ENTRELEC M8/M12/RJ45 CATALOG

ENTRELEC M8/M12/RJ45 CATALOG

ENTRELEC 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. ENTRELEC solution includes an extensive connector range of PCB headers, cable assemblies and I/O boxes, and provides users with an interface th at supports higher bandwidth needs – meeting the requirements of up to 10Gb/s.
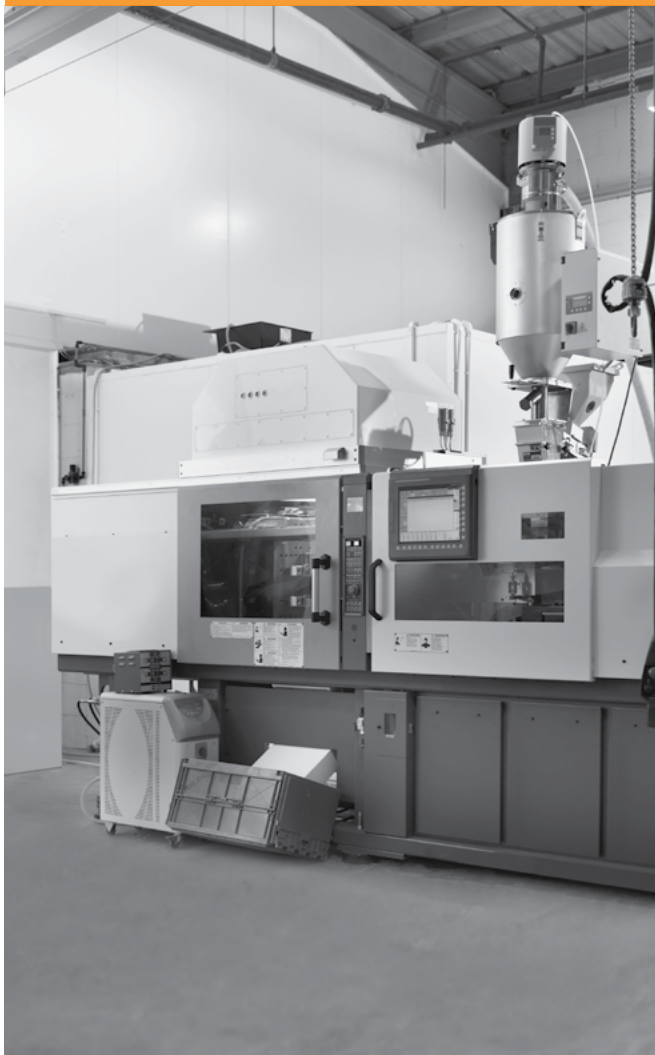
ENTRELEC also offers shielded and un-shielded Cat5e and Cat6A cable assembly variants. A predefined offering in length of 1, 3, 5 and 10 meters covers a vast range of customer needs on the market. For rewiring on site a wide range of field serviceable connectors are provided, allowing versatile systems 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.

ENTRELEC´S ELECTRICAL SOLUTIONS PRODUCTS PLAY A VITAL ROLE IN FACTORY AUTOMATION.

ENTRELEC´S Electrical Solutions 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, ENTRELEC solutions are also ideal for vision systems, common in security mail sortation devices.

ENTRELEC M8/M12/RJ45 CATALOG

MACHINERY

FACTORY AUTOMATION

ENTRELEC 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, ENTRELEC 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, ENTRELEC M8/M12 system and complete ENTRELEC´s electrical solutions 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-decreased and without the use of tools.

Contents

M8/M12 connectors

ENTRELEC 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. ENTRELEC 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 ENTRELEC 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

ENTRELEC M8/M12/RJ45 CATALOG

M8 STRAIGHT FIELD INSTALLABLE

Male Series

ENTRELEC Part Number		
M8 Male Screw Connection, Straight, Unshielded		
3-Pole	—	1SET310005R0000
4-Pole	—	1SET310006R0000
M8 Male Screw Connection, Straight, Shielded		
3-Pole	—	1SET310007R0000
4-Pole	—	1SET310008R0000

Female Series

ENTRELEC Part Number		
M8 Female Screw Connection, Straight, Unshielded		
3-Pole	—	1SET310001R0000
4-Pole	—	1SET310002R0000
M8 Female Screw Connection, Straight, Shielded		
3-Pole	—	1SET310003R0000
4-Pole	—	1SET310004R0000

M8 ANGLED FIELD INSTALLABLE

Male Series

ENTRELEC Part Number		
M8 Male Right Angled, Unshielded		
3-Pole	—	1SET310013R0000
4-Pole	—	1SET310014R0000
M8 Male Right Angled, Shielded		
3-Pole	—	1SET310015R0000
4-Pole	—	1SET310016R0000

Female Series

ENTRELEC Part Number		
M8 Female Right Angled, Unshielded		
3-Pole	—	1SET310009R0000
4-Pole	—	1SET310010R0000
M8 Female Right Angled, Shielded		
3-Pole	—	1SET310003R0000
4-Pole	—	1SET310004R0000

ENTRELEC M8/M12/RJ45 CATALOG

M8 PANEL MOUNT 200MM WIRE

Male Series

Female Series

ENTRELEC Part Number

M8, Male, Rear Mount, 200mm Wire, Straight		
3-Pole	—	1SET310125R0000
4-Pole	—	1SET310126R0000

M8, Male, Front Mount, 200mm Wire, Straight		
3-Pole	—	1SET310125R0000
4-Pole	—	1SET310126R0000

M8, Male, Panel Mount Front, Straight		
3-Pole	—	1SET310129R0000
4-Pole	—	1SET310130R0000

ENTRELEC Part Number

M8, Female, Rear Mount, 200mm Wire, Straight		
3-Pole	—	1SET310127R0000
4-Pole	—	1SET310128R0000

M8, Female, Front Mount, 200mm Wire, Straight		
3-Pole	—	1SET310131R00
4-Pole	—	1SET310132R0000

M12 STRAIGHT FIELD INSTALLABLE A, B, D CODED

Male Series

ENTRELEC Part Number

A coding – M12 Male Screw Connection, Straight, Unshielded		
4-Pole	PG7	1SET310309R0000
—	PG9	1SET310319R0000
5-Pole	PG7	1SET310311R0000
—	PG9	1SET310321R0000
8-Pole	PG9	1SET310323R0000

ENTRELEC Part Number

D coding – M12 Male Screw Connection, Straight, Shielded		
4-Pole	PG7	1SET310405R0000
—	PG9	1SET310413R0000

M12 STRAIGHT FIELD INSTALLABLE A, B, D CODED
Female Series

ENTRELEC Part Number		
A coding – M12 Female Screw Connection, Straight, Unshielded		
4-Pole	PG7	1SET310205R0000
—	PG9	1SET310215R0000
5-Pole	PG7	1SET310207R0000
—	PG9	1SET310217R0000
8-Pole	PG9	1SET310219R0000

ENTRELEC Part Number		
A coding – M12 Female Screw Connection, Straight, Shielded		
4-Pole	PG7	1SET310225R0000
—	PG9	1SET310235R0000
5-Pole	PG7	1SET310227R0000
—	PG9	1SET310237R0000
8-Pole	PG9	1SET310239R0000

D coding – M12 Female Screw Connection, Straight, Shielded		
4-Pole	PG7	1SET310293R0000
—	PG9	1SET310301R0000

M12 ANGLED FIELD INSTALLABLE A, B, D CODED
Male Series

Temperature Range: -25 to +85	ENTRELEC Part Number	
A coding – M12 Male Screw Connection, Angled, Unshielded		
4-Pole	PG7	1SET310525R0000
—	PG9	1SET310535R0000
5-Pole	PG7	1SET310527R0000
—	PG9	1SET310537R0000
8-Pole	PG9	1SET310539R0000

ENTRELEC Part Number		
D coding – M12 Male Screw Connection, Angled, Shielded		
4-Pole	PG7	1SET310613R0000
—	PG9	1SET310621R0000

M12 ANGLED FIELD INSTALLABLE A, B, D CODED
Female Series

ENTRELEC Part Number

A coding – M12 Female Screw Connection, Angled, Unshielded

4-Pole	PG7	1SET310421R0000
—	PG9	1SET310431R0000
5-Pole	PG7	1SET310423R0000
—	PG9	1SET310433R0000
8-Pole	PG9	1SET310435R0000

ENTRELEC Part Number

A coding – M12 Female Screw Connection, Angled, Shielded

4-Pole	PG7	1SET310441R0000
—	PG9	1SET310451R0000
5-Pole	PG7	1SET310443R0000
—	PG9	1SET310453R0000
8-Pole	PG9	1SET310455R0000

D coding – M12 Female Screw Connection, Angled, Shielded

4-Pole	PG7	1SET310509R0000
—	PG9	1SET310517R0000

M12 PANEL MOUNT R/A PCB
Female Series

ENTRELEC Part Number

B coding - M12, Female, Rear Mount, PCB, R/A, Shielded

5-Pole	—	1SET311027R0000

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M12 PANEL MOUNT STRAIGHT PCB Ñ REAR MOUNTING

Male Series

Female Series

ENTRELEC Part Number		
B coding – M12 Male, Rear Mounting, Straight		
5-Pole	—	1SET310899R0000

ENTRELEC Part Number		
B coding – M12 Female, Rear Mounting, Straight		
5-Pole	—	1SET310936R0000

M12 PANEL MOUNT SOLDER WIRE Ñ REAR MOUNTING

Male Series

Female Series

ENTRELEC Part Number		
A-coding - M12 Male, Rear Mounting, Solder Wire		
8-Pole	—	1SET310809R0000

ENTRELEC Part Number		
A-coding - M12 Female, Rear Mounting, Solder Wire		
8-Pole	—	1SET310836R0000

ENTRELEC M8/M12/RJ45 CATALOG

M12 PANEL MOUNT SOLDER WIRE Ñ FRONT MOUNTING

Male Series

Female Series

ENTRELEC Part Number

ENTRELEC Part Number

A-coding - M12 Male, Front Mounting, Solder Wire		
8-Pole	—	1SET310859R0000

A-coding - M12 Female, Front Mounting, Solder Wire		
8-Pole	—	1SET310873R0000

M12 PANEL MOUNT 200MM WIRE Ñ FRONT MOUNTING

Male Series

Female Series

ENTRELEC Part Number

ENTRELEC Part Number

A coding – M12 Male, Front Mounting, 200mm wire		
4-Pole	—	1SET311165R0000
5-Pole	—	1SET311167R0000

A coding – M12 Female, Front Mounting, 200mm wire		
4-Pole	—	1SET311193R0000
5-Pole	—	1SET311195R0000

A-coding - M12 Male, Front Mounting, 200mm wire		
8-Pole	—	1SET311185R0000
12-Pole	—	1SET311187R0000

D coding – M12 Female, Front Mounting, 200mm wire		
4-Pole	—	1SET311209R0000

A-coding - M12 Female, Front Mounting, 200mm wire		
8-Pole	—	1SET311215R0000
12-Pole	—	1SET3111213R0000

ENTRELEC M8/M12/RJ45 CATALOG

M12 PANEL MOUNT 200MM WIRE Ñ REAR MOUNTING

Male Series

ENTRELEC Part Number

A coding – M12 Male, Rear Mounting, 200mm wire

4-Pole	—	1SET311053R0000
5-Pole	—	1SET311057R0000

B coding – M12 Male, Rear Mounting, 200mm wire

5-Pole	—	1SET311073R0000

A-coding - M12 Male, Rear Mounting, 200mm wire

8-Pole	—	1SET311093R0000
12-Pole	—	1SET311097R0000

Female Series

ENTRELEC Part Number

A coding – M12 Female, Rear Mounting, 200mm wire

4-Pole	—	1SET311110R0000
5-Pole	—	1SET311115R0000

B coding – M12 Female, Rear Mounting, 200mm wire

5-Pole	—	1SET311131R0000

D coding – M12 Female, Rear Mounting, 200mm wire

4-Pole	—	1SET311143R0000

A-coding - M12 Female, Rear Mounting, 200mm wire

8-Pole	—	1SET311185R0000
12-Pole	—	1SET311187R0000

M12 X-CODED

M12 X-Coded PCB Connector

Description	ENTRELEC Part Number
M12 X-Coded PCB Connector	
Female Panel Mount Solder PCB Connector	1SET311217R0000
Female Panel Mount Solder Wire	1SET311218R0000

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.

ENTRELEC provides a full solution with shielded and non-shielded cable assembly options that customers easily help connect to advanced industrial networks. The new product line meets the IP67 rating for protection against dust and water ingress; it also provides 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. ENTRELEC 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.

ENTRELEC 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 ENTRELEC male/female connectors and I/O Modules.

KEY FEATURES

- IP67 rated: dust and water resistant
- 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 significantly reduce 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

ENTRELEC M8/M12/RJ45 CATALOG

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: up to 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 (≤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: 100MΩ 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 AND 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.

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M8 MALE STR SINGLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET312416R0000	M8-MS-3CON-PUR-1.0SH	
1SET312418R0000	M8-MS-3CON-PUR-3.0SH	
1SET312419R0000	M8-MS-3CON-PUR-5.0SH	
1SET311416R0000	M8-MS-3CON-PUR-1.0	
1SET311418R0000	M8-MS-3CON-PUR-3.0	
1SET311419R0000	M8-MS-3CON-PUR-5.0	
1SET311423R0000	M8-MS-4CON-PUR-1.0	
1SET311425R0000	M8-MS-4CON-PUR-3.0	
1SET311426R0000	M8-MS-4CON-PUR-5.0	
1SET311427R0000	M8-MS-4CON-PUR-7.0	
1SET311428R0000	M8-MS-4CON-PUR-10.0	
1SET312423R0000	M8-MS-4CON-PUR-1.0SH	
1SET312425R0000	M8-MS-4CON-PUR-3.0SH	
1SET312426R0000	M8-MS-4CON-PUR-5.0SH	

M8 MALE R/A SINGLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET312444R0000	M8-MR-3CON-PUR-1.0SH	
1SET312446R0000	M8-MR-3CON-PUR-3.0SH	
1SET312447R0000	M8-MR-3CON-PUR-5.0SH	
1SET311444R0000	M8-MR-3CON-PUR-1.0	
1SET311446R0000	M8-MR-3CON-PUR-3.0	
1SET311447R0000	M8-MR-3CON-PUR-5.0	
1SET311451R0000	M8-MR-4CON-PUR-1.0	
1SET311453R0000	M8-MR-4CON-PUR-3.0	
1SET311454R0000	M8-MR-4CON-PUR-5.0	
1SET312451R0000	M8-MR-4CON-PUR-1.0SH	
1SET312453R0000	M8-MR-4CON-PUR-3.0SH	
1SET312454R0000	M8-MR-4CON-PUR-5.0SH	

ENTRELEC M8/M12/RJ45 CATALOG

M8 FEMALE STR SINGLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET312472R0000	M8-FS-3CON-PUR-1.0SH	
1SET312474R0000	M8-FS-3CON-PUR-3.0SH	
1SET312475R0000	M8-FS-3CON-PUR-5.0SH	
1SET311472R0000	M8-FS-3CON-PUR-1.0	
1SET311474R0000	M8-FS-3CON-PUR-3.0	
1SET311475R0000	M8-FS-3CON-PUR-5.0	
1SET311479R0000	M8-FS-4CON-PUR-1.0	
1SET311481R0000	M8-FS-4CON-PUR-3.0	
1SET311482R0000	M8-FS-4CON-PUR-5.0	
1SET311483R0000	M8-FS-4CON-PUR-7.0	
1SET311484R0000	M8-FS-4CON-PUR-10.0	
1SET312479R0000	M8-FS-4CON-PUR-1.0SH	
1SET312481R0000	M8-FS-4CON-PUR-3.0SH	
1SET312482R0000	M8-FS-4CON-PUR-5.0SH	

M8 FEMALE R/A SINGLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET312500R0000	M8-FR-3CON-PUR-1.0SH	
1SET312502R0000	M8-FR-3CON-PUR-3.0SH	
1SET312503R0000	M8-FR-3CON-PUR-5.0SH	
1SET311500R0000	M8-FR-3CON-PUR-1.0	
1SET311502R0000	M8-FR-3CON-PUR-3.0	
1SET311503R0000	M8-FR-3CON-PUR-5.0	
1SET311507R0000	M8-FR-4CON-PUR-1.0	
1SET311509R0000	M8-FR-4CON-PUR-3.0	
1SET311510R0000	M8-FR-4CON-PUR-5.0	
1SET312507R0000	M8-FR-4CON-PUR-1.0SH	
1SET312509R0000	M8-FR-4CON-PUR-3.0SH	
1SET312510R0000	M8-FR-4CON-PUR-5.0SH	

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M8 MALE STR - FEMALE STR DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311571R0000	M8-3MS-1.0-M8-3FS-PUR	
1SET311573R0000	M8-3MS-3.0-M8-3FS-PUR	
1SET311574R0000	M8-3MS-5.0-M8-3FS-PUR	
1SET311578R0000	M8-4MS-1.0-M8-4FS-PUR	
1SET311580R0000	M8-4MS-3.0-M8-4FS-PUR	
1SET311581R0000	M8-4MS-5.0-M8-4FS-PUR	
1SET312542R0000	M8-3MS-1.0SH-M8-3FS-PUR	
1SET312544R0000	M8-3MS-3.0SH-M8-3FS-PUR	
1SET312545R0000	M8-3MS-5.0SH-M8-3FS-PUR	
1SET312549R0000	M8-4MS-1.0SH-M8-4FS-PUR	
1SET312551R0000	M8-4MS-3.0SH-M8-4FS-PUR	
1SET312552R0000	M8-4MS-5.0SH-M8-4FS-PUR	

M8 MALE R/A - FEMALE R/A DOUBE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311697R0000	M8-3MR-1.0-M8-3FR-PUR	
1SET311699R0000	M8-3MR-3.0-M8-3FR-PUR	
1SET3117º00R0000	M8-3MR-5.0-M8-3FR-PUR	
1SET312612R0000	M8-3MR-1.0SH-M8-3FR-PUR	
1SET311704R0000	M8-4MR-1.0-M8-4FR-PUR	
1SET311706R0000	M8-4MR-3.0-M8-4FR-PUR	
1SET311707R0000	M8-4MR-5.0-M8-4FR-PUR	
1SET312614R0000	M8-3MR-3.0SH-M8-3FR-PUR	
1SET312615R0000	M8-3MR-5.0SH-M8-3FR-PUR	
1SET312619R0000	M8-4MR-1.0SH-M8-4FR-PUR	
1SET312621R0000	M8-4MR-3.0SH-M8-4FR-PUR	
1SET312622R0000	M8-4MR-5.0SH-M8-4FR-PUR	

M8 MALE STR - M12 FEMALE STR DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311599R0000	M8-3MS-1.0-M12-3FS-PUR	
1SET311601R0000	M8-3MS-3.0-M12-3FS-PUR	
1SET311602R0000	M8-3MS-5.0-M12-3FS-PUR	
1SET311606R0000	M8-4MS-1.0-M12-4FS-PUR	
1SET311608R0000	M8-4MS-3.0-M12-4FS-PUR	
1SET311609R0000	M8-4MS-5.0-M12-4FS-PUR	

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M8 MALE STR - M12 FEMALE R/A DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311613R0000	M8-3MS-1.0-M12-3FR-PUR	
1SET311615R0000	M8-3MS-3.0-M12-3FR-PUR	
1SET311616R0000	M8-3MS-5.0-M12-3FR-PUR	
1SET311620R0000	M8-4MS-1.0-M12-4FR-PUR	
1SET311622R0000	M8-4MS-3.0-M12-4FR-PUR	
1SET311623R0000	M8-4MS-5.0-M12-4FR-PUR	

M8 MALE R/A - M12 FEMALE STR DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311711R0000	M8-3MR-1.0-M12-3FS-PUR	
1SET311713R0000	M8-3MR-3.0-M12-3FS-PUR	
1SET311714R0000	M8-3MR-5.0-M12-3FS-PUR	
1SET311718R0000	M8-4MR-1.0-M12-4FS-PUR	
1SET311720R0000	M8-4MR-3.0-M12-4FS-PUR	
1SET311721R0000	M8-4MR-5.0-M12-4FS-PUR	

M8 MALE RA - M12 FEMALE R/A DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311725R0000	M8-3MR-1.0-M12-3FR-PUR	
1SET311727R0000	M8-3MR-3.0-M12-3FR-PUR	
1SET311728R0000	M8-3MR-5.0-M12-3FR-PUR	
1SET311732R0000	M8-4MR-1.0-M12-4FR-PUR	
1SET311734R0000	M8-4MR-3.0-M12-4FR-PUR	
1SET311735R0000	M8-4MR-5.0-M12-4FR-PUR	

M8 FEMALE STR - M12 MALE STR DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311767R0000	M8-3FS-1.0-M12-3MS-PUR	
1SET311769R0000	M8-3FS-3.0-M12-3MS-PUR	
1SET311770R0000	M8-3FS-5.0-M12-3MS-PUR	
1SET311774R0000	M8-4FS-1.0-M12-4MS-PUR	
1SET311776R0000	M8-4FS-3.0-M12-4MS-PUR	
1SET311777R0000	M8-4FS-5.0-M12-4MS-PUR	

M8 FEMALE STR - M12 MALE R/A DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311781R0000	M8-3FS-1.0-M12-3MR-PUR	
1SET311783R0000	M8-3FS-3.0-M12-3MR-PUR	
1SET311784R0000	M8-3FS-5.0-M12-3MR-PUR	
1SET311788R0000	M8-4FS-1.0-M12-4MR-PUR	
1SET311790R0000	M8-4FS-3.0-M12-4MR-PUR	
1SET311791R0000	M8-4FS-5.0-M12-4MR-PUR	

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M8 FEMALE R/A - M12 MALE STR DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311823R0000	M8-3FR-1.0-M12-3MS-PUR	
1SET311826R0000	M8-3FR-5.0-M12-3MS-PUR	
1SET311830R0000	M8-4FR-1.0-M12-4MS-PUR	
1SET311832R0000	M8-4FR-3.0-M12-4MS-PUR	
1SET311833R0000	M8-4FR-5.0-M12-4MS-PUR	

M8 FEMALE R/A - M12 MALE R/A DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET311837R0000	M8-3FR-1.0-M12-3MR-PUR	
1SET311839R0000	M8-3FR-3.0-M12-3MR-PUR	
1SET311840R0000	M8-3FR-5.0-M12-3MR-PUR	
1SET311844R0000	M8-4FR-1.0-M12-4MR-PUR	
1SET311846R0000	M8-4FR-3.0-M12-4MR-PUR	
1SET311847R0000	M8-4FR-5.0-M12-4MR-PUR	

M12 MALE A-CODE STR SINGLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET312850R0000	M12-MS-4CON-PUR-1.0	
1SET312852R0000	M12-MS-4CON-PUR-3.0	
1SET312853R0000	M12-MS-4CON-PUR-5.0	
1SET312857R0000	M12-MS-5CON-PUR-1.0	
1SET312859R0000	M12-MS-5CON-PUR-3.0	
1SET312860R0000	M12-MS-5CON-PUR-5.0	
1SET312864R0000	M12-MS-8CON-PUR-1.0	
1SET312866R0000	M12-MS-8CON-PUR-3.0	
1SET312867R0000	M12-MS-8CON-PUR-5.0	
1SET314051R0000	M12-MS-4CON-PUR-1.0SH	
1SET314053R0000	M12-MS-4CON-PUR-3.0SH	
1SET314054R0000	M12-MS-4CON-PUR-5.0SH	
1SET314058R0000	M12-MS-5CON-PUR-1.0SH	
1SET314060R0000	M12-MS-5CON-PUR-3.0SH	
1SET314061R0000	M12-MS-5CON-PUR-5.0SH	
1SET314065R0000	M12-MS-8CON-PUR-1.0SH	
1SET314067R0000	M12-MS-8CON-PUR-3.0SH	
1SET314068R0000	M12-MS-8CON-PUR-5.0SH	

M12 MALE A-CODE R/A SINGLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET312920R0000	M12-MR-4CON-PUR-1.0	
1SET312922R0000	M12-MR-4CON-PUR-3.0	
1SET312923R0000	M12-MR-4CON-PUR-5.0	
1SET312927R0000	M12-MR-5CON-PUR-1.0	
1SET312929R0000	M12-MR-5CON-PUR-3.0	
1SET312930R0000	M12-MR-5CON-PUR-5.0	
1SET312934R0000	M12-MR-8CON-PUR-1.0	
1SET312936R0000	M12-MR-8CON-PUR-3.0	
1SET312937R0000	M12-MR-8CON-PUR-5.0	
1SET314121R0000	M12-MR-4CON-PUR-1.0SH	
1SET314123R0000	M12-MR-4CON-PUR-3.0SH	
1SET314124R0000	M12-MR-4CON-PUR-5.0SH	
1SET314128R0000	M12-MR-5CON-PUR-1.0SH	
1SET314130R0000	M12-MR-5CON-PUR-3.0SH	
1SET314131R0000	M12-MR-5CON-PUR-5.0SH	
1SET314135R0000	M12-MR-8CON-PUR-1.0SH	
1SET314137R0000	M12-MR-8CON-PUR-3.0SH	
1SET314138R0000	M12-MR-8CON-PUR-5.0SH	

M12 FEMALE A-CODE STR SINGLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET312990R0000	M12-FS-4CON-PUR-1.0	
1SET312992R0000	M12-FS-4CON-PUR-3.0	
1SET312993R0000	M12-FS-4CON-PUR-5.0	
1SET312997R0000	M12-FS-5CON-PUR-1.0	
1SET312999R0000	M12-FS-5CON-PUR-3.0	
1SET313000R0000	M12-FS-5CON-PUR-5.0	
1SET313004R0000	M12-FS-8CON-PUR-1.0	
1SET313006R0000	M12-FS-8CON-PUR-3.0	
1SET313007R0000	M12-FS-8CON-PUR-5.0	
1SET314191R0000	M12-FS-4CON-PUR-1.0SH	
1SET314193R0000	M12-FS-4CON-PUR-3.0SH	
1SET314194R0000	M12-FS-4CON-PUR-5.0SH	
1SET314198R0000	M12-FS-5CON-PUR-1.0SH	
1SET314200R0000	M12-FS-5CON-PUR-3.0SH	
1SET314201R0000	M12-FS-5CON-PUR-5.0SH	
1SET314205R0000	M12-FS-8CON-PUR-1.0SH	
1SET314207R0000	M12-FS-8CON-PUR-3.0SH	
1SET314208R0000	M12-FS-8CON-PUR-5.0SH	

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M12 FEMALE A-CODE R/A SINGLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET313060R0000	M12-FR-4CON-PUR-1.0	
1SET313062R0000	M12-FR-4CON-PUR-3.0	
1SET313063R0000	M12-FR-4CON-PUR-5.0	
1SET313067R0000	M12-FR-5CON-PUR-1.0	
1SET313069R0000	M12-FR-5CON-PUR-3.0	
1SET313070R0000	M12-FR-5CON-PUR-5.0	
1SET313074R0000	M12-FR-8CON-PUR-1.0	
1SET313076R0000	M12-FR-8CON-PUR-3.0	
1SET313077R0000	M12-FR-8CON-PUR-5.0	
1SET314261R0000	M12-FR-4CON-PUR-1.0SH	
1SET314263R0000	M12-FR-4CON-PUR-3.0SH	
1SET314264R0000	M12-FR-4CON-PUR-5.0SH	
1SET314268R0000	M12-FR-5CON-PUR-1.0SH	
1SET314270R0000	M12-FR-5CON-PUR-3.0SH	
1SET314271R0000	M12-FR-5CON-PUR-5.0SH	
1SET314275R0000	M12-FR-8CON-PUR-1.0SH	
1SET314277R0000	M12-FR-8CON-PUR-3.0SH	
1SET314278R0000	M12-FR-8CON-PUR-5.0SH	

M12 A-CODE MALE STR - FEMALE STR DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET313169R0000	M12-4MS-1.0-M12-4FS-PUR	
1SET313171R0000	M12-4MS-3.0-M12-4FS-PUR	
1SET313172R0000	M12-4MS-5.0-M12-4FS-PUR	
1SET313176R0000	M12-5MS-1.0-M12-5FS-PUR	
1SET313178R0000	M12-5MS-3.0-M12-5FS-PUR	
1SET313179R0000	M12-5MS-5.0-M12-5FS-PUR	
1SET314367R0000	M12-4MS-1.0SH-M12-4FS-PUR	
1SET314369R0000	M12-4MS-3.0SH-M12-4FS-PUR	
1SET314370R0000	M12-4MS-5.0SH-M12-4FS-PUR	
1SET314374R0000	M12-5MS-1.0SH-M12-5FS-PUR	
1SET314376R0000	M12-5MS-3.0SH-M12-5FS-PUR	
1SET314377R0000	M12-5MS-5.0SH-M12-5FS-PUR	

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M12 A-CODE MALE STR - FEMALE R/A DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET313204R0000	M12-4MS-1.0-M12-4FR-PUR	
1SET313206R0000	M12-4MS-3.0-M12-4FR-PUR	
1SET313207R0000	M12-4MS-5.0-M12-4FR-PUR	
1SET313211R0000	M12-5MS-1.0-M12-5FR-PUR	
1SET313213R0000	M12-5MS-3.0-M12-5FR-PUR	
1SET313214R0000	M12-5MS-5.0-M12-5FR-PUR	
1SET314402R0000	M12-4MS-1.0SH-M12-4FR-PUR	
1SET314404R0000	M12-4MS-3.0SH-M12-4FR-PUR	
1SET314405R0000	M12-4MS-5.0SH-M12-4FR-PUR	
1SET314409R0000	M12-5MS-1.0SH-M12-5FR-PUR	
1SET314411R0000	M12-5MS-3.0SH-M12-5FR-PUR	
1SET314412R0000	M12-5MS-5.0SH-M12-5FR-PUR	

M12 A-CODE MALE R/A - FEMALE STR DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET313309R0000	M12-4MR-1.0-M12-4FS-PUR	
1SET313311R0000	M12-4MR-3.0-M12-4FS-PUR	
1SET313312R0000	M12-4MR-5.0-M12-4FS-PUR	
1SET313316R0000	M12-5MR-1.0-M12-5FS-PUR	
1SET313318R0000	M12-5MR-3.0-M12-5FS-PUR	
1SET313319R0000	M12-5MR-5.0-M12-5FS-PUR	
1SET314507R0000	M12-4MR-1.0SH-M12-4FS-PUR	
1SET314509R0000	M12-4MR-3.0SH-M12-4FS-PUR	
1SET314510R0000	M12-4MR-5.0SH-M12-4FS-PUR	
1SET314514R0000	M12-5MR-1.0SH-M12-5FS-PUR	
1SET314516R0000	M12-5MR-3.0SH-M12-5FS-PUR	
1SET314517R0000	M12-5MR-5.0SH-M12-5FS-PUR	

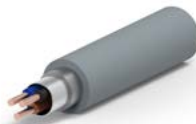## M12 A-CODE MALE R/A - FEMALE R/A DOUBLE ENDED CORDSET

EWS PN	Part Description	Product Image
1SET313344R0000	M12-4MR-1.0-M12-4FR-PUR	
1SET313346R0000	M12-4MR-3.0-M12-4FR-PUR	
1SET313347R0000	M12-4MR-5.0-M12-4FR-PUR	
1SET313351R0000	M12-5MR-1.0-M12-5FR-PUR	
1SET313353R0000	M12-5MR-3.0-M12-5FR-PUR	
1SET313354R0000	M12-5MR-5.0-M12-5FR-PUR	
1SET314542R0000	M12-4MR-1.0SH-M12-4FR-PUR	
1SET314544R0000	M12-4MR-3.0SH-M12-4FR-PUR	
1SET314545R0000	M12-4MR-5.0SH-M12-4FR-PUR	
1SET314549R0000	M12-5MR-1.0SH-M12-5FR-PUR	
1SET314551R0000	M12-5MR-3.0SH-M12-5FR-PUR	
1SET314552R0000	M12-5MR-5.0SH-M12-5FR-PUR	

M12 FEMALE A-CODE R/A SINGLE ENDED CORDSETM8 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	
Contruction	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	
Contruction	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	PVC					PUR				
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
Contruction	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	PVC					PUR				
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
Contruction	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

ENTRELEC 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 seem 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 ENTRELEC an one-stop shop. They have 360-degree shielding against EMI for extensive 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.

ENTRELEC 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

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

KEY FEATURES

- IP67 rated: dust and water resistant
- 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

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APPLICATIONS

- Industrial communications
- Industrial machinery
- Industrial automation
- Machine tools
- Robotics
- Material handling
- Process control systems

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

MECHANICAL

- Durability: up to 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 -40°C to +80°C
- CC-Link PVC:
  Operating temperature -30°C to +60°C

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)

ENTRELEC M8/M12/RJ45 CATALOG

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

EWS PN	Part Description	Product Image
1SET315057R0000	M12A5-MS-PVC-0.5M	
1SET315058R0000	M12A5-MS-PVC-1.0M	
1SET315061R0000	M12A5-MS-PVC-2.0M	
1SET315062R0000	M12A5-MS-PVC-4.0M	

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

EWS PN	Part Description	Product Image
1SET315067R0000	M12A5-MS-PUR-0.5M	
1SET315068R0000	M12A5-MS-PUR-1.0M	
1SET315070R0000	M12A5-MS-PUR-2.0M	
1SET315071R0000	M12A5-MS-PUR-4.0M	

DEVICENET MALE R/A M12 A-CODE 5POS CABLE ASSEMBLIES SINGLE ENDED PVC

EWS PN	Part Description	Product Image
1SET315075R0000	M12A5-MR-PVC-0.5M	
1SET315076R0000	M12A5-MR-PVC-1.0M	
1SET315078R0000	M12A5-MR-PVC-2.0M	
1SET315079R0000	M12A5-MR-PVC-4.0M	

DEVICENET MALE R/A M12 A-CODE 5POS CABLE ASSEMBLIES SINGLE ENDED PVC

EWS PN	Part Description	Product Image
1SET315083R0000	M12A5-MR-PUR-0.5M	
1SET315084R0000	M12A5-MR-PUR-1.0M	
1SET315086R0000	M12A5-MR-PUR-2.0M	
1SET315087R0000	M12A5-MR-PUR-4.0M	

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

EWS PN	Part Description	Product Image
1SET315091R0000	M12A5-FS-PVC-0.5M	
1SET315092R0000	M12A5-FS-PVC-1.0M	
1SET315094R0000	M12A5-FS-PVC-2.0M	
1SET315095R0000	M12A5-FS-PVC-4.0M	

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

EWS PN	Part Description	Product Image
1SET315091R0000	M12A5-FS-PVC-0.5M	
1SET315092R0000	M12A5-FS-PVC-1.0M	
1SET315094R0000	M12A5-FS-PVC-2.0M	
1SET315095R0000	M12A5-FS-PVC-4.0M	

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DEVICENET MALE STR - FEMALE R/A M12 A-CODE 5POS CABLE ASSEMBLIES DOUBLE ENDED PUR

EWS PN	Part Description	Product Image
1SET315147R0000	M12A5-MS-FR-PUR-0.5M	
1SET315148R0000	M12A5-MS-FR-PUR-1.0M	
1SET315150R0000	M12A5-MS-FR-PUR-2.0M	
1SET315151R0000	M12A5-MS-FR-PUR-4.0M	

DEVICENET MALE R/A - FEMALE STR M12 A-CODE 5POS CABLE ASSEMBLIES DOUBLE ENDED PVC

EWS PN	Part Description	Product Image
1SET315155R0000	M12A5-MR-FS-PVC-0.5M	
1SET315156R0000	M12A5-MR-FS-PVC-1.0M	
1SET315158R0000	M12A5-MR-FS-PVC-2.0M	
1SET315159R0000	M12A5-MR-FS-PVC-4.0M	

DEVICENET MALE R/A - FEMALE STR M12 A-CODE 5POS CABLE ASSEMBLIES DOUBLE ENDED PUR

EWS PN	Part Description	Product Image
1SET315163R0000	M12A5-MR-FS-PUR-0.5M	
1SET315164R0000	M12A5-MR-FS-PUR-1.0M	
1SET315166R0000	M12A5-MR-FS-PUR-2.0M	
1SET315167R0000	M12A5-MR-FS-PUR-4.0M	

PROFIBUS MALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR FLEX/DRAG CHAIN

EWS PN	Part Description	Product Image
1SET315174R0000	M12B2-MS-PUR-0.5M	
1SET315175R0000	M12B2-MS-PUR-1.0M	
1SET315177R0000	M12B2-MS-PUR-2.0M	
1SET315178R0000	M12B2-MS-PUR-4.0M	

PROFIBUS MALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR TORSION

EWS PN	Part Description	Product Image
1SET315182R0000	M12B2-MS-PUR TORSION-0.5M	
1SET315183R0000	M12B2-MS-PUR TORSION-1.0M	
1SET315185R0000	M12B2-MS-PUR TORSION-2.0M	
1SET315186R0000	M12B2-MS-PUR TORSION-4.0M	

PROFIBUS MALE R/A M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR FLEX/DRAG CHAIN

EWS PN	Part Description	Product Image
1SET315190R0000	M12B2-MR-PUR-0.5M	
1SET315191R0000	M12B2-MR-PUR-1.0M	
1SET315193R0000	M12B2-MR-PUR-2.0M	
1SET315194R0000	M12B2-MR-PUR-4.0M	

ENTRELEC M8/M12/RJ45 CATALOG

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

EWS PN	Part Description	Product Image
1SET315099R0000	M12A5-FS-PUR-0.5M	
1SET315100R0000	M12A5-FS-PUR-1.0M	
1SET315102R0000	M12A5-FS-PUR-2.0M	
1SET315103R0000	M12A5-FS-PUR-4.0M	

DEVICENET FEMALE R/A M12 A-CODE 5POS CABLE ASSEMBLIES SINGLE ENDED PVC

EWS PN	Part Description	Product Image
1SET315107R0000	M12A5-FR-PVC-0.5M	
1SET315108R0000	M12A5-FR-PVC-1.0M	
1SET315110R0000	M12A5-FR-PVC-2.0M	
1SET315111R0000	M12A5-FR-PVC-4.0M	

DEVICENET FEMALE R/A M12 A-CODE 5POS CABLE ASSEMBLIES SINGLE ENDED PUR

EWS PN	Part Description	Product Image
1SET315115R0000	M12A5-FR-PUR-0.5M	
1SET315116R0000	M12A5-FR-PUR-1.0M	
1SET315118R0000	M12A5-FR-PUR-2.0M	
1SET315119R0000	M12A5-FR-PUR-4.0M	

DEVICENET MALE STR - FEMALE STR M12 A-CODE 5POS CABLE ASSEMBLIES DOUBLE ENDED PVC

EWS PN	Part Description	Product Image
1SET315123R0000	M12A5-MS-FS-PVC-0.5M	
1SET315124R0000	M12A5-MS-FS-PVC-1.0M	
1SET315126R0000	M12A5-MS-FS-PVC-2.0M	
1SET315127R0000	M12A5-MS-FS-PVC-4.0M	

DEVICENET MALE STR - FEMALE STR M12 A-CODE 5POS CABLE ASSEMBLIES DOUBLE ENDED PUR

EWS PN	Part Description	Product Image
1SET315131R0000	M12A5-MS-FS-PUR-0.5M	
1SET315132R0000	M12A5-MS-FS-PUR-1.0M	
1SET315134R0000	M12A5-MS-FS-PUR-2.0M	
1SET315135R0000	M12A5-MS-FS-PUR-4.0M	

DEVICENET MALE STR - FEMALE R/A M12 A-CODE 5POS CABLE ASSEMBLIES DOUBLE ENDED PVC

EWS PN	Part Description	Product Image
1SET315139R0000	M12A5-MS-FR-PVC-0.5M	
1SET315140R0000	M12A5-MS-FR-PVC-1.0M	
1SET315142R0000	M12A5-MS-FR-PVC-2.0M	
1SET315143R0000	M12A5-MS-FR-PVC-4.0M	

ENTRELEC M8/M12/RJ45 CATALOG

PROFIBUS MALE R/A M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR TORSION

EWS PN	Part Description	Product Image
1SET315198R0000	M12B2-MR-PUR TORSION-0.5M	
1SET315199R0000	M12B2-MR-PUR TORSION-1.0M	
1SET315201R0000	M12B2-MR-PUR TORSION-2.0M	
1SET315202R0000	M12B2-MR-PUR TORSION-4.0M	

PROFIBUS FEMALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR FLEX/DRAG CHAIN

EWS PN	Part Description	Product Image
1SET315206R0000	M12B2-FS-PUR-0.5M	
1SET315207R0000	M12B2-FS-PUR-1.0M	
1SET315209R0000	M12B2-FS-PUR-2.0M	
1SET315210R0000	M12B2-FS-PUR-4.0M	

PROFIBUS FEMALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR TORSION

EWS PN	Part Description	Product Image
1SET315214R0000	M12B2-FS-PUR TORSION-0.5M	
1SET315215R0000	M12B2-FS-PUR TORSION-1.0M	
1SET315217R0000	M12B2-FS-PUR TORSION-2.0M	
1SET315218R0000	M12B2-FS-PUR TORSION-4.0M	

PROFIBUS FEMALE R/A M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR FLEX/DRAG CHAIN

EWS PN	Part Description	Product Image
1SET315222R0000	M12B2-FR-PUR-0.5M	
1SET315223R0000	M12B2-FR-PUR-1.0M	
1SET315225R0000	M12B2-FR-PUR-2.0M	
1SET315226R0000	M12B2-FR-PUR-4.0M	

PROFIBUS FEMAL R/A M12 B-CODE 2-POS CABLE ASSEMBLIES SINGLE ENDED PUR TORSION

EWS PN	Part Description	Product Image
1SET315230R0000	M12B2-FR-PUR TORSION-0.5M	
1SET315231R0000	M12B2-FR-PUR TORSION-1.0M	
1SET315233R0000	M12B2-FR-PUR TORSION-2.0M	
1SET315234R0000	M12B2-FR-PUR TORSION-4.0M	

PROFIBUS MALE STR-FEMALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES DOUBLE ENDED PUR FLEX/DRAG CHAIN

EWS PN	Part Description	Product Image
1SET315238R0000	M12B2-MS-FS-PUR-0.5M	
1SET315239R0000	M12B2-MS-FS-PUR-1.0M	
1SET315241R0000	M12B2-MS-FS-PUR-2.0M	
1SET315242R0000	M12B2-MS-FS-PUR-4.0M	

PROFIBUS MALE STR - FEMALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES DOUBLE ENDED PUR TORSION

EWS PN	Part Description	Product Image
1SET315246R0000	M12B2-MS-FS-PUR TORSION-0.5M	
1SET315247R0000	M12B2-MS-FS-PUR TORSION-1.0M	
1SET315249R0000	M12B2-MS-FS-PUR TORSION-2.0M	
1SET315250R0000	M12B2-MS-FS-PUR TORSION-4.0M	

PROFIBUS MALE STR - FEMALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES DOUBLE ENDED PUR TORSION

EWS PN	Part Description	Product Image
1SET315254R0000	M12B2-MS-FR-PUR-0.5M	
1SET315255R0000	M12B2-MS-FR-PUR-1.0M	
1SET315257R0000	M12B2-MS-FR-PUR-2.0M	
1SET315258R0000	M12B2-MS-FR-PUR-4.0M	

PROFIBUS MALE STR-FEMALE R/A M12 B-CODE 2-POS CABLE ASSEMBLIES DOUBLE ENDED PUR TORSION

EWS PN	Part Description	Product Image
1SET315262R0000	M12B2-MS-FR-PUR TORSION-0.5M	
1SET315263R0000	M12B2-MS-FR-PUR TORSION-1.0M	
1SET315265R0000	M12B2-MS-FR-PUR TORSION-2.0M	
1SET315266R0000	M12B2-MS-FR-PUR TORSION-4.0M	

PROFIBUS MALE R/A - FEMALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES DOUBLE ENDED PUR FLEX/DRAG CHAIN

EWS PN	Part Description	Product Image
1SET315270R0000	M12B2-MR-FS-PUR-0.5M	
1SET315271R0000	M12B2-MR-FS-PUR-1.0M	
1SET315273R0000	M12B2-MR-FS-PUR-2.0M	
1SET315274R0000	M12B2-MR-FS-PUR-4.0M	

PROFIBUS MALE R/A - FEMALE STR M12 B-CODE 2-POS CABLE ASSEMBLIES DOUBLE ENDED PUR TORSION

EWS PN	Part Description	Product Image
1SET315278R0000	M12B2-MR-FS-PUR TORSION-0.5M	
1SET315279R0000	M12B2-MR-FS-PUR TORSION-1.0M	
1SET315281R0000	M12B2-MR-FS-PUR TORSION-2.0M	
1SET315282R0000	M12B2-MR-FS-PUR TORSION-4.0M	

M12 INDUSTRIAL ETHERNET D-CODE CABLE ASSEMBLY CONNECTIVITY

ENTRELEC 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 one-stop shop for M8/M12 cable assemblies for industrial network communications.

ENTRELEC 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

- ENTRELEC 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

- ENTRELEC M12 cable assemblies will play an important role in bringing the Industrial Internet of Things to life

KEY 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 such as, 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 30m

APPLICATIONS

- Industrial communications
- Process control systems
- Industrial machinery
- Industrial automation
- Machine tools
- Robotics
- Material handling

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)

ELECTRICAL

M12 D code 4 poles: 30V/1.5A

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

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

ENTRELEC M8/M12/RJ45 CATALOG

M12 MALE STR ETHERNET D-CODE 4-POS CABLE ASSEMBLIES SINGLE ENDED TYPE B PVC

EWS PN	Part Description	Product Image
1SET315286R0000	M12D4-MS-PVC TYPE B-0.5M	
1SET315287R0000	M12D4-MS-PVC TYPE B-1.0M	
1SET315288R0000	M12D4-MS-PVC TYPE B-5.0M	
1SET315290R0000	M12D4-MS-PVC TYPE B-2.0M	

M12 MALE STR ETHERNET D-CODE 4-POS CABLE ASSEMBLIES SINGLE ENDED TYPE C PUR

EWS PN	Part Description	Product Image
1SET315304R0000	M12D4-MS-PUR TYPE C GREEN-0.5M	
1SET315305R0000	M12D4-MS-PUR TYPE C GREEN-1.0M	
1SET315306R0000	M12D4-MS-PUR TYPE C GREEN-5.0M	
1SET315308R0000	M12D4-MS-PUR TYPE C GREEN-2.0M	

M12 MALE R/A ETHERNET D-CODE 4-POS CABLE ASSEMBLIES SINGLE ENDED TYPE B PVC

EWS PN	Part Description	Product Image
1SET315322R0000	M12D4-MR-PVC TYPE B-0.5M	
1SET315323R0000	M12D4-MR-PVC TYPE B-1.0M	
1SET315324R0000	M12D4-MR-PVC TYPE B-5.0M	
1SET315326R0000	M12D4-MR-PVC TYPE B-2.0M	

M12 MALE R/A ETHERNET D-CODE 4-POS CABLE ASSEMBLIES SINGLE ENDED TYPE C PUR

EWS PN	Part Description	Product Image
1SET315340R0000	M12D4-MR-PUR TYPE C GREEN-0.5M	
1SET315341R0000	M12D4-MR-PUR TYPE C GREEN-1.0M	
1SET315342R0000	M12D4-MR-PUR TYPE C GREEN-5.0M	
1SET315344R0000	M12D4-MR-PUR TYPE C GREEN-2.0M	

M12 MALE STR- MALE STR ETHERNET D-CODE 4-POS CABLE ASSEMBLIES DOUBLE ENDED TYPE B PVC

EWS PN	Part Description	Product Image
1SET315358R0000	M12D4-MS-MS-PVC TYPE B-0.5M	
1SET315359R0000	M12D4-MS-MS-PVC TYPE B-1.0M	
1SET315360R0000	M12D4-MS-MS-PVC TYPE B-5.0M	
1SET315362R0000	M12D4-MS-MS-PVC TYPE B-2.0M	

M12 MALE STR - MALE STR ETHERNET D-CODE 4-POS CABLE ASSEMBLIES DOUBLE ENDED TYPE C PUR

EWS PN	Part Description	Product Image
1SET315377R0000	M12D4-MS-MS-PUR TYPE C GREEN-0.5M	
1SET315378R0000	M12D4-MS-MS-PUR TYPE C GREEN-1.0M	
1SET315379R0000	M12D4-MS-MS-PUR TYPE C GREEN-5.0M	
1SET315381R0000	M12D4-MS-MS-PUR TYPE C GREEN-2.0M	

ENTRELEC M8/M12/RJ45 CATALOG

M12 MALE STR - MALE R/A ETHERNET D-CODE 4-POS CABLE ASSEMBLIES DOUBLE ENDED TYPE B PVC

EWS PN	Part Description	Product Image
1SET315395R0000	M12D4-MS-MR-PVC TYPE B-0.5M	
1SET315396R0000	M12D4-MS-MR-PVC TYPE B-1.0M	
1SET315397R0000	M12D4-MS-MR-PVC TYPE B-5.0M	
1SET315399R0000	M12D4-MS-MR-PVC TYPE B-2.0M	

M12 MALE STR - MALE R/A ETHERNET D-CODE 4-POS CABLE ASSEMBLIES DOUBLE ENDED TYPE C PUR

EWS PN	Part Description	Product Image
1SET315413R0000	M12D4-MS-MR-PUR TYPE C GREEN-0.5M	
1SET315414R0000	M12D4-MS-MR-PUR TYPE C GREEN-1.0M	
1SET315415R0000	M12D4-MS-MR-PUR TYPE C GREEN-5.0M	
1SET315417R0000	M12D4-MS-MR-PUR TYPE C GREEN-2.0M	

M12 X-CODE FIELD INSTALLABLE CONNECTOR

With the M12 X-code field installable connector, installers and machinery makers can make a Cat6A connection termination error free and tool-less, faster than alternative standard data connector solutions.

With only two parts the M12 X-code FI connector is easy to install in the field without the chance of dropping parts into places where they can not be recovered from.

The cable leads can be stripped at arbitrary length (so no measuring upfront required) and will be terminated for optimal performance. This unique standardized tool-less connector series enables you to fasten assembly time to the cable and cable braid.

With the final closing of the connector, an error free 10 Gb/s connection (Cat6A) with IP67 (optionally IP68) environmental shielding is realized without the usage of any tools.

BENEFITS

- Fast, error-free installation because of reliable IDC contacts, automatic wire cut-o function integrated in the connector and tool-less installation

- Terminates most common wire sizes
  - AWG 22-24-26, solid and stranded;
    Outer Cable Diameter 6.5mm..9.0mm

- Visible inspection of cable braid and wire assignment possible before final connector assembly

APPLICATIONS

- PLC
- Servo drive
- Industrial ethernet switches
- Industrial wireless access points
- Industrial machinery
- Robotics

MECHANICAL

- Integrated cable strain relief (100N).
- Operating temperature range -40∞C to +85∞C.
- Number of mating cycles > 100.
- Assembly of wires from AWG 22 up to AWG 26
- Re-assembly; 22AWG up to 3 times, AWG24/26 up to 7 times

KEY FEATURES

- Insulation Displacement Contacts (IDC)
- Automatic wire cut-o function
- integrated in connector
- Tool-less assembly installation
- Speed up to 10 GB/s

MATERIALS

- UL94-V0

STANDARDS AND SPECIFICATIONS

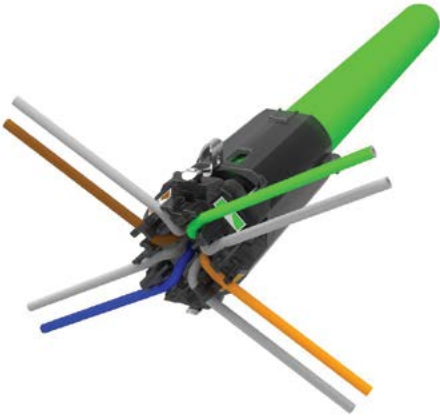- ISO/IEC 61076-2-109
- UL recognition: C Ru US

ELECTRICAL

- 4x2 pair, Cat6A, 60V dielectric strength 1,5 kV AC rms (50/60Hz) / 60s between shield and signal contacts according to IEC 60512-2, test 4a
- PoE: IEEE 802.3at, see IEC TR 29125: currents up to 1 A per pair (500 mA per conductor) with all 4 pairs energized

PRODUCT OFFERINGS

Part Number	Description
1SET310625R0000	M12 X-code field installable cable connector (easy connect)

Wire assignment

1

PreTermination

2

Connector closure

3

Complete connector

4

ODVA VARIANT 1 RJ45 CONNECTORS

The ODVA Variant 1 RJ45 connectors are designed to handle harsh environments.

These products are designed with a rugged housing in either flame-resistant, glass-reinforced PBT or die-cast, nickel-plated zinc, both providing resistance to chemicals and UV radiation. Double-bayonet locking provides IP67 resistance to ingress of dust and water. The connectors also provide durability for various applications. They allow designers to place external ports on their equipment that will be installed in locations both indoors and outdoors.

BENEFITS

- Provides reliable IP67 protection rate in harsh environments with double bayonet locking
- Bulkhead receptacle mounts to either outside or inside panel cutout for design flexibility
- Wire-side components maintain environmental ratings when engaged with panel mounted version

APPLICATIONS

- Industrial data network systems
- Automation systems
- Renewable energies
- Test devices and instruments
- Fiber to the home / fiber to the antenna
- Process control

MECHANICAL

- ODVA variant 1 rated connector
- IP67 rated
- Plastic and metal versions available
- Bayonet style design for quick connect
- Cap available to disconnect port and maintain environmental qualifications

KEY FEATURES

- Bayonet locking provides reliable sealing in harsh environments
- RJ45 connections that are rated to CAT5E
- UV-resistant
- Chemical resistant
- Sealed IP67 solution in metal or plastic

MATERIALS

- PBT GF UL 94 V-0
- Housing material - Zinc die cast
- Plating of housing - Nickel plated

STANDARDS & SPECIFICATIONS

- Product UL approved E202784
- IEC 60603-7

ELECTRICAL

- Meets RJ45 connector standard electrical specification
- Dielectric with standing voltage signal 1000 V DC 60sec.

PART NUMBER

Part Number	Description
1SET316001R0000	RJ45 CAT5e panel mount socket(PBT)
1SET316002R0000	RJ45 protection cap (PBT)
1SET316003R0000	RJ45 CAT5e panel mount socket
1SET316004R0000	IDC plug, PBT
1SET316005R0000	IDC plug, Die Cast
1SET316006R0000	RJ45 protection cap

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