



# 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 equip-

ment, 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.

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# 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

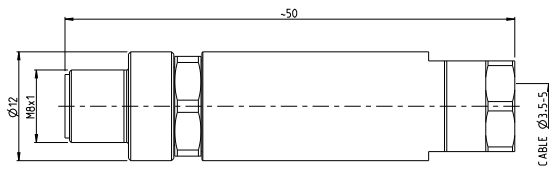
Product Specifications:  
Connectors: 108-3641, 108-19483,  
108-106140  
X-coded: 108-137008



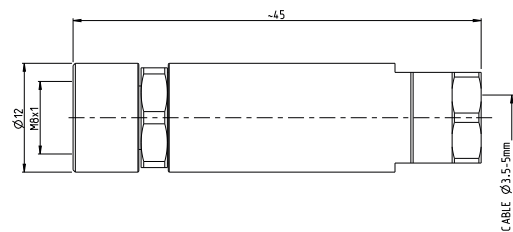
Size	Pins	Rated	Maximum Current per pin	Polution grade
M8	3	60 V	4 A	3
M8	4	30 V	4 A	3
M12	3	250 V	4 A	3
M12	4	250 V	4 A	3
M12	5	125 V	4 A	3
M12	8	60 V	2 A	3
M12	12	30 V	2 A	3

# M8 Field Installable

## Male Series



## Female Series



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

TE Part Number		
<b>M8 Male Screw Connection, Straight</b>		
3-Pole	PG7	2120954-1
4-Pole	PG7	1-2120954-1

TE Part Number		
<b>M8 Male Right Angle</b>		
3-Pole	PG7	2120955-1
4-Pole	PG7	1-2120955-1

TE Part Number		
<b>M8 Male Panel, Solder, Front Mounting, M8 Fastening Thread</b>		
3-Pole	M8	2120958-1
4-Pole	M8	1-2120958-1

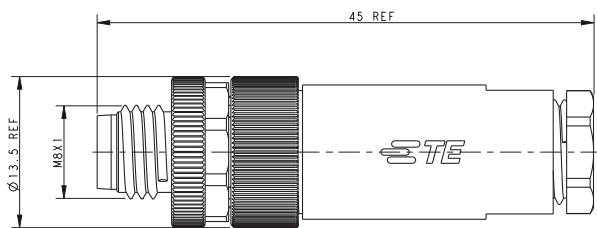
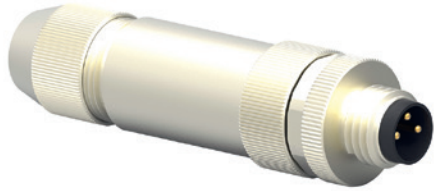
TE Part Number		
<b>M8 Female Screw Connection, Straight</b>		
3-Pole	PG7	2120956-1
4-Pole	PG7	1-2120956-1

TE Part Number		
<b>M8 Female Right Angle</b>		
3-Pole	PG7	2120957-1
4-Pole	PG7	1-2120957-1

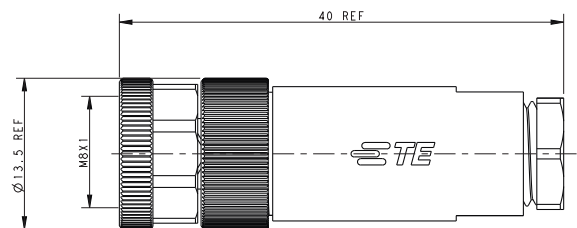
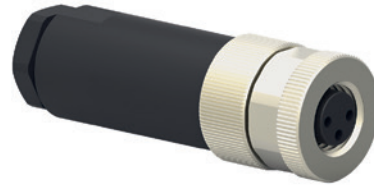
TE Part Number		
<b>M8 Female Panel, Solder, Front Mounting, M8 Fastening Thread</b>		
3-Pole	M8	2120959-1
4-Pole	M8	1-2120959-1

# M8 Field Installable – Screw Assy Straight

## 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

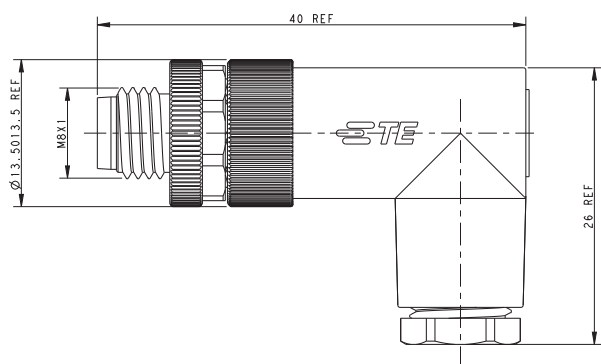
TE Part Number	
<b>M8 Male Screw Connection, Straight, Shielded</b>	
3-Pole	T4011019031-000
4-Pole	T4011019041-000

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

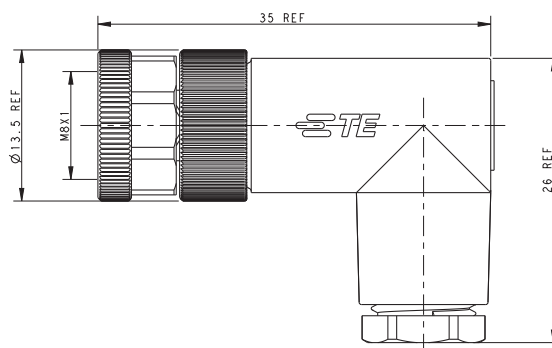
TE Part Number	
<b>M8 Female Screw Connection, Straight, Shielded</b>	
3-Pole	T4010019031-000
4-Pole	T4010019041-000

# M8 Field Installable – Screw Assy Right Angled

## 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

TE Part Number	
<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

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