to 85 °C

Current rating:

4 and 5 pins: 4 A per pin

8 and 12 pins: 2 A per pin

IP rating: IP67/IP68

As specifications vary for different parts, please refer to your TE contact for detailed information.

Application Specifications for M8 M12 Connectors and Cable Assemblies:

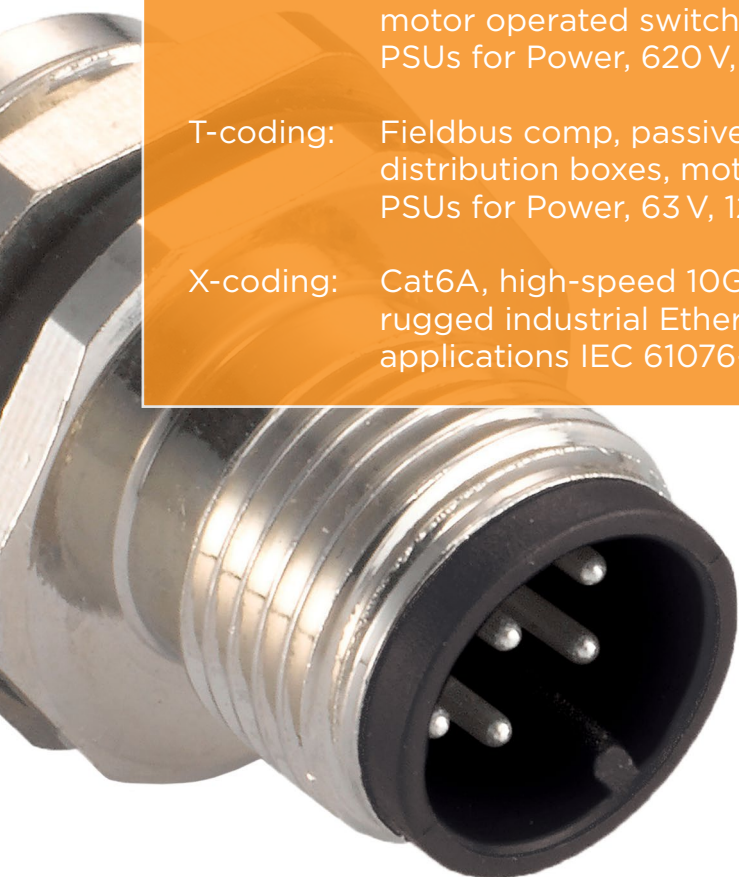
114-32127, 114-137008, 114-137144

Product Specifications:

Connectors: 108-3641, 108-19483,

108-106140

X-coded: 108-137008

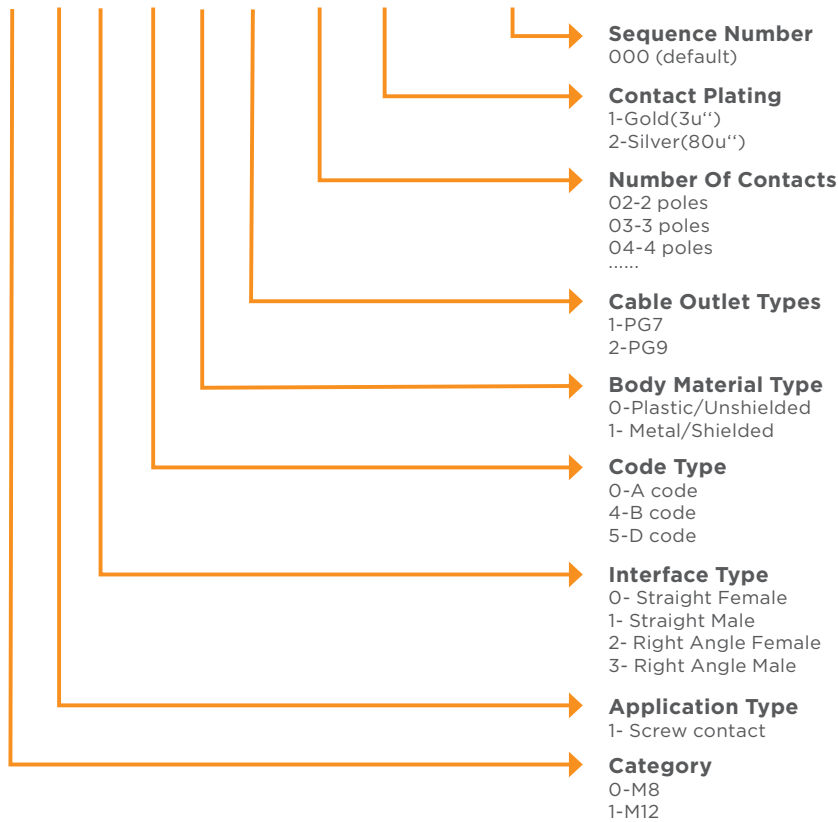


Size	Pins	Rated	Maximum Current per pin	Polution grade
M8	3	60V	4A	3
M8	4	30V	4A	3
M12	3	250V	4A	3
M12	4	250V	4A	3
M12	5	125V	4A	3
M12	8	60V	2A	3
M12	12	30V	2A	3

# TE Part Number Definition

## M8M12 Field Installable Connector PNs: T401/T411

T 4 X 1 X X X X XX X - XXX



**Sequence Number**  
000 (default)

**Contact Plating**  
1-Gold(3u")  
2-Silver(80u")

**Number Of Contacts**  
02-2 poles  
03-3 poles  
04-4 poles  
.....

**Cable Outlet Types**  
1-PG7  
2-PG9

**Body Material Type**  
0-Plastic/Unshielded  
1- Metal/Shielded

**Code Type**  
0-A code  
4-B code  
5-D code

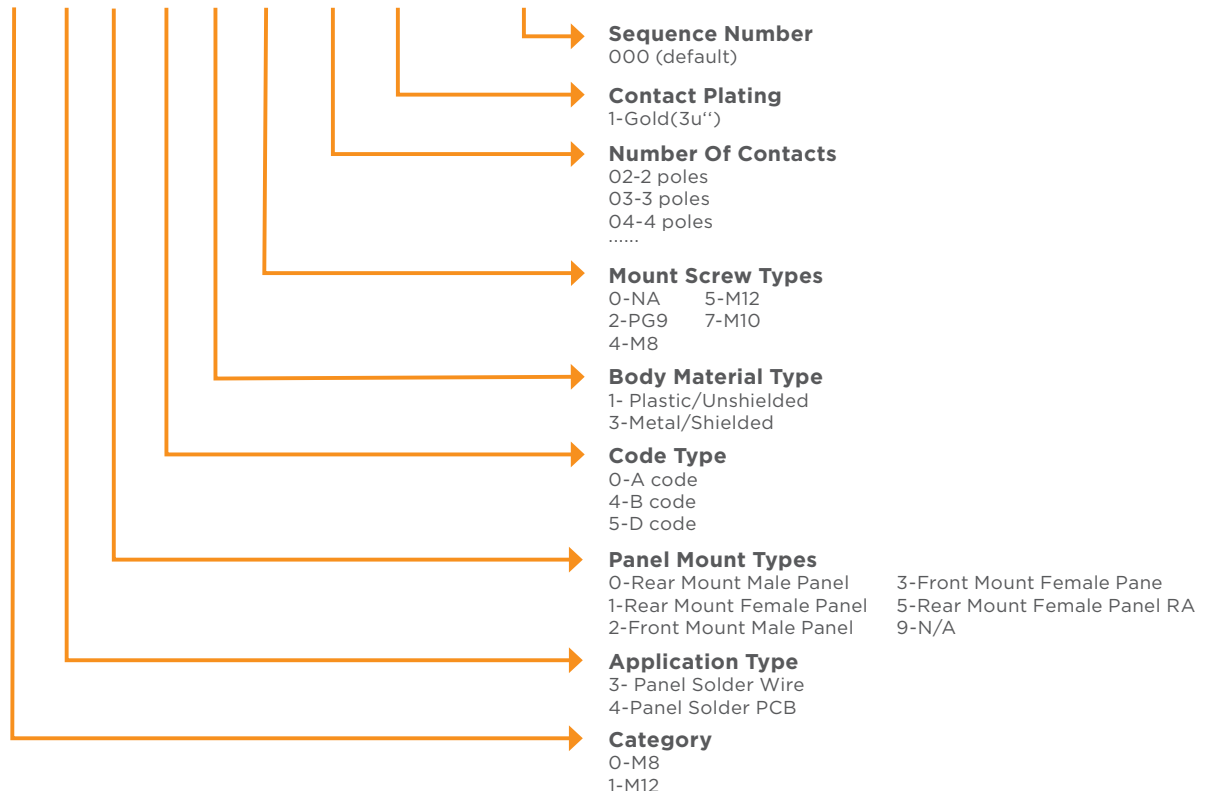
**Interface Type**  
0- Straight Female  
1- Straight Male  
2- Right Angle Female  
3- Right Angle Male

**Application Type**  
1- Screw contact

**Category**  
0-M8  
1-M12

## M8M12 Panel Mount Connector PNs: T403/T404/T413/T414/T407

T 4 X X X X X X XX X - XXX



**Sequence Number**  
000 (default)

**Contact Plating**  
1-Gold(3u")

**Number Of Contacts**  
02-2 poles  
03-3 poles  
04-4 poles  
.....

**Mount Screw Types**  
0-NA 5-M12  
2-PG9 7-M10  
4-M8

**Body Material Type**  
1- Plastic/Unshielded  
3-Metal/Shielded

**Code Type**  
0-A code  
4-B code  
5-D code

**Panel Mount Types**  
0-Rear Mount Male Panel  
1-Rear Mount Female Panel  
2-Front Mount Male Panel  
3-Front Mount Female Panel  
5-Rear Mount Female Panel RA  
9-N/A

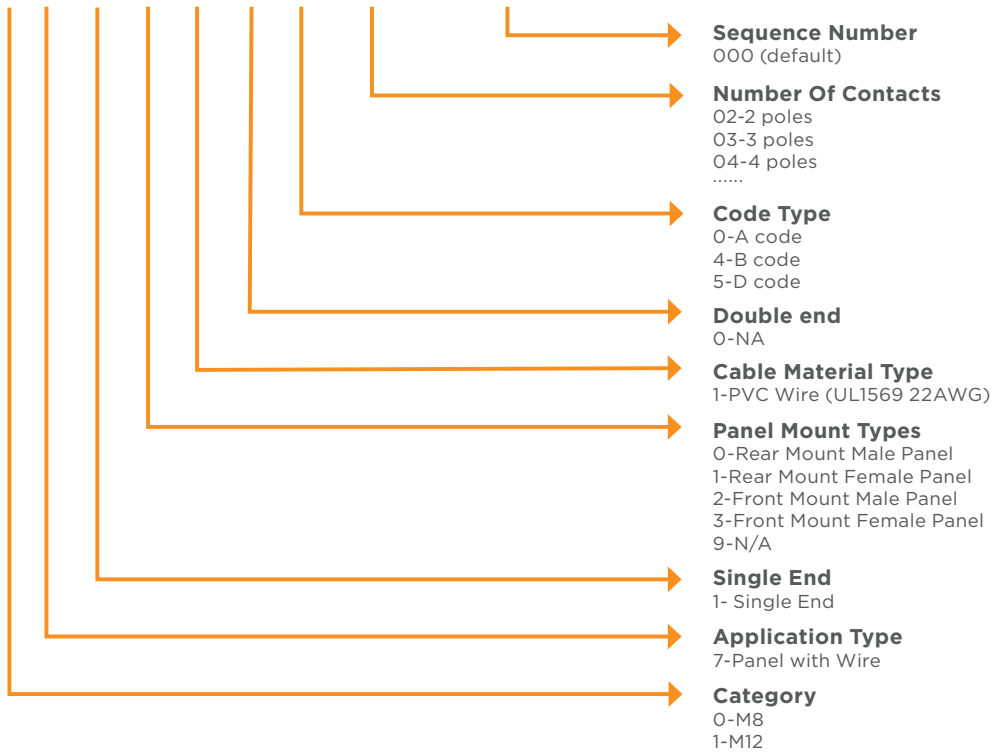
**Application Type**  
3- Panel Solder Wire  
4-Panel Solder PCB

**Category**  
0-M8  
1-M12

# TE Part Number Definition

M8M12 Panel Mount Connector with Wire PNs: T407/T417

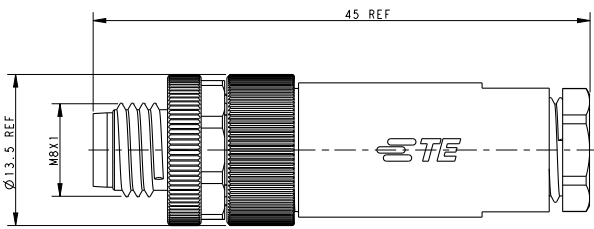
T 4 X 7 X X X X X XX - XXX



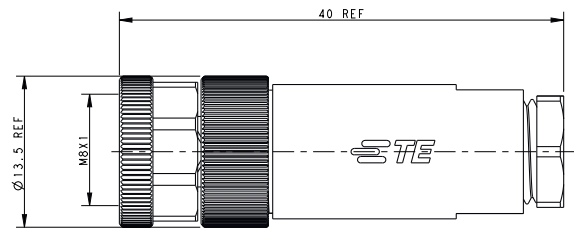
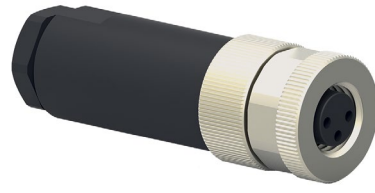


# M8 Straight Field Installable

## Male Series



## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree. Products can also be obtained with silver-plated contacts upon request.

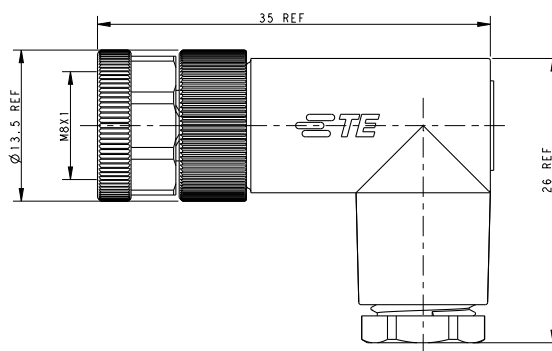
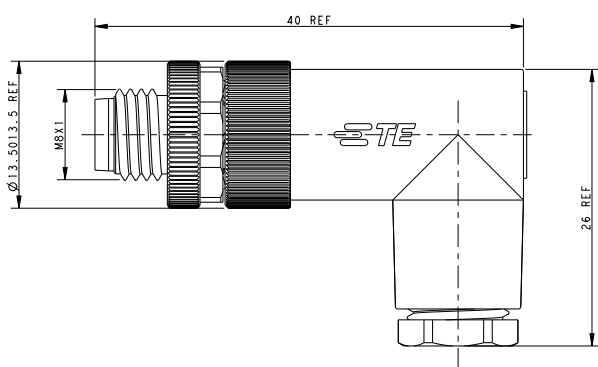
TE Part Number		
<b>M8 Male Screw Connection, Straight, Unshielded</b>		
3-Pole		T4011008031-000
4-Pole		T4011008041-000
<b>M8 Male Screw Connection, Straight, Shielded</b>		
3-Pole		T4011019031-000
4-Pole		T4011019041-000

TE Part Number		
<b>M8 Female Screw Connection, Straight, Unshielded</b>		
3-Pole		T4010008031-000
4-Pole		T4010008041-000
<b>M8 Female Screw Connection, Straight, Shielded</b>		
3-Pole		T4010019031-000
4-Pole		T4010019041-000

# M8 Angled Field Installable

## Male Series

## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree. Products can also be obtained with silver-plated contacts upon request.

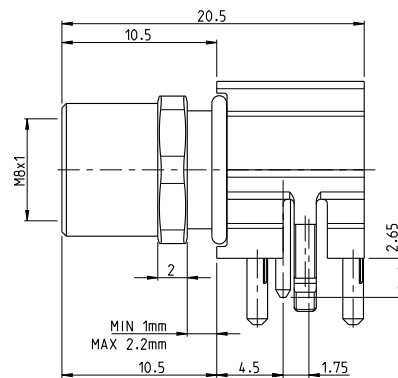
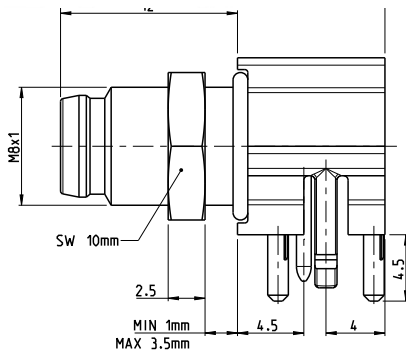
TE Part Number		
<b>M8 Male Right Angled, Unshielded</b>		
3-Pole		T4013008031-000
4-Pole		T4013008041-000
<b>M8 Male Right Angled, Shielded</b>		
3-Pole		T4013019031-000
4-Pole		T4013019041-000

TE Part Number		
<b>M8 Female Right Angled, Unshielded</b>		
3-Pole		T4012008031-000
4-Pole		T4012008041-000
<b>M8 Female Right Angled, Shielded</b>		
3-Pole		T4010019031-000
4-Pole		T4010019041-000

# M8 Panel Mount R/A PCB

## Male Series

## Female Series



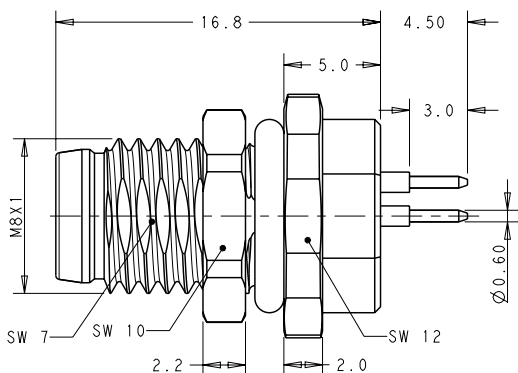
All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>M8, Male, Rear Mount, PCB, R/A, Unshielded</b>		
3-Pole		2-2172067-2
4-Pole		3-2172067-2
<b>M8, Male, Rear Mount, PCB, R/A, Shielded</b>		
3-Pole		2-2172093-2
4-Pole		3-2172093-2

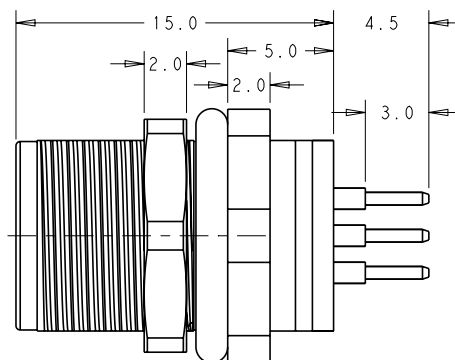
TE Part Number		
<b>M8, Female, Rear Mount, PCB, R/A, Unshielded</b>		
3-Pole		2-2172068-2
4-Pole		3-2172068-2
<b>M8, Female, Rear Mount, PCB, R/A, Shielded</b>		
3-Pole		2-2172091-2
4-Pole		3-2172091-2

# M8 Panel Mount Straight PCB

## Male Series



## Female Series



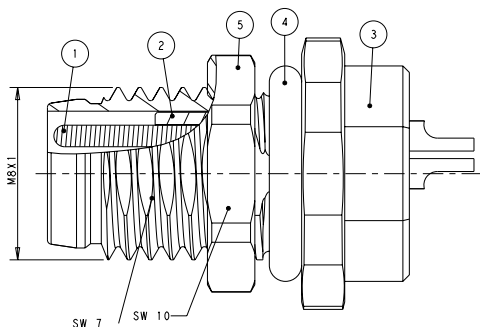
All dimensions in mm. Temperature range: -40 to +85 degree. Products can also be obtained with silver-plated contacts upon request.

TE Part Number		
<b>M8, Male, Rear Mount, PCB, Straight, Unshielded</b>		
3-Pole		T4040014031-000
4-Pole		T4040014041-000
<b>M8, Male, Front Mount, PCB, Straight, Unshielded</b>		
3-Pole		T4042014031-000
4-Pole		T4042014041-000
<b>M8, Male, Rear Mount, PCB, Straight, Shielded</b>		
3-Pole		T4040034031-000
4-Pole		T4040034041-000

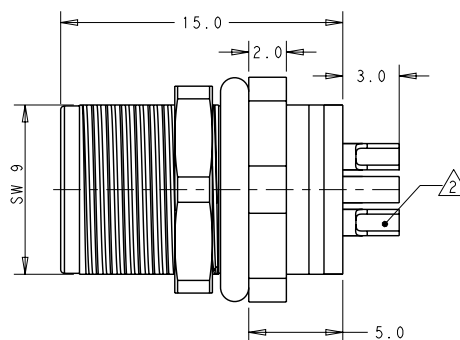
TE Part Number		
<b>M8, Female, Rear Mount, PCB, Straight, Unshielded</b>		
3-Pole		T4041017031-000
4-Pole		T4041017041-000
<b>M8, Female, Front Mount, PCB, Straight, Unshielded</b>		
3-Pole		T4043014031-000
4-Pole		T4043014041-000
<b>M8, Female, Rear Mount, PCB, Straight, Shielded</b>		
3-Pole		T4041037031-000
4-Pole		T4041037041-000

# M8 Panel Mount Solder Wire

## Male Series



## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>M8, Male, Rear Mount, Solder Wire, Straight</b>		
3-Pole		T4030014031-000
4-Pole		T4030014041-000

TE Part Number		
<b>M8, Male, Front Mount, Solder Wire, Straight</b>		
3-Pole		T4032014031-000
4-Pole		T4032014041-000

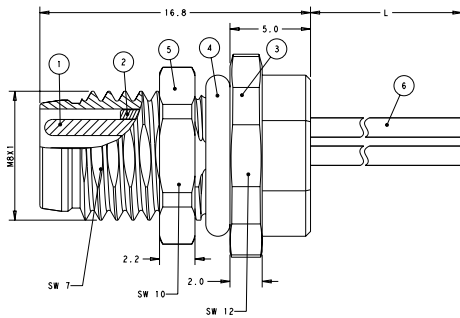
TE Part Number		
<b>M8, Female, Rear Mount, Solder Wire, Straight</b>		
3-Pole		T4031017031-000
4-Pole		T4031017041-000

TE Part Number		
<b>M8, Female, Front Mount, Solder Wire, Straight</b>		
3-Pole		T4033014031-000
4-Pole		T4033014041-000

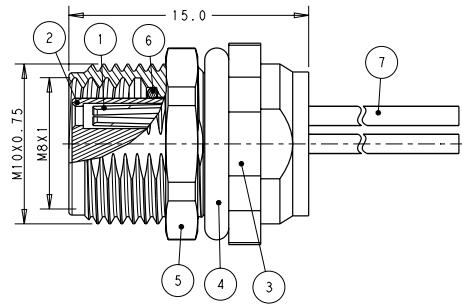


# M8 Panel Mount 200mm Wire

## Male Series



## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>M8, Male, Rear Mount, 200mm Wire, Straight</b>		
3-Pole		T4070014031-001
4-Pole		T4070014041-001

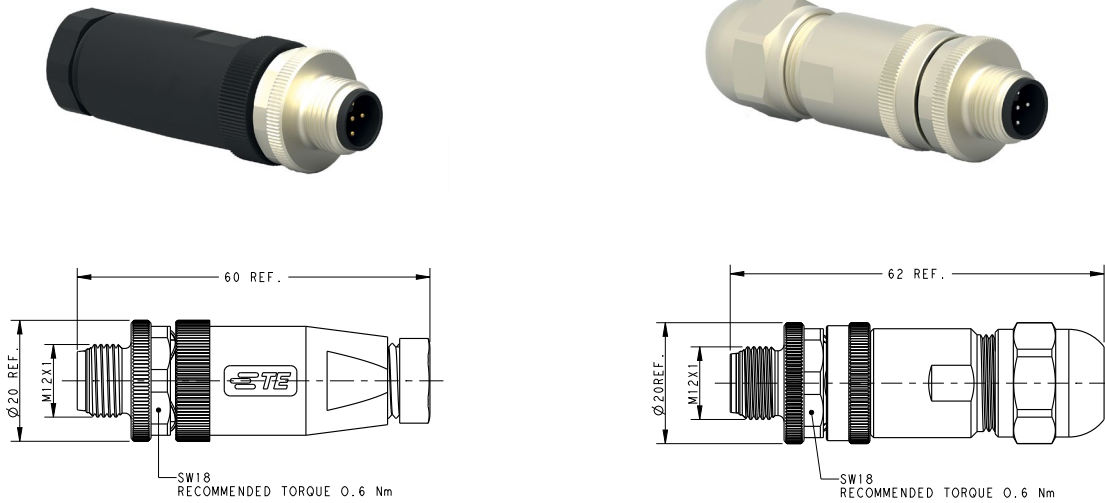
TE Part Number		
<b>M8, Male, Front Mount, 200mm Wire, Straight</b>		
3-Pole		T4070014031-001
4-Pole		T4070014041-001

TE Part Number		
<b>M8, Female, Rear Mount, 200mm Wire, Straight</b>		
3-Pole		T4071017031-001
4-Pole		T4071017041-001

TE Part Number		
<b>M8, Female, Front Mount, 200mm Wire, Straight</b>		
3-Pole		T4073014031-001
4-Pole		T4073014041-001

# M12 Straight Field Installable A, B, D Coded

## Male Series



All dimensions in mm. Temperature range: -40 to +85 degree. Products can also be obtained with silver-plated contacts upon request.

TE Part Number		
A coding – M12 Male Screw Connection, Straight, Unshielded		
2-Pole	PG7	T4111001021-000
	PG9	T4111002021-000
3-Pole	PG7	T4111001031-000
	PG9	T4111002031-000
4-Pole	PG7	T4111001041-000
	PG9	T4111002041-000
5-Pole	PG7	T4111001051-000
	PG9	T4111002051-000
8-Pole	PG9	T4111002081-000
12-Pole	PG9	6-2271110-2

B coding – M12 Male Screw Connection, Straight, Unshielded		
2-Pole	PG7	T4111401021-000
	PG9	T4111402021-000
3-Pole	PG7	T4111401031-000
	PG9	T4111402031-000
4-Pole	PG7	T4111401041-000
	PG9	T4111402041-000
5-Pole	PG7	T4111401051-000
	PG9	T4111402051-000

D coding – M12 Male Screw Connection, Straight, Unshielded		
2-Pole	PG7	T4111501021-000
	PG9	T4111502021-000
3-Pole	PG7	T4111501031-000
	PG9	T4111502031-000
4-Pole	PG7	T4111501041-000
	PG9	T4111502041-000
5-Pole	PG7	T4111501051-000
	PG9	T4111502051-000

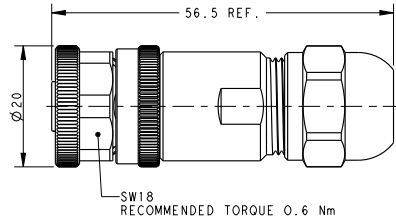
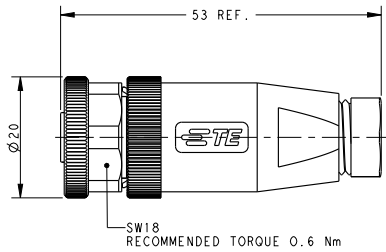
TE Part Number		
A coding – M12 Male Screw Connection, Straight, Shielded		
2-Pole	PG7	T4111011021-000
	PG9	T4111012021-000
3-Pole	PG7	T4111011031-000
	PG9	T4111012031-000
4-Pole	PG7	T4111011041-000
	PG9	T4111012041-000
5-Pole	PG7	T4111011051-000
	PG9	T4111012051-000
8-Pole	PG9	T4111012081-000
12-Pole	PG9	6-2271111-2

B coding – M12 Male Screw Connection, Straight, Shielded		
2-Pole	PG7	T4111411021-000
	PG9	T4111412021-000
3-Pole	PG7	T4111411031-000
	PG9	T4111412031-000
4-Pole	PG7	T4111411041-000
	PG9	T4111412041-000
5-Pole	PG7	T4111411051-000
	PG9	T4111412051-000

D coding – M12 Male Screw Connection, Straight, Shielded		
2-Pole	PG7	T4111511021-000
	PG9	T4111512021-000
3-Pole	PG7	T4111511031-000
	PG9	T4111512031-000
4-Pole	PG7	T4111511041-000
	PG9	T4111512041-000
5-Pole	PG7	T4111511051-000
	PG9	T4111512051-000

# M12 Straight Field Installable A, B, D Coded

## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree. Products can also be obtained with silver-plated contacts upon request.

TE Part Number		
A coding - M12 Female Screw Connection, Straight, Unshielded		
2-Pole	PG7	T4110001021-000
	PG9	T4110002021-000
3-Pole	PG7	T4110001031-000
	PG9	T4110002031-000
4-Pole	PG7	T4110001041-000
	PG9	T4110002041-000
5-Pole	PG7	T4110001051-000
	PG9	T4110002051-000
8-Pole	PG9	T4110002081-000
12-Pole	PG9	6-2271116-2

TE Part Number		
B coding - M12 Female Screw Connection, Straight, Unshielded		
2-Pole	PG7	T4110401021-000
	PG9	T4110402021-000
3-Pole	PG7	T4110401031-000
	PG9	T4110402031-000
4-Pole	PG7	T4110401041-000
	PG9	T4110402041-000
5-Pole	PG7	T4110401051-000
	PG9	T4110402051-000

TE Part Number		
D coding - M12 Female Screw Connection, Straight, Unshielded		
2-Pole	PG7	T4110501021-000
	PG9	T4110502021-000
3-Pole	PG7	T4110501031-000
	PG9	T4110502031-000
4-Pole	PG7	T4110501041-000
	PG9	T4110502041-000
5-Pole	PG7	T4110501051-000
	PG9	T4110502051-000

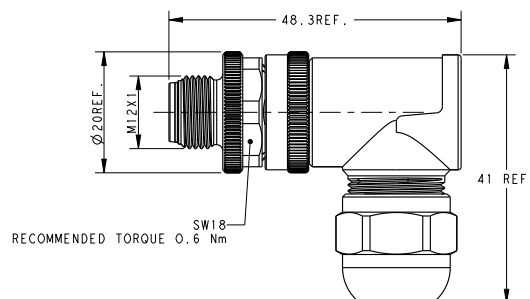
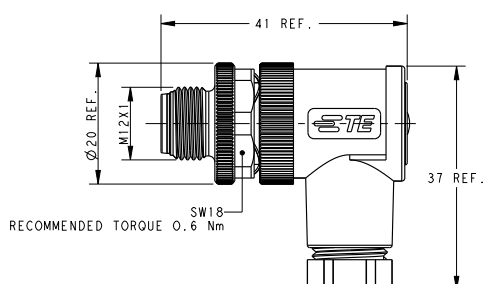
TE Part Number		
A coding - M12 Female Screw Connection, Straight, Shielded		
2-Pole	PG7	T4110011021-000
	PG9	T4110012021-000
3-Pole	PG7	T4110011031-000
	PG9	T4110012031-000
4-Pole	PG7	T4110011041-000
	PG9	T4110012041-000
5-Pole	PG7	T4110011051-000
	PG9	T4110012051-000
8-Pole	PG9	T4110012081-000
12-Pole	PG9	6-2271117-2

TE Part Number		
B coding - M12 Female Screw Connection, Straight, Shielded		
2-Pole	PG7	T4110411021-000
	PG9	T4110412021-000
3-Pole	PG7	T4110411031-000
	PG9	T4110412031-000
4-Pole	PG7	T4110411041-000
	PG9	T4110412041-000
5-Pole	PG7	T4110411051-000
	PG9	T4110412051-000

TE Part Number		
D coding - M12 Female Screw Connection, Straight, Shielded		
2-Pole	PG7	T4110511021-000
	PG9	T4110512021-000
3-Pole	PG7	T4110511031-000
	PG9	T4110512031-000
4-Pole	PG7	T4110511041-000
	PG9	T4110512041-000
5-Pole	PG7	T4110511051-000
	PG9	T4110512051-000

# M12 Angled Field Installable A, B, D Coded

## Male Series



All dimensions in mm. Temperature range: -40 to +85 degree. Products can also be obtained with silver-plated contacts upon request.

Temperature range: -25 to +85		TE Part Number
<b>A coding - M12 Male Screw Connection, Angled, Unshielded</b>		
2-Pole	PG7	T4113001021-000
	PG9	T4113002021-000
3-Pole	PG7	T4113001031-000
	PG9	T4113002031-000
4-Pole	PG7	T4113001041-000
	PG9	T4113002041-000
5-Pole	PG7	T4113001051-000
	PG9	T4113002051-000
8-Pole	PG9	T4113002081-000
12-Pole	PG9	6-2271122-2

<b>B coding - M12 Male Screw Connection, Angled, Unshielded</b>		
2-Pole	PG7	T4113401021-000
	PG9	T4113402021-000
3-Pole	PG7	T4113401031-000
	PG9	T4113402031-000
4-Pole	PG7	T4113401041-000
	PG9	T4113402041-000
5-Pole	PG7	T4113401051-000
	PG9	T4113402051-000

<b>D coding - M12 Male Screw Connection, Angled, Unshielded</b>		
2-Pole	PG7	T4113501021-000
	PG9	T4113502021-000
3-Pole	PG7	T4113501031-000
	PG9	T4113502031-000
4-Pole	PG7	T4113501041-000
	PG9	T4113502041-000
5-Pole	PG7	T4113501051-000
	PG9	T4113502051-000

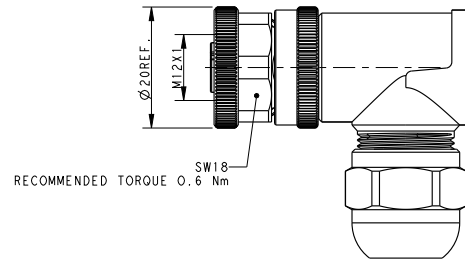
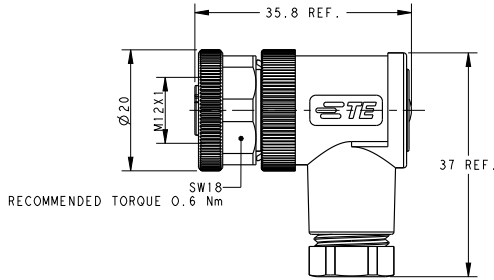
TE Part Number		
<b>A coding - M12 Male Screw Connection, Angled, Shielded</b>		
2-Pole	PG7	T4113011021-000
	PG9	T4113012021-000
3-Pole	PG7	T4113011031-000
	PG9	T4113012031-000
4-Pole	PG7	T4113011041-000
	PG9	T4113012041-000
5-Pole	PG7	T4113011051-000
	PG9	T4113012051-000
8-Pole	PG9	T4113012081-000
12-Pole	PG9	6-2271123-2

<b>B coding - M12 Male Screw Connection, Angled, Shielded</b>		
2-Pole	PG7	T4113411021-000
	PG9	T4113412021-000
3-Pole	PG7	T4113411031-000
	PG9	T4113412031-000
4-Pole	PG7	T4113411041-000
	PG9	T4113412041-000
5-Pole	PG7	T4113411051-000
	PG9	T4113412051-000

<b>D coding - M12 Male Screw Connection, Angled, Shielded</b>		
2-Pole	PG7	T4113511021-000
	PG9	T4113512021-000
3-Pole	PG7	T4113511031-000
	PG9	T4113512031-000
4-Pole	PG7	T4113511041-000
	PG9	T4113512041-000
5-Pole	PG7	T4113511051-000
	PG9	T4113512051-000

# M12 Angled Field Installable A, B, D Coded

## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree. Products can also be obtained with silver-plated contacts upon request.

TE Part Number		
A coding - M12 Female Screw Connection, Angled, Unshielded		
2-Pole	PG7	T4112001021-000
	PG9	T4112002021-000
3-Pole	PG7	T4112001031-000
	PG9	T4112002031-000
4-Pole	PG7	T4112001041-000
	PG9	T4112002041-000
5-Pole	PG7	T4112001051-000
	PG9	T4112002051-000
8-Pole	PG9	T4112002081-000
12-Pole	PG9	6-2271128-2

B coding - M12 Female Screw Connection, Angled, Unshielded		
2-Pole	PG7	T4112401021-000
	PG9	T4112402021-000
3-Pole	PG7	T4112401031-000
	PG9	T4112402031-000
4-Pole	PG7	T4112401041-000
	PG9	T4112402041-000
5-Pole	PG7	T4112401051-000
	PG9	T4112402051-000

D coding - M12 Female Screw Connection, Angled, Unshielded		
2-Pole	PG7	T4112501021-000
	PG9	T4112502021-000
3-Pole	PG7	T4112501031-000
	PG9	T4112502031-000
4-Pole	PG7	T4112501041-000
	PG9	T4112502041-000
5-Pole	PG7	T4112501051-000
	PG9	T4112502051-000

TE Part Number		
A coding - M12 Female Screw Connection, Angled, Shielded		
2-Pole	PG7	T4112011021-000
	PG9	T4112012021-000
3-Pole	PG7	T4112011031-000
	PG9	T4112012031-000
4-Pole	PG7	T4112011041-000
	PG9	T4112012041-000
5-Pole	PG7	T4112011051-000
	PG9	T4112012051-000
8-Pole	PG9	T4112012081-000
12-Pole	PG9	6-2271129-2

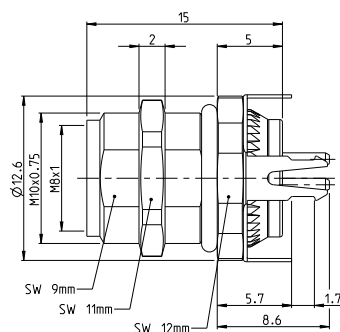
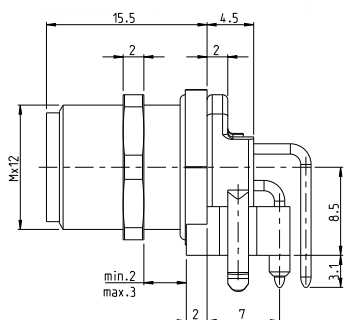
B coding - M12 Female Screw Connection, Angled, Shielded		
2-Pole	PG7	T4112411021-000
	PG9	T4112412021-000
3-Pole	PG7	T4112411031-000
	PG9	T4112412031-000
4-Pole	PG7	T4112411041-000
	PG9	T4112412041-000
5-Pole	PG7	T4112411051-000
	PG9	T4112412051-000

D coding - M12 Female Screw Connection, Angled, Shielded		
2-Pole	PG7	T4112511021-000
	PG9	T4112512021-000
3-Pole	PG7	T4112511031-000
	PG9	T4112512031-000
4-Pole	PG7	T4112511041-000
	PG9	T4112512041-000
5-Pole	PG7	T4112511051-000
	PG9	T4112512051-000



# M12 Panel Mount R/A PCB

## Male Series



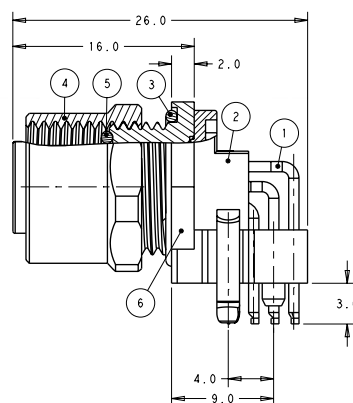
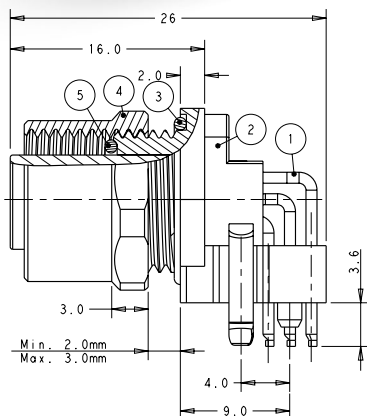
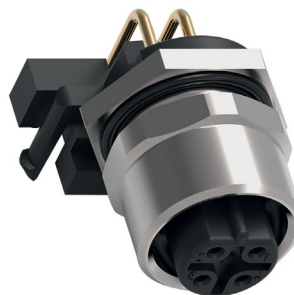
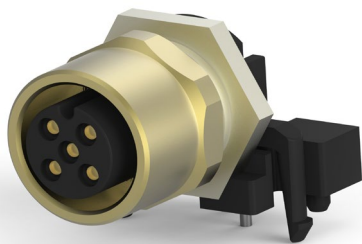
All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>A coding – M12, Male, Rear Mount, PCB, R/A, Unshielded</b>		
4-Pole		3-2172062-2
5-Pole		4-2172062-2
<b>A coding – M12, Male, Rear Mount, PCB, R/A, Shielded</b>		
4-Pole (45 degrees)		3-2172094-2
4-Pole		3-2172081-2
5-Pole		4-2172081-2
8-Pole		5-2172081-2

TE Part Number		
<b>B coding – M12, Male, Rear Mount, PCB, R/A, Unshielded</b>		
5-Pole		4-2172082-2
<b>B coding – M12, Male, Rear Mount, PCB, R/A, Shielded</b>		
5-Pole		4-2172063-2
<b>D coding – M12, Male, Rear Mount, PCB, R/A, Unshielded</b>		
4-Pole		3-2172086-2
<b>D coding – M12, Male, Rear Mount, PCB, R/A, Shielded</b>		
4-Pole		3-2172065-2

# M12 Panel Mount R/A PCB

## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>A coding - M12, Female, Rear Mount, PCB, R/A, Unshielded</b>		
2-Pole		T4145015021-001
3-Pole		T4145015031-001
4-Pole		T4145015041-001
5-Pole		T4145015051-001

TE Part Number		
<b>A coding - M12, Female, Rear Mount, PCB, R/A, Shielded</b>		
2-Pole		T4145035021-001
3-Pole		T4145035031-001
4-Pole		T4145035041-001
4-Pole (45 degrees)		3-2172095-2
5-Pole		T4145035051-001
8-Pole		5-2172079-2

TE Part Number		
<b>B coding - M12, Female, Rear Mount, PCB, R/A, Unshielded</b>		
2-Pole		T4145415021-001
3-Pole		T4145415031-001
4-Pole		T4145415041-001
5-Pole		T4145415051-001

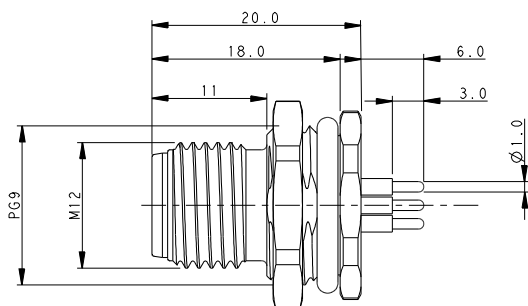
TE Part Number		
<b>B coding - M12, Female, Rear Mount, PCB, R/A, Shielded</b>		
2-Pole		T4145435021-001
3-Pole		T4145435031-001
4-Pole		T4145435041-001
5-Pole		T4145435051-001

TE Part Number		
<b>D coding - M12, Female, Rear Mount, PCB, R/A, Unshielded</b>		
2-Pole		T4145515021-001
3-Pole		T4145515031-001
4-Pole		T4145515041-001
5-Pole		T4145515051-001

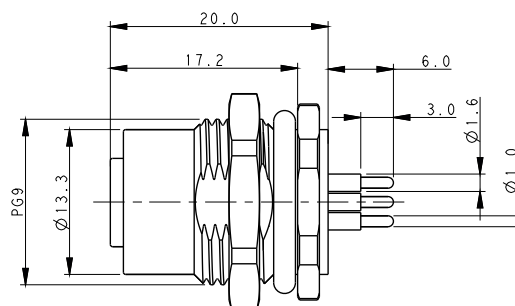
TE Part Number		
<b>D coding - M12, Female, Rear Mount, PCB, R/A, Shielded</b>		
2-Pole		T4145535021-001
3-Pole		T4145535031-001
4-Pole		T4145535041-001
5-Pole		T4145535051-001

# M12 Panel Mount Straight PCB – Rear Mounting

## Male Series



## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>A coding – M12 Male, Rear Mounting, Straight</b>		
2-Pole		T4140012021-000
3-Pole		T4140012031-000
4-Pole		T4140012041-000
5-Pole		T4140012051-000

TE Part Number		
<b>B coding – M12 Male, Rear Mounting, Straight</b>		
2-Pole		T4140412021-000
3-Pole		T4140412031-000
4-Pole		T4140412041-000
5-Pole		T4140412051-000

TE Part Number		
<b>D coding – M12 Male, Rear Mounting, Straight</b>		
2-Pole		T4140512021-000
3-Pole		T4140512031-000
4-Pole		T4140512041-000
5-Pole		T4140512051-000

TE Part Number		
<b>A-coding - M12 Male, Rear Mounting, Solder PCB</b>		
8-Pole	T4140012081-000	
12-Pole	T4140012121-000	

TE Part Number		
<b>A coding – M12 Female, Rear Mounting, Straight</b>		
2-Pole		T4141012021-000
3-Pole		T4141012031-000
4-Pole		T4141012041-000
5-Pole		T4141012051-000

TE Part Number		
<b>B coding – M12 Female, Rear Mounting, Straight</b>		
2-Pole		T4141412021-000
3-Pole		T4141412031-000
4-Pole		T4141412041-000
5-Pole		T4141412051-000

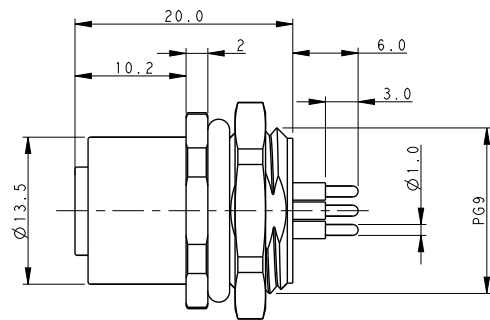
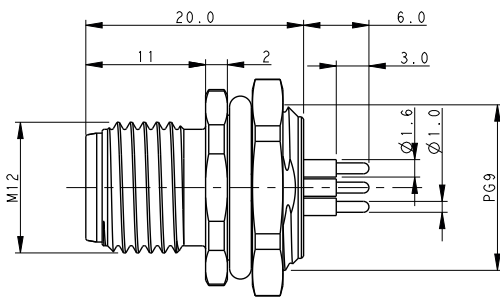
TE Part Number		
<b>D coding – M12 Female, Rear Mounting, Straight</b>		
2-Pole		T4141512021-000
3-Pole		T4141512031-000
4-Pole		T4141512041-000
5-Pole		T4141512051-000

TE Part Number		
<b>A-coding - M12 Female, Rear Mounting, Solder PCB</b>		
8-Pole	T4141012081-000	
12-Pole	T4141012121-000	

# M12 Panel Mount Straight PCB – Front Mounting

## Male Series

## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>A coding – M12 Male, Front Mounting, Straight</b>		
2-Pole		T4142012021-000
3-Pole		T4142012031-000
4-Pole		T4142012041-000
5-Pole		T4142012051-000

<b>B coding – M12 Male, Front Mounting, Straight</b>		
2-Pole		T4142412021-000
3-Pole		T4142412031-000
4-Pole		T4142412041-000
5-Pole		T4142412051-000

<b>D coding – M12 Male, Front Mounting, Straight</b>		
2-Pole		T4142512021-000
3-Pole		T4142512031-000
4-Pole		T4142512041-000
5-Pole		T4142512051-000

<b>A-coding – M12 Male, Front Mounting, Solder PCB</b>		
8-Pole		T4142012081-000
12-Pole		T4142012121-000

TE Part Number		
<b>A coding – M12 Female, Front Mounting, Straight</b>		
2-Pole		T4143012021-000
3-Pole		T4143012031-000
4-Pole		T4143012041-000
5-Pole		T4143012051-000

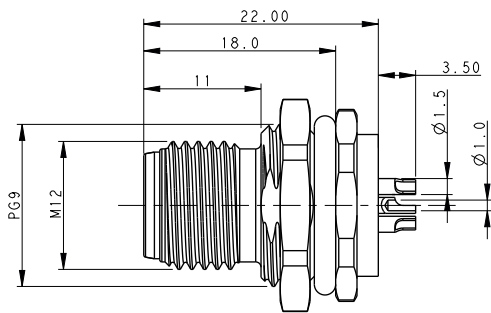
<b>B coding – M12 Female, Front Mounting, Straight</b>		
2-Pole		T4143412021-000
3-Pole		T4143412031-000
4-Pole		T4143412041-000
5-Pole		T4143412051-000

<b>D coding – M12 Female, Front Mounting, Straight</b>		
2-Pole		T4143512021-000
3-Pole		T4143512031-000
4-Pole		T4143512041-000
5-Pole		T4143512051-000

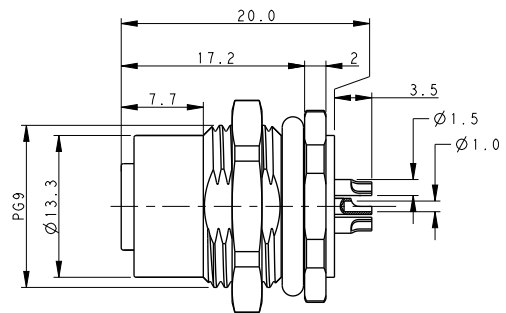
<b>A-coding – M12 Female, Front Mounting, Solder PCB</b>		
8-Pole		T4143012081-000
12-Pole		T4143012121-000

# M12 Panel Mount Solder Wire - Rear Mounting

## Male Series



## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

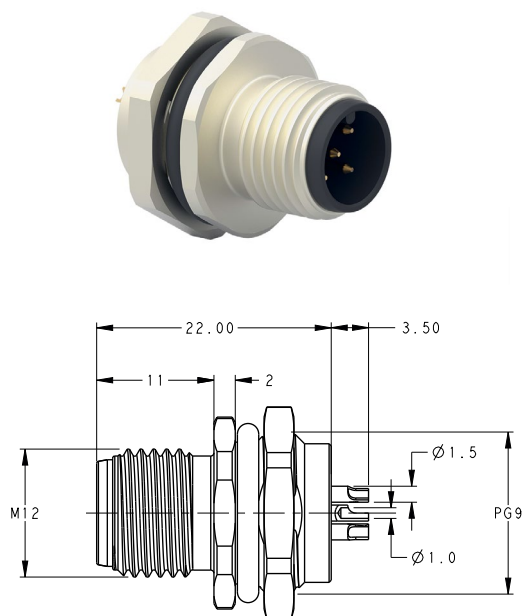
TE Part Number		
<b>A coding - M12 Male, Rear Mounting, Straight</b>		
2-Pole		T4130012021-000
3-Pole		T4130012031-000
4-Pole		T4130012041-000
5-Pole		T4130012051-000
<b>B coding - M12 Male, Rear Mounting, Straight</b>		
2-Pole		T4130412021-000
3-Pole		T4130412031-000
4-Pole		T4130412041-000
5-Pole		T4130412051-000
<b>D coding - M12 Male, Rear Mounting, Straight</b>		
2-Pole		T4130512021-000
3-Pole		T4130512031-000
4-Pole		T4130512041-000
5-Pole		T4130512051-000
<b>A-coding - M12 Male, Rear Mounting, Solder Wire</b>		
8-Pole		T4130012081-000
12-Pole		T4130012121-000

TE Part Number		
<b>A coding - M12 Female, Rear Mounting, Straight</b>		
2-Pole		T4131012021-000
3-Pole		T4131012031-000
4-Pole		T4131012041-000
5-Pole		T4131012051-000
<b>B coding - M12 Female, Rear Mounting, Straight</b>		
2-Pole		T4131412021-000
3-Pole		T4131412031-000
4-Pole		T4131412041-000
5-Pole		T4131412051-000
<b>D coding - M12 Female, Rear Mounting, Straight</b>		
2-Pole		T4131512021-000
3-Pole		T4131512031-000
4-Pole		T4131512041-000
5-Pole		T4131512051-000
<b>A-coding - M12 Female, Rear Mounting, Solder Wire</b>		
8-Pole		T4131012081-000
12-Pole		T4131012121-000

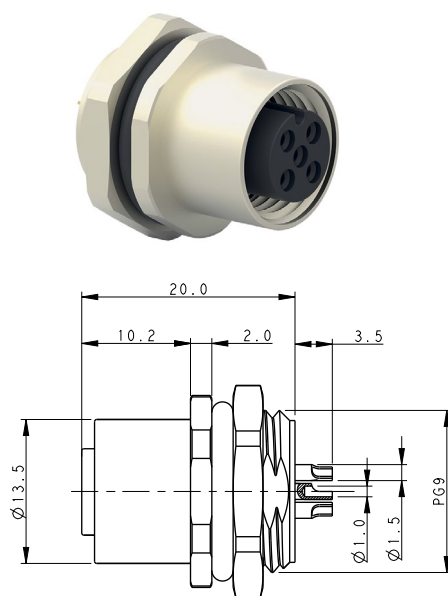


# M12 Panel Mount Solder Wire - Front Mounting

## Male Series



## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>A coding - M12 Male, Front Mounting, Straight</b>		
2-Pole		T4132012021-000
3-Pole		T4132012031-000
4-Pole		T4132012041-000
5-Pole		T4132012051-000

TE Part Number		
<b>B coding - M12 Male, Front Mounting, Straight</b>		
2-Pole		T4132412021-000
3-Pole		T4132412031-000
4-Pole		T4132412041-000
5-Pole		T4132412051-000

TE Part Number		
<b>D coding - M12 Male, Front Mounting, Straight</b>		
2-Pole		T4132512021-000
3-Pole		T4132512031-000
4-Pole		T4132512041-000
5-Pole		T4132512051-000

TE Part Number		
<b>A-coding - M12 Male, Front Mounting, Solder Wire</b>		
8-Pole		T4132012081-000
12-Pole		T4132012121-000

TE Part Number		
<b>A coding - M12 Female, Front Mounting, Straight</b>		
2-Pole		T4133012021-000
3-Pole		T4133012031-000
4-Pole		T4133012041-000
5-Pole		T4133012051-000

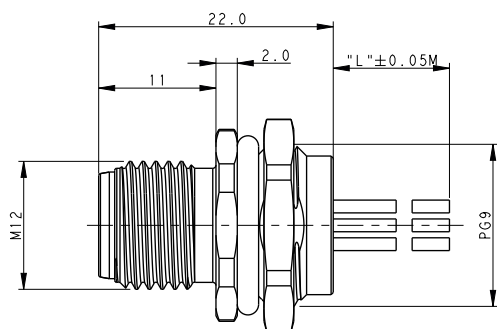
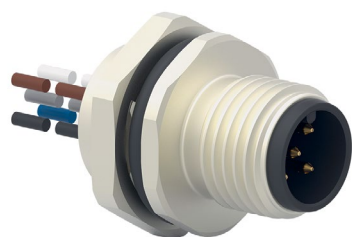
TE Part Number		
<b>B coding - M12 Female, Front Mounting, Straight</b>		
2-Pole		T4133412021-000
3-Pole		T4133412031-000
4-Pole		T4133412041-000
5-Pole		T4133412051-000

TE Part Number		
<b>D coding - M12 Female, Front Mounting, Straight</b>		
2-Pole		T4133512021-000
3-Pole		T4133512031-000
4-Pole		T4133512041-000
5-Pole		T4133512051-000

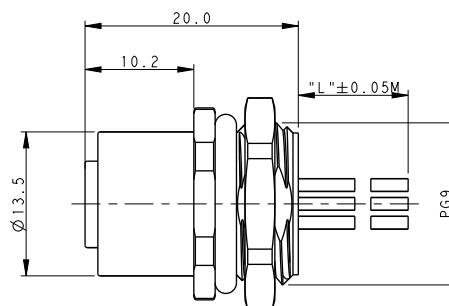
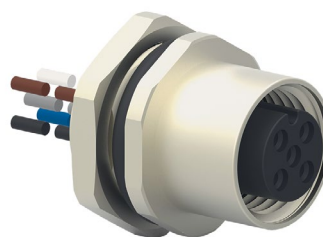
TE Part Number		
<b>A-coding - M12 Female, Front Mounting, Solder Wire</b>		
8-Pole		T4133012081-000
12-Pole		T4133012121-000

# M12 Panel Mount 200mm Wire – Front Mounting

## Male Series



## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>A coding – M12 Male, Front Mounting, 200mm wire</b>		
2-Pole		T4171210002-001
3-Pole		T4171210003-001
4-Pole		T4171210004-001
5-Pole		T4171210005-001

<b>B coding – M12 Male, Front Mounting, 200mm wire</b>		
2-Pole		T4171210402-001
3-Pole		T4171210403-001
4-Pole		T4171210404-001
5-Pole		T4171210405-001

<b>D coding – M12 Male, Front Mounting, 200mm wire</b>		
2-Pole		T4171210502-001
3-Pole		T4171210503-001
4-Pole		T4171210504-001
5-Pole		T4171210505-001

<b>A-coding - M12 Male, Front Mounting, 200mm wire</b>		
8-Pole		T4171220008-001
12-Pole		T4171230012-001

TE Part Number		
<b>A coding – M12 Female, Front Mounting, 200mm wire</b>		
2-Pole		T4171310002-001
3-Pole		T4171310003-001
4-Pole		T4171310004-001
5-Pole		T4171310005-001

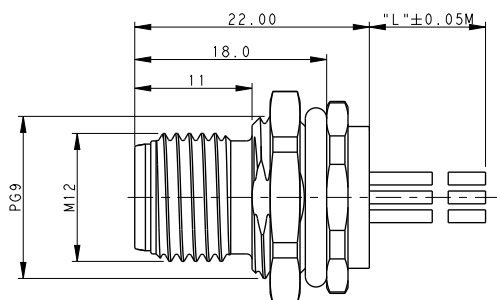
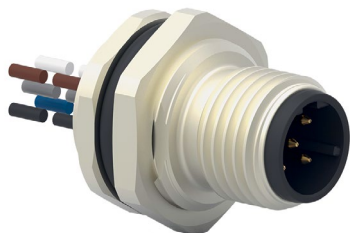
<b>B coding – M12 Female, Front Mounting, 200mm wire</b>		
2-Pole		T4171310402-001
3-Pole		T4171310403-001
4-Pole		T4171310404-001
5-Pole		T4171310405-001

<b>D coding – M12 Female, Front Mounting, 200mm wire</b>		
2-Pole		T4171310502-001
3-Pole		T4171310503-001
4-Pole		T4171310504-001
5-Pole		T4171310505-001

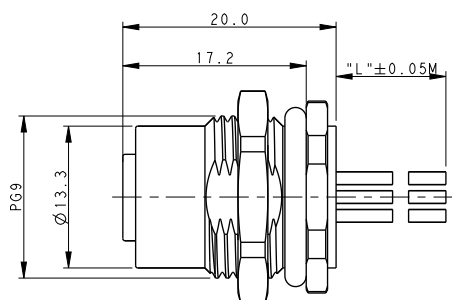
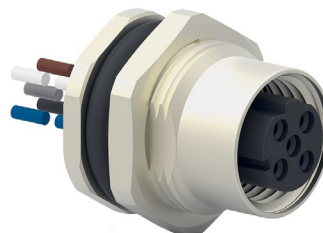
<b>A-coding - M12 Female, Front Mounting, 200mm wire</b>		
8-Pole		T4171330012-001
12-Pole		T4171320008-001

# M12 Panel Mount 200mm Wire - Rear Mounting

## Male Series



## Female Series



All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>A coding - M12 Male, Rear Mounting, 200mm wire</b>		
2-Pole		T4171010002-001
3-Pole		T4171010003-001
4-Pole		T4171010004-001
5-Pole		T4171010005-001

<b>B coding - M12 Male, Rear Mounting, 200mm wire</b>		
2-Pole		T4171010402-001
3-Pole		T4171010403-001
4-Pole		T4171010404-001
5-Pole		T4171010405-001

<b>D coding - M12 Male, Rear Mounting, 200mm wire</b>		
2-Pole		T4171010502-001
3-Pole		T4171010503-001
4-Pole		T4171010504-001
5-Pole		T4171010505-001

<b>A-coding - M12 Male, Rear Mounting, 200mm wire</b>		
8-Pole		T4171020008-001
12-Pole		T4171030012-001

TE Part Number		
<b>A coding - M12 Female, Rear Mounting, 200mm wire</b>		
2-Pole		T4171110002-001
3-Pole		T4171110003-001
4-Pole		T4171110004-001
5-Pole		T4171110005-001

<b>B coding - M12 Female, Rear Mounting, 200mm wire</b>		
2-Pole		T4171110402-001
3-Pole		T4171110403-001
4-Pole		T4171110404-001
5-Pole		T4171110405-001

<b>D coding - M12 Female, Rear Mounting, 200mm wire</b>		
2-Pole		T4171110502-001
3-Pole		T4171110503-001
4-Pole		T4171110504-001
5-Pole		T4171110505-001

<b>A-coding - M12 Female, Rear Mounting, 200mm wire</b>		
8-Pole		T4171120008-001
12-Pole		T4171130012-001

# M12 Power Solutions

## M12 L-coding Straight solder pcb



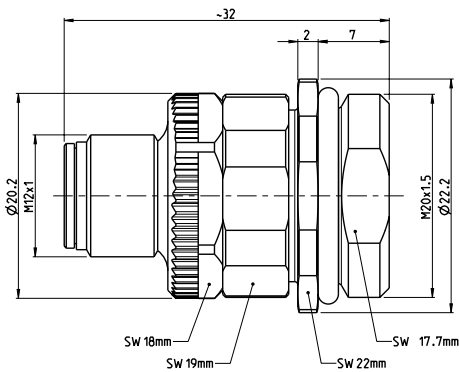
Type	Poles	Mounting	TE Part Number
Male	2	Rear	T4140L12031-000
Male	3	Rear	T4140L12041-000
Male	4	Rear	T4140L12051-000



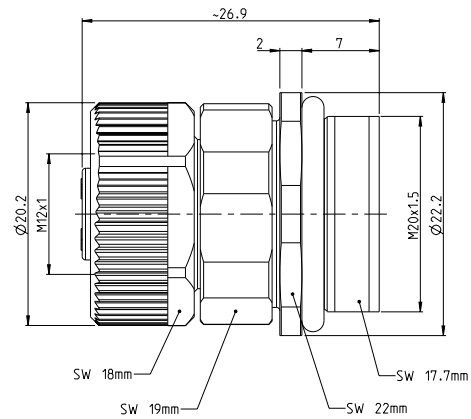
Type	Poles	Mounting	TE Part Number
Female	2	Rear	T4141L12031-000
Female	3	Rear	T4141L12041-000
Female	4	Rear	T4141L12051-000

## M12 S, T coded

### Male Series



### Female Series



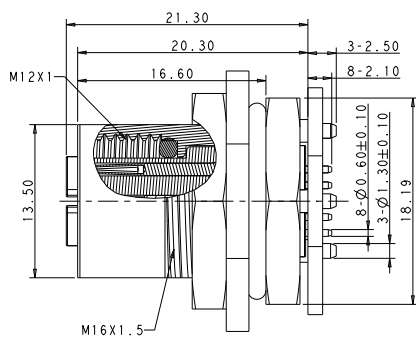
All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number		
<b>S coding - M12 Male Screw Connection, Straight, Shielded</b>		
3-Pole	plus PE	2120951-1
<b>T coding - M12 Male Screw Connection, Straight, Shielded</b>		
4-Pole		3-2172096-2
<b>T coding - M12 Male, Front Mounting M20 x 1.5</b>		
4-Pole		2120947-1

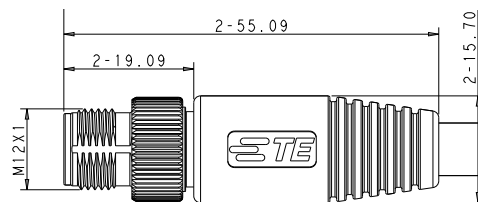
TE Part Number		
<b>S coding - M12 Female Screw Connection, Straight, Shielded</b>		
3-Pole	plus PE	2120950-1
<b>T coding - M12 Female Screw Connection, Straight, Shielded</b>		
4-Pole		3-2172097-2
<b>T coding - M12 Female, Front Mounting M20 x 1.5</b>		
4-Pole		2120946-1

# M12 X-Coded

## M12 X-Coded PCB Connector



## M12 Pin Connector Cable Assembly



All dimensions in mm. Temperature range: -40 to +85 degree.

Description	TE Part Number
<b>M12 X-Coded PCB Connector</b>	
Female Panel Mount Solder PCB Connector	2232331-1
Female Panel Mount Solder Wire	2271195-1
<b>M12 X-Coded Field Installable Connector</b>	
Male Connector installable (IDC): 5.5 - 9 mm cable diameter	2120952-1

Length	TE Part Number
<b>M12 Pin Connector Cable Assembly</b>	
1m	2241021-1
2m	2241021-2
3m	2241021-3
4m	2241021-4
5m	2241021-5
10m	2241021-6

# Accessories

## Dust Caps



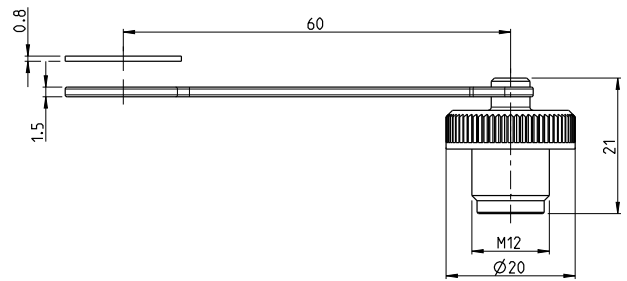
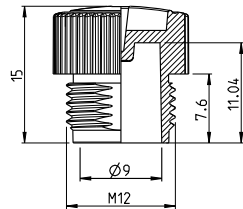
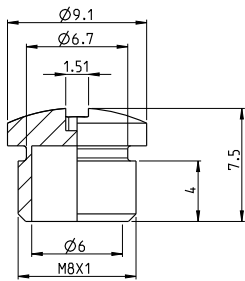
2823563-1



2823064-1



2823065-1



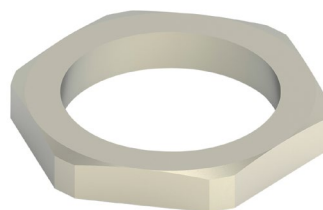
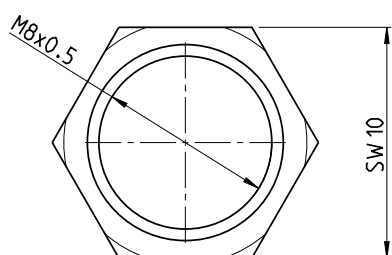
All dimensions in mm. Temperature range: -40 to +85 degree.

TE Part Number	
<b>Dust Caps</b>	
M8, Dust Cap, Female, IP67, without sleeve	2823563-1
M12, Dust Cap, Female, IP67, without sleeve	2823064-1
M12, Dust Cap, Female, IP67, with sleeve	2823065-1

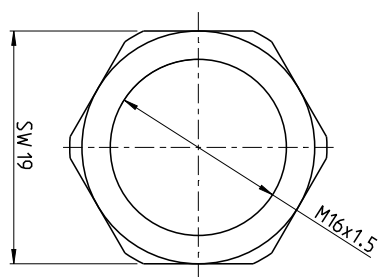
## Nuts for Panel Mount connectors



2823423-1



2823066-1



All dimensions in mm.


TE Part Number	
<b>Nuts for Panel Mount connectors</b>	
Nut for M8 Panel Mount connector	2823423-1
Nut for M12 Panel Mount connector	2823066-1

# Explore more from te.com:

## M8/M12 Connectors

Connectors > Circular Connectors  
TE CONNECTIVITY (TE)  
M8/M12 Connector System

OVERVIEW RELATED MATERIALS



**Field installable connector system for reliable communication**

Safe and reliable communication - our M8/M12 connector system provides a full solution that includes connectors, IO modules, and cable assemblies. Decrease installation and tooling costs with TE's field installable connectors.

[Browse Products](#) [Download Catalog](#)

**Product Features**  
M8/M12 connectors


- X-coded connectors support higher bandwidth needs of up to 10 Gb/s
- A,B,D,X,S,T coding available
- Easily installable connector system
- Environment protection IP67 and IP68
- Connector ranges include male and female
- All connectors also available with silver plated contacts for higher conductivity
- Alternative mount arrangements for solder cup or PCB
- Panel Mount and distribution version available
- Shield reliable

[te.com/m8m12](https://te.com/m8m12)

## M8M12 Cable Assemblies

Cable Assemblies > Copper Cable Assemblies  
TE CONNECTIVITY (TE)  
M8/M12 Sensor Cable Assemblies

OVERVIEW PRODUCTS



**Sensor Cable Assemblies with high flexibility & reliability**

M8/M12 Cable Assemblies are M8/M12 circular connectors overmolded to a cord set that safely and reliably ensure communication in industrial applications. Compared to installing separate cables and connectors for sensors and actuators, they provide a ready-to-plug solution for versatile systems to be quickly and easily established. Along with the connector configurations, the range of the M8/M12 overmolded cable assemblies are further enhanced with a wide selection of jacketed cable materials based on the application needs.

[VIEW PRODUCTS](#) [Download Datasheet](#)

**Features**  
M8/M12 cable assemblies

- IP67 rated: dust and waterproof
- Overmolded PVC or PUR cable assemblies/shielded and non-shielded versions
- Key options: A, X coded
- M12 Positions: 2, 3, 4, 5 & 8 poles
- M8 Positions: 3 & 4 poles
- M8 & M12 single ended cable assemblies
- M8 & M12 double ended cable assemblies
- M8 to M12 cable assemblies
- Cable length options: 0.5 m, 1 m, 1.5 m, 3 m, 5 m, 7 m, and 10 m; additional lengths for X-code: 2 m, 4 m, 15 m, 20 m

[te.com/m8m12cableassemblies](https://te.com/m8m12cableassemblies)

# FIND THE PART NUMBERS AND INFORMATION YOU ARE LOOKING FOR

### Additional Information

Read more about the connector and cable assembly portfolio on the M8/M12 website - in many different languages.

### Download the product flyer

Find all information you need at one glance in the M8/M12 connector system product flyer.

### View the video

See our M8/M12 connector system video and learn about the product features, benefits and applications.

### Find the products

If you are looking for a specific product or part number, the M8/M12 website is the place to look. Find the images, drawings, technical specifications and much more.





## SENSOR/ACTUATOR M8/M12 A-CODE

M8/M12 A-coded cable assemblies are designed for applications such as sensors, robotics & production machinery & equipment, where extreme temperatures and harsh environments are likely to be encountered. These cable assemblies are also ideal for non-industrial applications where compact, robust and reliable connections are required to withstand rigorous environmental elements.

TE provides a full solution with shielded and non-shielded cable assembly options that help customers easily connect to advanced industrial networks. The new product line meets the IP67 rating for protection against dust and water ingress; they also provide protection against electromagnetic radiation, chemicals and mechanical stress commonly found in industrial environments.

Designed as industry standard solutions, these quick-turn cable assemblies help to reduce unnecessary downtime and help maintain continuous operations in critical conditions. TE's cross-industry expertise allows it to offer customized solutions through a broad cable assembly portfolio that includes connectivity to many industry standards serving various customer needs.

TE's M8/M12 cable assemblies are available as single-ended or double-ended, in straight and angled versions, with shielded and un-shielded variants. Various cable types are offered depending on the application requirements. Cable sheathing is in PVC or PUR. The predefined offering in length of 0.5, 1, 1.5, 3, 5, 7 and 10 meters covers a vast range of customer needs on the market. Customized cable assemblies in different lengths provide a solution for specific needs. All can be used in combination with TE's male/female connectors and I/O Modules.

## KEY FEATURES

- IP67 rated: dust and waterproof
- Overmolded PVC or PUR cable assemblies/Shielded & non shielded versions
- Key options: A coded
- M12 Positions: 2, 3, 4, 5 & 8 poles
- M8 Positions: 3 & 4 poles
- M8 & M12 single ended cable assemblies
- M8 & M12 double ended cable assemblies
- M8 to M12 cable assemblies
- Cable length options: 0.5 m, 1 m, 1.5 m, 3 m, 5 m, 7 m, and 10 m

## BENEFITS

- M12 Cable Assemblies are IP67 sealed and tested in TE's factory to eliminate the possibility of false wiring & to ensure robust connection
- Reduce downtime in harsh environments with reliable industry standard solution that includes quick turn, prototype cable assemblies.
- Full solution offering including customized and general market cable assemblies enables 1-stopshopping and reduced TCO

## APPLICATIONS

- Industrial Communications
- Industrial Machinery
- Industrial automation
- Robotics
- Machine tools
- Semiconductor manufacturing
- Manufacturing of solenoid and sensor valves
- Process control systems
- Vision systems
- Electronics manufacturing

## MECHANICAL

- Durability: 100 cycles
- Degree of protection: IP67
- Temperature Ratings:
  - PVC:
    - Fixed: -40°C to +80°C
    - Flexible: -25°C to +80°C
  - PUR:
    - Fixed: -10°C to +80°C
    - Flexible: -5°C to +80°C

## ELECTRICAL

- Voltage rating
  - M12:
    - 250V ( $\leq 4$  way)
    - 60V (5 way)
    - 30V ( $> 5$  way)
  - M8:
    - 60V (3 way)
    - 30V (4 & 5 pos)
- Current rating
  - M12 A Coding
    - 2 - 5 ways = 4A
    - 6 - 8 ways = 2 A
  - M8: 3A
- Insulation Resistance: 100M $\Omega$  Min.

## MATERIALS

- Contact: Brass, Gold Flash Plating
- Nut: Brass, Nickel plating
- O-ring: Silicon rubber
- Spring: Stainless steel
- Over-molding: TPU
- Housing: PA
- M12 Cable: 22 AWG, 2/3/4/5 core, with or without Foil, Drain, Braid Shield RoHS; Cable Jacket material: PVC or PUR
- M12 Cable: 24 AWG, 8 core, with or without Foil, Drain, Braid Shield RoHS; Cable Jacket material: PVC or PUR
- M8 Cable: 24 AWG, 3/4 core, with or without Foil, Drain, Braid Shield RoHS; Cable Jacket material: PVC or PUR

## STANDARDS & APPLICATIONS

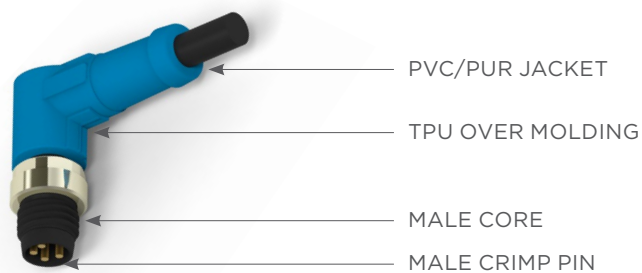
- Product Specification: 108-106140
- Application Specification: 114-137144
- UL Standard: UL2238
- IEC 61076-2-101: Detail specification for M12 connectors with screw-locking
- IEC 61076-2-104: Detail specification with M8 screw-locking or snap-locking
- IEC 60512: Electromechanical components for electronic equipment; basic testing procedure and measuring methods
- IEC-60529: Degree of protection provided by enclosures (IP Code)

\* This wire diagram is applicable to all M8 cable assemblies listed in this flyer.

## M8 Single Ended Cable Assembly

M8 cable assemblies T405/T406 series

STANDARD: IEC61076-2-104



**T40 S A X W Y O MN -00L**

S	Application Type - Shield/Unshielded	MN	Position	-00L	Cable Length
5	Unshielded	03	3P	-001	0.5M
6	Shield	04	4P	-002	1.0M
				-003	1.5M
				-004	3.0M
				-005	5.0M
				-006	7.0M
				-007	10.0M
A	Single/Double	Y	Connector Type for Double End	-XXX	Customized Cable Length
1	Single end	0	N/A	-XX0	XX M
2	Double end	1	M8 Straight, Male	-XX5	XX.5 M
		2	M8 Right angle, Male		
		3	M8 Straight, Female		
		4	M8 Right angle, Female		
		5	M12 Straight, Male		
		6	M12 Right angle, Male		
		7	M12 Straight, Female		
		8	M12 Right angle, Female		
X	Connector Type for Single End				
1	M8 Straight, Male				
2	M8 Right angle, Male				
3	M8 Straight, Female				
4	M8 Right angle, Female				
W	Cable Material Type				
1	Black PVC				
2	Gray PUR				

Wiring Diagram-M8 cable assembly Unshielded*			
From Pin	Poles		To Pin
	3	4	
1	Brown	Brown	1
2	-	White	2
3	Blue	Blue	3
4	Black	Black	4

Wiring Diagram-M8 cable assembly Shielded*			
From Pin	Poles		To Pin
	3	4	
1	Brown	Brown	1
2	-	White	2
3	Blue	Blue	3
4	Black	Black	4
Shielded	Metal Nut	Metal Nut	Shielded

\* This wire diagram is applicable to all M8 cable assemblies listed in this flyer.

## PRODUCT OFFERINGS - M8 Single Ended Cable Assembly

### M8 STR SINGLE ENDED CABLE ASSEMBLY

PN	Part Description	Pos	Type	Cable Material	Shielded/Unshielded
T4051320003-001	M8 FS 3P PUR CABLE 0.5M	3	Female Straight	PUR	Unshielded
T4061320003-001	M8 FS 3P PUR CABLE 0.5M SH				Shielded
T4051310003-001	M8 FS 3P PVC CABLE 0.5M			PVC	Unshielded
T4061310003-001	M8 FS 3P PVC CABLE 0.5M SH				Shielded
T4051320004-001	M8 FS 4P PUR CABLE 0.5M	4	Female Straight	PUR	Unshielded
T4061320004-001	M8 FS 4P PUR CABLE 0.5M SH				Shielded
T4051310004-001	M8 FS 4P PVC CABLE 0.5M			PVC	Unshielded
T4061310004-001	M8 FS 4P PVC CABLE 0.5M SH				Shielded



PN	Part Description	Pos	Type	Cable Material	Shielded/Unshielded
T4051120003-001	M8 MS 3P PUR CABLE 0.5M	3	Male Straight	PUR	Unshielded
T4061120003-001	M8 MS 3P PUR CABLE 0.5M SH				Shielded
T4051110003-001	M8 MS 3P PVC CABLE 0.5M			PVC	Unshielded
T4061110003-001	M8 MS 3P PVC CABLE 0.5M SH				Shielded
T4051120004-001	M8 MS 4P PUR CABLE 0.5M	4	Male Straight	PUR	Unshielded
T4061120004-001	M8 MS 4P PUR CABLE 0.5M SH				Shielded
T4051110004-001	M8 MS 0.5M 4P PVC CABLE 0.5M			PVC	Unshielded
T4061110004-001	M8 MS 4P PVC CABLE 0.5M SH				Shielded



### M8 R/A SINGLE ENDED CABLE ASSEMBLY

PN	Part Description	Pos	Type	Cable Material	Shielded/Unshielded
T4051420003-001	M8 FR 3P PUR CABLE 0.5M	3	Female Right Angle	PUR	Unshielded
T4061420003-001	M8 FR 3P PUR CABLE 0.5M SH				Shielded
T4051410003-001	M8 FR 3P PVC CABLE 0.5M			PVC	Unshielded
T4061410003-001	M8 FR 3P PVC CABLE 0.5M SH				Shielded
T4051420004-001	M8 FR 4P PUR CABLE 0.5M	4	Female Right Angle	PUR	Unshielded
T4061420004-001	M8 FR 4P PUR CABLE 0.5M SH				Shielded
T4051410004-001	M8 FR 4P PVC CABLE 0.5M			PVC	Unshielded
T4061410004-001	M8 FR 4P PVC CABLE 0.5M SH				Shielded



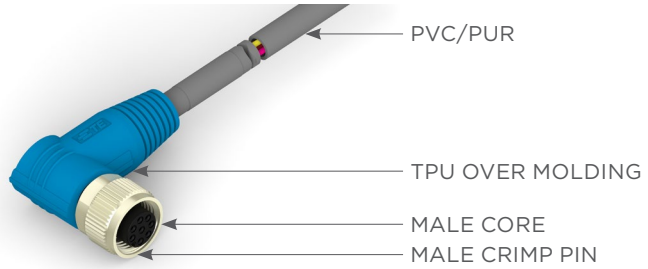
PN	Part Description	Pos	Type	Cable Material	Shielded/Unshielded
T4051220003-001	M8 MR 3P PUR CABLE 0.5M	3	Male Right Angle	PUR	Unshielded
T4061220003-001	M8 MR 3P PUR CABLE 0.5M SH				Shielded
T4051210003-001	M8 MR 3P PVC CABLE 0.5M			PVC	Unshielded
T4061210003-001	M8 MR 3P PVC CABLE 0.5M SH				Shielded
T4051220004-001	M8 MR 4P PUR CABLE 0.5M	4	Male Right Angle	PUR	Unshielded
T4061220004-001	M8 MR 4P PUR CABLE 0.5M SH				Shielded
T4051210004-001	M8 MR 4P PVC CABLE 0.5M			PVC	Unshielded
T4061210004-001	M8 MR 4P PVC CABLE 0.5M SH				Shielded



# M12 Single Ended Cable Assembly

M12 cable assemblies T415/T416 series

STANDARD: IEC61076-2-101



## T41 S A X W Y C MN -00L

S	Shield/Unshielded	MN	Position	-00L	Cable Length
5	Unshielded	03	3P	-001	0.5M
6	Shield	04	4P	-002	1.0M
		05	5P	-003	1.5M
		08	8P	-004	3.0M
A	Single/Double End			-005	5.0M
1	Single end			-006	7.0M
2	Double end			-007	10.0M
X	Connector Type for Single End	Y	Connector Type for Double End		
1	M12 Straight, Male	0	N/A	-XXX	Customized Cable Length
2	M12 Right angle, Male	1	M12 Straight, Male	-XX0	XX M
3	M12 Straight, Female	2	M12 Right angle, Male	-XX5	XX.5 M
4	M12 Right angle, Female	3	M12 Straight, Female		
		4	M12 Right angle, Female		
W	Cable Material Type	C	Code		
1	Black PVC	0	A Code		
2	Gray PUR				

From Pin	Poles					To Pin
	2	3	4	5	8	
1	Brown	Brown	Brown	Brown	White	1
2	-	-	White	White	Brown	2
3	Blue	Blue	Blue	Blue	Green	3
4	-	Black	Black	Black	Yellow	4
5	-	-	-	Gray	Gray	5
6	-	-	-	-	Pink	6
7	-	-	-	-	Blue	7
8	-	-	-	-	Red	8

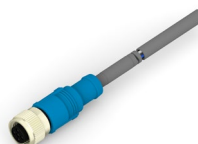
From Pin	Poles					To Pin
	2	3	4	5	8	
1	Brown	Brown	Brown	Brown	White	1
2	-	-	White	White	Brown	2
3	Blue	Blue	Blue	Blue	Green	3
4	-	Black	Black	Black	Yellow	4
5	-	-	-	Gray	Gray	5
6	-	-	-	-	Pink	6
7	-	-	-	-	Blue	7
8	-	-	-	-	Red	8
Shielded	Metal Nut	Metal Nut	Metal Nut	Metal Nut	Metal Nut	Shielded

\* This wire diagram is applicable to all M12 cable assemblies listed in this flyer.

PRODUCT OFFERINGS - M12 A-Code Single Ended Cable Assembly

M12 A-CODE STR SINGLE ENDED CABLE ASSEMBLY

PN	Part Description	Code	Pos	Type	Cable Materials	Shield/ Unshielded
T4151320002-001	M12 FS 2P PUR CABLE 0.5M	A	2	Female Straight	PUR	Unshielded
T4161320002-001	M12 FS 2P PUR CABLE 0.5M SH					Shielded
T4151310002-001	M12 FS 2P PVC CABLE 0.5M		PVC		Unshielded	
T4161310002-001	M12 FS 2P PVC CABLE 0.5M SH				Shielded	
T4151320003-001	M12 FS 3P PUR CABLE 0.5M		3		PUR	Unshielded
T4161320003-001	M12 FS 3P PUR CABLE 0.5M SH					Shielded
T4151310003-001	M12 FS 3P PVC CABLE 0.5M		PVC		Unshielded	
T4161310003-001	M12 FS 3P PVC CABLE 0.5M SH				Shielded	
T4151320004-001	M12 FS 4P PUR CABLE 0.5M		4		PUR	Unshielded
T4161320004-001	M12 FS 4P PUR CABLE 0.5M SH					Shielded
T4151310004-001	M12 FS 4P PVC CABLE 0.5M		PVC		Unshielded	
T4161310004-001	M12 FS 4P PVC CABLE 0.5M SH				Shielded	
T4151320005-001	M12 FS 5P PUR CABLE 0.5M		5		PUR	Unshielded
T4161320005-001	M12 FS 5P PUR CABLE 0.5M SH					Shielded
T4151310005-001	M12 FS 5P PVC CABLE 0.5M		PVC		Unshielded	
T4161310005-001	M12 FS 5P PVC CABLE 0.5M SH				Shielded	
T4151320008-001	M12 FS 8P PUR CABLE 0.5M		8		PUR	Unshielded
T4161320008-001	M12 FS 8P PUR CABLE 0.5M SH					Shielded
T4151310008-001	M12 FS 8P PVC CABLE 0.5M		PVC		Unshielded	
T4161310008-001	M12 FS 8P PVC CABLE 0.5M SH				Shielded	



PN	Part Description	Code	Pos	Type	Cable Materials	Shield/ Unshielded
T4151120002-001	M12 MS 2P PUR CABLE 0.5M	A	2	Male Straight	PUR	Unshielded
T4161120002-001	M12 MS 2P PUR CABLE 0.5M SH					Shielded
T4151110002-001	M12 MS 2P PVC CABLE 0.5M		PVC		Unshielded	
T4161110002-001	M12 MS 2P PVC CABLE 0.5M SH				Shielded	
T4151120003-001	M12 MS 3P PUR CABLE 0.5M		3		PUR	Unshielded
T4161120003-001	M12 MS 3P PUR CABLE 0.5M SH					Shielded
T4151110003-001	M12 MS 3P PVC CABLE 0.5M		PVC		Unshielded	
T4161110003-001	M12 MS 3P PVC CABLE 0.5M SH				Shielded	
T4151120004-001	M12 MS 4P PUR CABLE 0.5M		4		PUR	Unshielded
T4161120004-001	M12 MS 4P PUR CABLE 0.5M SH					Shielded
T4151110004-001	M12 MS 4P PVC CABLE 0.5M		PVC		Unshielded	
T4161110004-001	M12 MS 4P PVC CABLE 0.5M SH				Shielded	
T4151120005-001	M12 MS 5P PUR CABLE 0.5M		5		PUR	Unshielded
T4161120005-001	M12 MS 5P PUR CABLE 0.5M SH					Shielded
T4151110005-001	M12 MS 5P PVC CABLE 0.5M		PVC		Unshielded	
T4161110005-001	M12 MS 5P PVC CABLE 0.5M SH				Shielded	
T4151120008-001	M12 MS 8P PUR CABLE 0.5M		8		PUR	Unshielded
T4161120008-001	M12 MS 8P PUR CABLE 0.5M SH					Shielded
T4151110008-001	M12 MS 8P PVC CABLE 0.5M		PVC		Unshielded	
T4161110008-001	M12 MS 8P PVC CABLE 0.5M SH				Shield	



## M12 A-CODE R/A SINGLE ENDED CABLE ASSEMBLY

PN	Part Description	Code	Pos	Type	Cable Materials	Shield/ Unshielded
T4151420002-001	M12 FR 2P PUR CABLE 0.5M	A	2	Female	PUR	Unshielded
T4161420002-001	M12 FR 2P PUR CABLE 0.5M SH					Shield
T4151410002-001	M12 FR 2P PVC CABLE 0.5M		3		PUR	Unshielded
T4161410002-001	M12 FR 2P PVC CABLE 0.5M SH					Shield
T4151420003-001	M12 FR 3P PUR CABLE 0.5M		3		PVC	Unshielded
T4161420003-001	M12 FR 3P PUR CABLE 0.5M SH					Shield
T4151410003-001	M12 FR 3P PVC CABLE 0.5M		4		PUR	Unshielded
T4161410003-001	M12 FR 3P PVC CABLE 0.5M SH					Shield
T4151420004-001	M12 FR 4P PUR CABLE 0.5M		4		PVC	Unshielded
T4161420004-001	M12 FR 4P PUR CABLE 0.5M SH					Shield
T4151410004-001	M12 FR 4P PVC CABLE 0.5M		5		PUR	Unshielded
T4161410004-001	M12 FR 4P PVC CABLE 0.5M SH					Shield
T4151420005-001	M12 FR 5P PUR CABLE 0.5M		5		PVC	Unshielded
T4161420005-001	M12 FR 5P PUR CABLE 0.5M SH					Shield
T4151410005-001	M12 FR 5P PVC CABLE 0.5M		8		PUR	Unshielded
T4161410005-001	M12 FR 5P PVC CABLE 0.5M SH					Shield
T4151420008-001	M12 FR 8P PUR CABLE 0.5M		8		PVC	Unshielded
T4161420008-001	M12 FR 8P PUR CABLE 0.5M SH					Shield
T4151410008-001	M12 FR 8P PVC CABLE 0.5M					Unshielded
T4161410008-001	M12 FR 8P PVC CABLE 0.5M SH					Shield





PN	Part Description	Code	Pos	Type	Cable Materials	Shield/ Unshielded
T4151220002-001	M12 MR 2P PUR CABLE 0.5M	A	2	Male	PUR	Unshielded
T4161220002-001	M12 MR 2P PUR CABLE 0.5M SH					Shield
T4151210002-001	M12 MR 2P PVC CABLE 0.5M		3		PVC	Unshielded
T4161210002-001	M12 MR 2P PVC CABLE 0.5M SH					Shield
T4151220003-001	M12 MR 3P PUR CABLE 0.5M		3		PUR	Unshielded
T4161220003-001	M12 MR 3P PUR CABLE 0.5M SH					Shield
T4151210003-001	M12 MR 3P PVC CABLE 0.5M		4		PVC	Unshielded
T4161210003-001	M12 MR 3P PVC CABLE 0.5M SH					Shield
T4151220004-001	M12 MR 4P PUR CABLE 0.5M		4		PUR	Unshielded
T4161220004-001	M12 MR 4P PUR CABLE 0.5M SH					Shield
T4151210004-001	M12 MR 4P PVC CABLE 0.5M		5		PVC	Unshielded
T4161210004-001	M12 MR 4P PVC CABLE 0.5M SH					Shield
T4151220005-001	M12 MR 5P PUR CABLE 0.5M		5		PUR	Unshielded
T4161220005-001	M12 MR 5P PUR CABLE 0.5M SH					Shield
T4151210005-001	M12 MR 5P PVC CABLE 0.5M		8		PVC	Unshielded
T4161210005-001	M12 MR 5P PVC CABLE 0.5M SH					Shield
T4151220008-001	M12 MR 8P PUR CABLE 0.5M		8		PUR	Unshielded
T4161220008-001	M12 MR 8P PUR CABLE 0.5M SH					Shield
T4151210008-001	M12 MR 8P PVC CABLE 0.5M					Unshielded
T4161210008-001	M12 MR 8P PVC CABLE 0.5M SH					Shield





PRODUCT OFFERINGS - M8 to M8 Double Ended Cable Assembly



**M8 MALE STR – FEMALE STR DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded	
T4052123003-001	M8 MS 3P – M8 FS 3P PUR CABLE 0.5M	3	 MS-FS	PUR	Unshielded	
T4062123003-001	M8 MS 3P – M8 FS 3P PUR CABLE 0.5M SH				Shield	
T4052113003-001	M8 MS 3P – M8 FS 3P PVC CABLE 0.5M			PVC	Unshielded	
T4062113003-001	M8 MS 3P – M8 FS 3P PVC CABLE 0.5M SH				Shield	
T4052123004-001	M8 MS 4P – M8 FS 4P PUR CABLE 0.5M	4		 MS-FS	PUR	Unshielded
T4062123004-001	M8 MS 4P – M8 FS 4P PUR CABLE 0.5M SH					Shield
T4052113004-001	M8 MS 4P – M8 FS 4P PVC CABLE 0.5M				PVC	Unshielded
T4062113004-001	M8 MS 4P – M8 FS 4P PVC CABLE 0.5M SH					Shield



**M8 MALE STR – FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded	
T4052124003-001	M8 MS 3P – M8 FR 3P PUR CABLE 0.5M	3	 MS-FR	PUR	Unshielded	
T4062124003-001	M8 MS 3P – M8 FR 3P PUR CABLE 0.5M SH				Shield	
T4052114003-001	M8 MS 3P – M8 FR 3P PVC CABLE 0.5M			PVC	Unshielded	
T4062114003-001	M8 MS 3P – M8 FR 3P PVC CABLE 0.5M SH				Shield	
T4052124004-001	M8 MS 4P – M8 FR 4P PUR CABLE 0.5M	4		 MS-FR	PUR	Unshielded
T4062124004-001	M8 MS 4P – M8 FR 4P PUR CABLE 0.5M SH					Shield
T4052114004-001	M8 MS 4P – M8 FR 4P PVC CABLE 0.5M				PVC	Unshielded
T4062114004-001	M8 MS 4P – M8 FR 4P PVC CABLE 0.5M SH					Shield

**M8 MALE R/A – FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded	
T4052224003-001	M8 MR 3P – M8 FR 3P PUR CABLE 0.5M	3	 MR-FR	PUR	Unshielded	
T4062224003-001	M8 MR 3P – M8 FR 3P PUR CABLE 0.5M SH				Shield	
T4052214003-001	M8 MR 3P – M8 FR 3P PVC CABLE 0.5M			PVC	Unshielded	
T4062214003-001	M8 MR 3P – M8 FR 3P PVC CABLE 0.5M SH				Shield	
T4062224004-001	M8 MR 4P – M8 FR 3P PUR CABLE 0.5M	4		 MR-FR	PUR	Unshielded
T4052224004-001	M8 MR 4P – M8 FR 3P PUR CABLE 0.5M SH					Shield
T4062214004-001	M8 MR 4P – M8 FR 3P PVC CABLE 0.5M				PVC	Unshielded
T4052214004-001	M8 MR 4P – M8 FR 3P PVC CABLE 0.5M SH					Shield


**M8 MALE R/A – FEMALE STR DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded	
T4062223003-001	M8 MR 3P – M8 FS 3P PUR CABLE 0.5M	3	 MR-FS	PUR	Unshield	
T4052223003-001	M8 MR 3P – M8 FS 3P PUR CABLE 0.5M SH				Shielded	
T4062213003-001	M8 MR 3P – M8 FS 3P PVC CABLE 0.5M			PVC	Unshield	
T4052213003-001	M8 MR 3P – M8 FS 3P PVC CABLE 0.5M SH				Shielded	
T4052223004-001	M8 MR 4P – M8 FS 3P PUR CABLE 0.5M	4		 MR-FS	PUR	Unshielded
T4062223004-001	M8 MR 4P – M8 FS 3P PUR CABLE 0.5M SH					Shield
T4052213004-001	M8 MR 4P – M8 FS 3P PVC CABLE 0.5M				PVC	Unshielded
T4062213004-001	M8 MR 4P – M8 FS 3P PVC CABLE 0.5M SH					Shield




PRODUCT OFFERINGS - M12 to M12 A-Code Double Ended Cable Assembly

M12 A-CODE MALE STR - FEMALE STR DOUBLE ENDED CABLE ASSEMBLY





PN	Part Description	Pos	Type	Code	Cable Materials	Shield/Unshielded
T4152123002-001	M12 MS 2P - M12 FS 2P PUR CABLE 0.5M	2	 MS-FS	A	PUR	Unshielded
T4162123002-001	M12 MS 2P - M12 FS 2P PUR CABLE 0.5M SH					Shield
T4152113002-001	M12 MS 2P - M12 FS 2P PVC CABLE 0.5M	3			PUR	Unshielded
T4162113002-001	M12 MS 2P - M12 FS 2P PVC CABLE 0.5M SH					Shield
T4152123003-001	M12 MS 3P - M12 FS 3P PUR CABLE 0.5M	3			PVC	Unshielded
T4162123003-001	M12 MS 3P - M12 FS 3P PUR CABLE 0.5M SH					Shield
T4152113003-001	M12 MS 3P - M12 FS 3P PVC CABLE 0.5M	4			PUR	Unshielded
T4162113003-001	M12 MS 3P - M12 FS 3P PVC CABLE 0.5M SH					Shield
T4152123004-001	M12 MS 4P - M12 FS 4P PUR CABLE 0.5M	4			PVC	Unshielded
T4162123004-001	M12 MS 4P - M12 FS 4P PUR CABLE 0.5M SH					Shield
T4152113004-001	M12 MS 4P - M12 FS 4P PVC CABLE 0.5M	5			PUR	Unshielded
T4162113004-001	M12 MS 4P - M12 FS 4P PVC CABLE 0.5M SH					Shield
T4152123005-001	M12 MS 5P - M12 FS 5P PUR CABLE 0.5M	5	PVC	Unshielded		
T4162123005-001	M12 MS 5P - M12 FS 5P PUR CABLE 0.5M SH			Shield		
T4152113005-001	M12 MS 5P - M12 FS 5P PVC CABLE 0.5M			PUR	Unshielded	
T4162113005-001	M12 MS 5P - M12 FS 5P PVC CABLE 0.5M SH				Shield	

M12 A-CODE MALE R/A - FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY





PN	Part Description	Pos	Type	Code	Cable Materials	Shield/Unshielded
T4152224002-001	M12 MR 2P - M12 FR 2P PUR CABLE 0.5M	2	 MS-FS	A	PUR	Unshielded
T4162224002-001	M12 MR 2P - M12 FR 2P PUR CABLE 0.5M SH					Shield
T4152214002-001	M12 MR 2P - M12 FR 2P PVC CABLE 0.5M	3			PUR	Unshielded
T4162214002-001	M12 MR 2P - M12 FR 2P PVC CABLE 0.5M SH					Shield
T4152224003-001	M12 MR 3P - M12 FR 3P PUR CABLE 0.5M	3			PVC	Unshielded
T4162224003-001	M12 MR 3P - M12 FR 3P PUR CABLE 0.5M SH					Shield
T4152214003-001	M12 MR 3P - M12 FR 3P PVC CABLE 0.5M	4			PUR	Unshielded
T4162214003-001	M12 MR 3P - M12 FR 3P PVC CABLE 0.5M SH					Shield
T4152224004-001	M12 MR 4P - M12 FR 4P PUR CABLE 0.5M	4			PVC	Unshielded
T4162224004-001	M12 MR 4P - M12 FR 4P PUR CABLE 0.5M SH					Shield
T4152214004-001	M12 MR 4P - M12 FR 4P PVC CABLE 0.5M	5			PUR	Unshielded
T4162214004-001	M12 MR 4P - M12 FR 4P PVC CABLE 0.5M SH					Shield
T4152224005-001	M12 MR 5P - M12 FR 5P PUR CABLE 0.5M	5	PVC	Unshielded		
T4162224005-001	M12 MR 5P - M12 FR 5P PUR CABLE 0.5M SH			Shield		
T4152214005-001	M12 MR 5P - M12 FR 5P PVC CABLE 0.5M			PUR	Unshielded	
T4162214005-001	M12 MR 5P - M12 FR 5P PVC CABLE 0.5M SH				Shield	

PRODUCT OFFERINGS - M12 to M12 A-Code Double Ended Cable Assembly

M12 A-CODE MALE STR - FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY


PN	Part Description	Pos	Type	Code	Cable Materials	Shield/ Unshielded				
T4152124002-001	M12 MS 2P - M12 FR 2P PUR CABLE 0.5M	2	 MS-FR	A	PUR	Unshielded				
T4162124002-001	M12 MS 2P - M12 FR 2P PUR CABLE 0.5M SH					Shield				
T4152114002-001	M12 MS 2P - M12 FR 2P PVC CABLE 0.5M				PVC	Unshielded				
T4162114002-001	M12 MS 2P - M12 FR 2P PVC CABLE 0.5M SH					Shield				
T4152124003-001	M12 MS 3P - M12 FR 3P PUR CABLE 0.5M	3			 MS-FR	A	PUR	Unshielded		
T4162124003-001	M12 MS 3P - M12 FR 3P PUR CABLE 0.5M SH							Shield		
T4152114003-001	M12 MS 3P - M12 FR 3P PVC CABLE 0.5M						PVC	Unshielded		
T4162114003-001	M12 MS 3P - M12 FR 3P PVC CABLE 0.5M SH							Shield		
T4152124004-001	M12 MS 4P - M12 FR 4P PUR CABLE 0.5M	4					 MS-FR	A	PUR	Unshielded
T4162124004-001	M12 MS 4P - M12 FR 4P PUR CABLE 0.5M SH									Shield
T4152114004-001	M12 MS 4P - M12 FR 4P PVC CABLE 0.5M								PVC	Unshielded
T4162114004-001	M12 MS 4P - M12 FR 4P PVC CABLE 0.5M SH									Shield
T4152124005-001	M12 MS 5P - M12 FR 5P PUR CABLE 0.5M	5	 MS-FR	A					PUR	Unshielded
T4162124005-001	M12 MS 5P - M12 FR 5P PUR CABLE 0.5M SH									Shield
T4152114005-001	M12 MS 5P - M12 FR 5P PVC CABLE 0.5M								PVC	Unshielded
T4162114005-001	M12 MS 5P - M12 FR 5P PVC CABLE 0.5M SH									Shield

M12 A-CODE MALE R/A - FEMALE STR DOUBLE ENDED CABLE ASSEMBLY


PN	Part Description	Pos	Type	Code	Cable Materials	Shield/ Unshielded				
T4152223002-001	M12 MR 2P - M12 FS 2P PUR CABLE 0.5M	2	 MR-FS	A	PUR	Unshielded				
T4162223002-001	M12 MR 2P - M12 FS 2P PUR CABLE 0.5M SH					Shield				
T4152213002-001	M12 MR 2P - M12 FS 2P PVC CABLE 0.5M				PVC	Unshielded				
T4162213002-001	M12 MR 2P - M12 FS 2P PVC CABLE 0.5M SH					Shield				
T4152223003-001	M12 MR 3P - M12 FS 3P PUR CABLE 0.5M	3			 MR-FS	A	PUR	Unshielded		
T4162223003-001	M12 MR 3P - M12 FS 3P PUR CABLE 0.5M SH							Shield		
T4152213003-001	M12 MR 3P - M12 FS 3P PVC CABLE 0.5M						PVC	Unshielded		
T4162213003-001	M12 MR 3P - M12 FS 3P PVC CABLE 0.5M SH							Shield		
T4152223004-001	M12 MR 4P - M12 FS 4P PUR CABLE 0.5M	4					 MR-FS	A	PUR	Unshielded
T4162223004-001	M12 MR 4P - M12 FS 4P PUR CABLE 0.5M SH									Shield
T4152213004-001	M12 MR 4P - M12 FS 4P PVC CABLE 0.5M								PVC	Unshielded
T4162213004-001	M12 MR 4P - M12 FS 4P PVC CABLE 0.5M SH									Shield
T4152223005-001	M12 MR 5P - M12 FS 5P PUR CABLE 0.5M	5	 MR-FS	A					PUR	Unshielded
T4162223005-001	M12 MR 5P - M12 FS 5P PUR CABLE 0.5M SH									Shield
T4152213005-001	M12 MR 5P - M12 FS 5P PVC CABLE 0.5M								PVC	Unshielded
T4162213005-001	M12 MR 5P - M12 FS 5P PVC CABLE 0.5M SH									Shield

PRODUCT OFFERINGS - M8 to M12 Double Ended Cable Assembly


**M8 FEMALE STR - M12 MALE STR DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded
T4052325003-001	M8 3P FS - M12 3P MS PUR CABLE 0.5M	3		PUR	Unshielded
T4052315003-001	M8 3P FS - M12 3P MS PVC CABLE 0.5M			PVC	
T4052325004-001	M8 4P FS - M12 4P MS PUR CABLE 0.5M	4		PUR	
T4052315004-001	M8 4P FS - M12 4P MS PVC CABLE 0.5M			PVC	


**M8 FEMALE STR - M12 MALE R/A DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded
T4052326003-001	M8 3P FS - M12 3P MR PUR CABLE 0.5M	3		PUR	Unshielded
T4052316003-001	M8 3P FS - M12 3P MR PVC CABLE 0.5M			PVC	
T4052326004-001	M8 4P FS - M12 4P MR PUR CABLE 0.5M	4		PUR	
T4052316004-001	M8 4P FS - M12 4P MR PVC CABLE 0.5M			PVC	

**M8 FEMALE R/A - M12 MALE STR DOUBLE ENDED CABLE ASSEMBLY**


PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded
T4052425003-001	M8 3P FR - M12 3P MS PUR CABLE 0.5M	3		PUR	Unshielded
T4052415003-001	M8 3P FR - M12 3P MS PVC CABLE 0.5M			PVC	
T4052425004-001	M8 4P FR - M12 4P MS PUR CABLE 0.5M	4		PUR	
T4052415004-001	M8 4P FR - M12 4P MS PVC CABLE 0.5M			PVC	

**M8 FEMALE R/A - M12 MALE R/A DOUBLE ENDED CABLE ASSEMBLY**


PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded
T4052426003-001	M8 3P FR - M12 3P MR PUR CABLE 0.5M	3		PUR	Unshielded
T4052416003-001	M8 3P FR - M12 3P MR PVC CABLE 0.5M			PVC	
T4052426004-001	M8 4P FR - M12 4P MR PUR CABLE 0.5M	4		PUR	
T4052416004-001	M8 4P FR - M12 4P MR PVC CABLE 0.5M			PVC	

PRODUCT OFFERINGS - M8 to M12 Double Ended Cable Assembly


**M8 MALE STR – M12 FEMALE STR DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded
T4052127003-001	M8 3P MS - M12 3P FS PUR CABLE 0.5M	3	 M8 MS -M12 FS	PUR	Unshielded
T4052117003-001	M8 3P MS - M12 3P FS PVC CABLE 0.5M			PVC	
T4052127004-001	M8 4P MS - M12 4P FS PUR CABLE 0.5M	4		PUR	
T4052117004-001	M8 4P MS - M12 4P FS PVC CABLE 0.5M			PVC	


**M8 MALE STR – M12 FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded
T4052128003-001	M8 3P MS - M12 3P FR PUR CABLE 0.5M	3	 M8 MS -M12 FR	PUR	Unshielded
T4052118003-001	M8 3P MS - M12 3P FR PVC CABLE 0.5M			PVC	
T4052128004-001	M8 4P MS - M12 4P FR PUR CABLE 0.5M	4		PUR	
T4052118004-001	M8 4P MS - M12 4P FR PVC CABLE 0.5M			PVC	

**M8 MALE R/A – M12 FEMALE STR DOUBLE ENDED CABLE ASSEMBLY**



PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded
T4052227003-001	M8 3P MR - M12 3P FS PUR CABLE 0.5M	3	 M8 MR -M12 FS	PUR	Unshielded
T4052217003-001	M8 3P MR - M12 3P FS PVC CABLE 0.5M			PVC	
T4052227004-001	M8 4P MR - M12 4P FS PUR CABLE 0.5M	4		PUR	
T4052217004-001	M8 4P MR - M12 4P FS PVC CABLE 0.5M			PVC	

**M8 MALE R/A – M12 FEMALE R/A DOUBLE ENDED CABLE ASSEMBLY**

PN	Part Description	Pos	Type	Cable Materials	Shield/Unshielded
T4052228003-001	M8 3P MR - M12 3P FR PUR CABLE 0.5M	3	 M8 MR - M12 FR	PUR	Unshielded
T4052218003-001	M8 3P MR - M12 3P FR PVC CABLE 0.5M			PVC	
T4052228004-001	M8 4P MR - M12 4P FR PUR CABLE 0.5M	4		PUR	
T4052218004-001	M8 4P MR - M12 4P FR PVC CABLE 0.5M			PVC	

## Cable Specifications

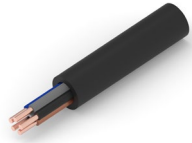
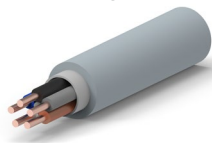
### M8 UNSHIELDED CABLE ASSEMBLIES

M8 cable assembly unshielded PVC series		M8 cable assembly unshielded PUR series		
Image	PVC		PUR	
				
No. of conductors	3	4	3	4
Jacket material	PVC		PUR	
Jacket color	Black		Gray	
Cross section	24AWG		24AWG	
Construction	32/0.10mm		32/0.10mm	
Temp range-Fixed	-10°C-80°C		-40°C-80°C	
Temp range-Flexible	-5°C-80°C		-25°C-80°C	
Features	Flame Retardant, Rohs		Flame Retardant, oil resistant, Rohs	
Standards	UL758, UL1581, UL2464		UL758, UL1581, UL20549	

### M8 SHIELDED CABLE ASSEMBLIES

M8 cable assembly shielded PVC series		M8 cable assembly shielded PUR series		
Image	PVC		PUR	
				
No. of conductors	3	4	3	4
Jacket material	PVC		PUR	
Jacket color	Black		Gray	
Cross section	24AWG		24AWG	
Construction	Construction: 32/0.10mm Shield1: AL/Mylar Shield2: Tinned copper braid		Construction: 32/0.10mm Shield1: AL/Mylar Shield2: Tinned copper braid	
Temp range-Fixed	-10°C-80°C		-40°C-80°C	
Temp range-Flexible	-5°C-80°C		-25°C-80°C	
Features	Flame Retardant, Rohs		Flame Retardant, oil resistant, Rohs	
Standards	UL758, UL1581, UL2464		UL758, UL1581, UL20549	

## M12 UNSHIELDED CABLE ASSEMBLIES

M12 PVC cable assembly unshielded series						M12 PUR cable assembly unshielded series				
Image	 <p>PVC</p>					 <p>PUR</p>				
No. of conductors	2	3	4	5	8	2	3	4	5	8
Jacket material	PVC					PUR				
Jacket color	Black					Gray				
Cross section	22AWG					22AWG	22AWG	22AWG	22AWG	24AWG
Construction	43/0.10 mm	43/0.10 mm	43/0.10 mm	43/0.10 mm	32/0.10 mm	43/0.10 mm	43/0.10 mm	43/0.10 mm	43/0.10 mm	32/0.10 mm
Temp range-Fixed	-10°C-80°C					-40°C-80°C				
Temp range-Flexible	-5°C-80°C					-25°C-80°C				
Features	Flame Retardant, Rohs					Flame Retardant, oil resistant, Rohs				
Standards	UL758, UL1581, UL2464					UL758, UL1581, UL20549				

## M12 SHIELDED CABLE ASSEMBLIES

M12 cable assembly shielded series						M12 cable assembly shielded series				
Image	 <p>PVC</p>					 <p>PUR</p>				
No. of conductors	2	3	4	5	8	2	3	4	5	8
Jacket material	PVC					PUR				
Jacket color	Black					Gray				
Cross section	22AWG	22AWG	22AWG	22AWG	24AWG	22AWG	22AWG	22AWG	22AWG	24AWG
Construction	Construction: 43/0.10mm Shield1: AL/Mylar Shield2: Tinned copper braid			Construction: 32/0.10mm Shield1: AL/Mylar Shield2: Tinned copper braid		Construction: 43/0.10mm Shield1: AL/Mylar Shield2: Tinned copper braid			Construction: 2/0.10mm Shield1: AL/Mylar Shield2: Tinned copper braid	
Temp range-Fixed	-10°C-80°C					-40°C-80°C				
Temp range-Flexible	-5°C-80°C					-25°C-80°C				
Features	Flame Retardant, Rohs					Flame Retardant, oil resistant, Rohs				
Standards	UL758, UL1581, UL2464					UL758, UL1581, UL20549				



## M12 FIELDBUS CABLE ASSEMBLY SOLUTIONS

TE now complements its' Sensor/Actuator cable assemblies with Data Communication solutions by introducing the Fieldbus cable assemblies. First developed more than two decades ago, many different field networks still continue to dominate Industrial automation and process control. Fieldbus networks seems to be very practical at the lowest level of the automation pyramid and are critical element of Industry 4.0, IIoT and beyond for end devices that do not require the bandwidth but do need the ability to have power and signal in the same cable.

The new A and B-coded M12 cable assemblies comply with Profibus, DeviceNet and CC-link protocols, offering multiple options for a variety of needs that makes TE an one-stop shop. They have 360-degree shielding against EMI for complete protection for signal and data transmission, and are rated IP67 for resistance to dust and water. The assemblies are overmolded in either PVC or halogen-free polyurethane (PUR) cables, suitable for drag chain applications or torsional stress, depending on customer performance requirements.

Assemblies are produced in many customer-specific plug-and-play configurations to enable design flexibility and quick installation in most industrial environments. Applications for the new assemblies lie in numerous areas of industry, including process control systems, robotics and automation, production equipment, machine tools and material handling.

TE's Fieldbus M12 cable assemblies are available as single-ended or double-ended, in straight and angled versions, all shielded variants. Various cable types are offered depending on the application requirements. The predefined offering in length of 0.5, to 15 meters covers a vast range of customer needs on the market, while customized cable assemblies in different lengths provide a solution for specific needs. All can be used in combination with TE's male/female connectors.

## BENEFITS

- Maximum signal transmission
- Reduced noise and interference
- Maximum installation versatility
- Cable types variations for drag chain and torsion applications

### • APPLICATIONS

- Industrial Communications
- Industrial Machinery
- Industrial Automation
- Machine tools
- Robotics
- Material Handling
- Process control systems

## KEY FEATURES

- IP67 rated: dust and waterproof
- Overmolded PVC or PUR cable assemblies/ Shielded
- Key options: A, B coded
- M12 Positions: 2, 4, 5 pos
- M12 B-coded 5-pole for Profibus applications
- M12 A-code 5pos for DeviceNet applications
- M12 A-code 4pos for CC-link applications
- Cable length options: 0.5 m, 1 m, 2m, 4m, 6m, 8m, 10m & 15m.

## MECHANICAL

- Durability: 100 cycles
- Degree of protection: IP67
- Temperature Ratings:
  - Profibus PUR:
    - Fixed: -40°C to +80°C
    - Flexible: -40°C to +75°C
- Profibus PUR Torsion:  
Operating temperature -25°C to +75°C
- DeviceNet PUR:  
Operating temperature -20°C to +75°C
- DeviceNet PVC:  
Operating temperature -40C to +80°C
- CC-Link PVC:  
Operating temperature -30C to +60°C

## ELECTRICAL

Voltage and Current Rating:

- M12 A code 4 poles: 250V/4A
- M12 A code 5 poles: 60V/4A
- M12 B code 2 poles: 250V/4A

## MATERIALS



- Contact: Brass, Gold Plating
- Nut & Shells: Brass, Nickel plating
- O-ring: Silicon rubber
- Over-molding: TPU/PVC
- Housing: PA
- PROFIBUS® M12 Cable Assy B-code 2-pole 1x2x22AWG PUR Drag Chain
- PROFIBUS®M12 Cable Assy B-code 2-pole 1x2x24AWG PUR Torsion
- DeviceNet™ M12 Cable Assy A-code 5-pole 2x24AWG+2x22AWG Thin Violet PUR
- DeviceNet™ M12 Cable Assy A-code 5-pole 2x24AWG+2x22AWG Thin Gray PVC
- CC-Link® M12 Cable Assy A-code 4pos 3 conductor 20AWG Red PVC

## SPECIFICATIONS



- Product Specification: 108-106140
- Application Specification: 114-137144
- UL Standard: UL2238
- IEC 61076-2-101: Detail specification for M12 connectors with screw-locking
- IEC 60512: Electromechanical Components For Electronic Equipment; Basic Testing Procedure and Measuring Methods
- IEC-60529: Degree of Protection Provided by Enclosures (IP Code)





PRODUCT OFFERINGS - CC-LINK M12 A-CODE 4POS CABLE ASSEMBLIES SINGLE ENDED

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA541B1411-001	M12A4-MS-PVC-0.5M	CC-Link (10Mbs)	A	4	Male / Female Straight	PVC Red 20AWG	Yes
TAA543B1411-001	M12A4-FS-PVC-0.5M				 		
TAA544B1411-001	M12A4-FR-PVC-0.5M						
TAA542B1411-001	M12A4-MR-PVC-0.5M						


PRODUCT OFFERINGS - CC-LINK M12 A-CODE 4POS CABLE ASSEMBLIES DOUBLE ENDED

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA545B1411-001	M12A4-MS-FS-PVC-0.5M	CC-Link (10Mbs)	A	4	MS-FS	PVC Red 20AWG	Yes
TAA54AB1411-001	M12A4-MR-FS-PVC-0.5M				 		
TAA546B1411-001	M12A4-MS-FR-PVC-0.5M						



PRODUCT OFFERINGS - DEVICENET M12 A-CODE 5POS CABLE ASSEMBLIES SINGLE ENDED PUR

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA751A5501-001	M12A5-MS-PUR-0.5M	DeviceNet (500Kbs)	A	5	Male / Female Straight	PUR Violet 2x24AWG+2x22 AWG	Yes
TAA753A5501-001	M12A5-FS-PUR-0.5Mv				 		
TAA754A5501-001	M12A5-FR-PUR-0.5M						
TAA752A5501-001	M12A5-MR-PUR-0.5M						


PRODUCT OFFERINGS - DEVICENET M12 A-CODE 5POS CABLE ASSEMBLIES DOUBLE ENDED PUR

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA755A5501-001	M12A5-MS-FS-PUR-0.5M	DeviceNet (500Kbs)	A	5	MS-FS	PUR Violet 2x24AWG+2x 22AWG	Yes
TAA75AA5501-001	M12A5-MR-FS-PUR-0.5M				MR-FS / MS-FR		
TAA756A5501-001	M12A5-MS-FR-PUR-0.5M						




PRODUCT OFFERINGS - DEVICENET M12 A-CODE 5POS CABLE ASSEMBLIES SINGLE ENDED PVC

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA751A1611-001	M12A5-MS-PVC-0.5M	DeviceNet (500Kbs)	A	5	Male / Female Straight	PVC Gray 2x24AWG+2x 22AWG	Yes
TAA753A1611-001	M12A5-FS-PVC-0.5M						
TAA754A1611-001	M12A5-FR-PVC-0.5M				Male / Female R/A		
TAA752A1611-001	M12A5-MR-PVC-0.5M						



PRODUCT OFFERINGS - DEVICENET M12 A-CODE 5POS CABLE ASSEMBLIES DOUBLE ENDED PVC

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAA755A1611-001	M12A5-MS-FS-PVC-0.5M	DeviceNet (500Kbs)	A	5	MS-FS	PVC Gray 2x24AWG+2x22 AWG	Yes
TAA75AA1611-001	M12A5-MR-FS-PVC-0.5M				MR-FS / MS-FR		
TAA756A1611-001	M12A5-MS-FR-PVC-0.5M						




PRODUCT OFFERINGS - PROFIBUS M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR TORSION

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAB62146501-001	M12B2-MS-PUR TORS-0.5M	Profibus DP (12Mbs)	B	2	Male / Female Straight	PUR Torsion 22AWG Violet	Yes
TAB62346501-001	M12B2-FS-PUR TORS-0.5M						
TAB62446501-001	M12B2-FR-PUR TORS-0.5M				Male / Female R/A		
TAB62246501-001	M12B2-MR-PUR TORS-0.5M				 		





PRODUCT OFFERINGS - PROFIBUS M12 B-CODE 2-POS CABLE ASSEMBLIES DOUBLE ENDED PUR TORSION

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAB62546501-001	M12B2-MS-FS-PUR/T-0.5M	Profibus DP (12Mbs)	B	2	MS-FS	PUR Torsion 22AWG Violet	Yes
TAB62A46501-001	M12B2-MR-FS-PUR/T-0.5M				MR-FS / MS-FR		
TAB62646501-001	M12B2-MS-FR-PUR/T-0.5M				 		

PRODUCT OFFERINGS - PROFIBUS M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR FLEX/DRAW CHAIN

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAB62135501-001	M12B2-MS-PUR Flex-0.5M	Profibus DP (12Mbs)	B	2	Male / Female Straight	PUR Flex/Draw Chain 24AWG Violet	Yes
TAB62335501-001	M12B2-FS-PUR Flex-0.5M						
TAB62435501-001	M12B2-FR-PUR Flex-0.5M				Male / Female R/A		
TAB62235501-001	M12B2-MR-PUR Flex-0.5M				 		

PRODUCT OFFERINGS - PROFIBUS M12 B-CODE 2-POS CABLE ASSEMBLIES DOUBLE ENDED PUR FLEX/Drag CHAIN

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAB62535501-001	M12B2-MS-FS-PURFlex-0.5M	Profibus DP (12Mbs)	B	2	MS-FS 	PUR Flex/Drag Chain 24AWG Violet 	Yes
TAB62A35501-001	M12B2-MR-FS-PURFlex0.5				MR-FS / MS-FR 		
TAB62635501-001	M12B2-MS-FR-PURFlex-0.5M						

OOL	Cable Length
-001	0.5M
-002	1.0M
-020	2.0M
-040	4.0M
-060	6.0M
-080	8.0M
-007	10.0M
-150	15.0M

-XXX	Customized Cable Length
-XX0	XXM
-XX5	XX.5M



# M12 INDUSTRIAL ETHERNET D-CODE CABLE ASSEMBLY CONNECTIVITY

TE Connectivity now offers M12 data cable assemblies with D-code interfaces that support Ethernet protocols as part of its package of Industrial Ethernet and Fieldbus solutions. This makes it the one-stop shop for M8/M12 cable assemblies for Industrial Network communications.

TE has enriched its already large offering in Fieldbus connectivity solutions (based on Profibus, DeviceNet, CanOpen and CC-link) with Industrial Ethernet protocols such as Profinet, EtherCAT, Ethernet/IP and SERCOS-III.

## BENEFITS

- Ethernet is rapidly becoming the technology of choice for higher-level industrial control applications that call for real-time data.
- In order for Ethernet to be used in industrial environments, cables and connectors must be adapted to withstand harsh environmental conditions often found there.
- TE M12 Ethernet cable assemblies deliver the speed, reliability and ruggedness that smart factories demand.
- With the high cost of downtime in industrial applications, it pays to invest in cable assemblies that provide reliable high performance.
- TE's M12 cable assemblies will play an important role in bringing the Industrial Internet of Things to life.

## APPLICATIONS

- Industrial Communications
- Process control systems
- Industrial Machinery
- Industrial Automation
- Machine tools
- Robotics
- Material Handling

## FEATURES

- Jacketing is in halogen-free flame-retardant thermoplastic polyurethane (PUR) or other FRNC (flame retardant, non-corrosive) materials.
- PVC provides a competitive and economic solution for occasional movement or vibration, but PUR is more suited to more demanding applications in for example, drag chains and harsh environments where operational reliability is crucial.
- Depending on the material, the assemblies withstand up to 1 million flexes, machine oils, abrasion and UV radiation.
- Category 5e cables can realize transmission rates of 100Mbps to meet network requirements in the field and at supervisory management levels.
- The new assemblies are available with several standard cable length options from 0.5m through to 30m.

## MATERIALS

- Contact: Brass, Gold Plating 30um
- Nut & Shells: Brass, Nickel plating
- O-ring: Silicon rubber
- Over-molding: PUR/PVC
- Housing: PA
- Cable Jacket materials: PUR,PVC, FRNC

## ELECTRICAL

- M12 D code 4 poles:30V/1.5A

## MECHANICAL

- Durability: 100 cycles (up to 1M for drag chain cable)
- Degree of protection: IP67
- Temperature Ratings:
  - Industrial Ethernet SERCOS III Type B PVC:
    - Operating temperature -40°C to +80°C (fixed)
    - 20°C to +60°C (flexible)
  - Industrial Ethernet Profinet Type B PVC:
    - Operating temperature -40°C to +80°C (fixed)
    - 20°C to +60°C (flexible)
  - Industrial Ethernet Profinet Type C PUR:
    - Operating temperature -30°C to +70°C (fixed)
    - 20°C to +60°C (flexible)
  - Industrial Ethernet Profinet Type B FRNC:
    - Operating temperature -25°C to +80°C (fixed)
    - 25°C to +80°C (flexible)

## SPECIFICATIONS

- UL1863
- IEC 61076-2-101: Detail specification for M12 connectors with screw-locking (but True Position 0.1mm requirement for male side is not required)
- IEC 60512: Electromechanical Components For Electronic Equipment; Basic Testing Procedure and Measuring Methods
- IEC-60529: Degree of Protection Provided by Enclosures(IP Code)
- ISO/IEC 11801 category 5e



PRODUCT OFFERINGS - M12 ETHERNET D-CODE 4-POS CABLE ASSEMBLIES SINGLE ENDED TYPE C PUR

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAD14145101-001	M12D4-MS-PUR TYPE C GREEN-0.5M	Profinet, EtherCAT, Ethernet/IP  (up to 100Mbps)	D	4	Male Straight	CAT5E TYPE C, PUR, 22AWG, GREEN	Yes
TAD14245101-001	M12D4-MR-PUR TYPE C GREEN-0.5M				Male R/A		




PRODUCT OFFERINGS - M12 ETHERNET D-CODE 4-POS CABLE ASSEMBLIES DOUBLE ENDED TYPE C PUR

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAD14745101-001	M12D4-MS-MS-PUR TYPE C GREEN-0.5M	Profinet, EtherCAT, Ethernet/IP  (up to 100Mbps)	D	4	MS-MS	CAT5E TYPE C, PUR, 22AWG, GREEN	Yes
TAD14845101-001	M12D4-MS-MR-PUR TYPE C GREEN-0.5M				MS-MR		




PRODUCT OFFERINGS - M12 ETHERNET D-CODE 4-POS CABLE ASSEMBLIES SINGLE ENDED TYPE B FRNC

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAD14147101-001	M12D4-MS-FRNC TYPE B GREEN-0.5M	Profinet, EtherCAT, Ethernet/IP  (up to 100Mbps)	D	4	Male Straight	CAT5E TYPE B, FRNC, 22AWG, GREEN	Yes
TAD14247101-001	M12D4-MR-FRNC TYPE B GREEN-0.5M				Male R/A		




PRODUCT OFFERINGS - M12 ETHERNET D-CODE 4-POS CABLE ASSEMBLIES DOUBLE ENDED TYPE B FRNC

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAD14747101-001	M12D4-MS-MS-FRNC TYPE B GREEN-0.5M	Profinet, EtherCAT, Ethernet/IP  (up to 100Mbps)	D	4	MS-MS 	CAT5E TYPE B, FRNC, 22AWG, GREEN 	Yes
TAD14847101-001	M12D4-MS-MR-FRNC TYPE B GREEN-0.5M				MS-MR 		

PRODUCT OFFERINGS - M12 ETHERNET D-CODE 4-POS CABLE ASSEMBLIES SINGLE ENDED TYPE B PVC




Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAD14141111-001	M12D4-MS-PVC TYPE B-0.5M	Profinet, EtherCAT, Ethernet/IP  (up to 100Mbps)	D	4	Male Straight 	CAT5E TYPE B, PVC, 22AWG, GREEN 	Yes
TAD14241111-001	M12D4-MR-PVC TYPE B-0.5M				Male R/A 		

PRODUCT OFFERINGS - M12 ETHERNET D-CODE 4-POS CABLE ASSEMBLIES DOUBLE ENDED TYPE B PVC




Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAD14741111-001	M12D4-MS-MS-PVC TYPE B-0.5M	Profinet, EtherCAT, Ethernet/IP  (up to 100Mbps)	D	4	MS-MS 	CAT5E TYPE B, PVC, 22AWG, GREEN 	Yes
TAD14841111-001	M12D4-MS-MR-PVC TYPE B-0.5M				MS-MR 		



PRODUCT OFFERINGS - M12 ETHERNET D-CODE 4-POS CABLE ASSEMBLIES SINGLE ENDED TYPE B PVC

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAD14141311-001	M12D4-MS-PVC TYPE B RED-0.5M	SERCOS-III (up to 100Mbs)	D	4	Male Straight 	CAT5E TYPE B, PVC, 22AWG, RED 	Yes
TAD14241311-001	M12D4-MR-PVC TYPE B RED-0.5M				Male R/A 		

PRODUCT OFFERINGS - M12 ETHERNET D-CODE 4-POS CABLE ASSEMBLIES DOUBLE ENDED TYPE B PVC

Part Number	Part Description	Application	Code	POS	Type	Cable Material	Shielded
TAD14741311-001	M12D4-MS-MS-PVC TYPE B RED-0.5M	SERCOS-III (up to 100Mbs)	D	4	MS-MS 	CAT5E TYPE B, PVC, 22AWG, RED 	Yes
TAD14841311-001	M12D4-MS-MR-PVC TYPE B RED-0.5M				MS-MR 		

00L	Cable Length
-001	0.5M
-002	1.0M
-020	2.0M
-040	4.0M
-060	6.0M
-080	8.0M
-007	10.0M
-150	15.0M
-200	20.0M
-250	25.0M
-300	30.0M

-XXX	Customized Cable Length
-XX0	XXM
-XX5	XX.5M

te.com

© 2019 TE Connectivity. All Rights Reserved.

TE, TE Connectivity, and TE Connectivity (logo) are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information in this brochure, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this catalog are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.

1-1773701-8 AK 09/20

