EPIC® DATA M12D

M12 D-coded connectors

LAPP GROUP

Field mountable Industrial Ethernet Connectors
– quick and without special tools

With respect to field mountable connectors, the main focus should be on ensuring that the connection process is as easy as possible and performed without the use of special tools. In addition, the connectors should be able to connect to as many cables as possible. This means that they cover a broad spectrum of core cross-sections and diameters, conductor stranding and cable outer diameters.

Connectors that are easy to connect play a particularly important role in Industrial Ethernet, whether it is the RJ45 that is familiar from office use or the M12 that is standard in the industrial environment. The EPIC® Data connector range is easy to connect to the matching cable – without the use of special tools. This not only saves time during assembly, this helps you, our customer, save money.

The EPIC® DATA M12D is a D-coded Cat.5 connector for a quick and easy installation in the field. The installation is done within 3 basic steps: At first the cable outer sheath needs to be removed and following placed on the stuffer cap. On the stuffer cap there is a coloured captive identification for an easy and definite assignment of wires to pins. At last the housing is joined with the stuffer cap and securely screwed together.

Almost every Cat.5 cable can be attached to the EPIC® DATA M12D: from the classic Profinet cable with AWG22, to thin Industrial Ethernet cables with AWG26.

With the new EPIC® DATA M12D transmission rates up to 100 Mbit/s and a protection degree of IP67 are realizable.

EPIC® DATA M12D

M12 D-coded connectors

Info

- CAT.5-Performance
- Installation without tools

Benefit

- Space saving due to compact design
- Robust zinc die-cast housing with vibration protection
- Avoid connection mistakes by coloured identification of the stuffer cap
- Time saving by easy termination
- UL certified for the export to the north-american market

Product features

- M12 connector acc. to DIN EN 61076-2-101
- Cat.5 for up to 100 Mbit/s, D-coded
- Cross section AWG26 – AWG22
- Wire diameter 0,85 – 1,6 mm
- Protection degree IP 67
- IDC connection
- Colour code acc. to::

Technical data

ETIM 5.0 Class-ID: EC001121
ETIM 5.0 Class-Description: Modular connector

Protection rating
IP 67

Ambient temperature (operation)
-25 °C to +85 °C

PROFINET (white, yellow, blue, orange)

TIA 568 (white-orange, orange; white-green, green)

Article number	Article designation	Min. outer diameter (mm)	Max. outer diameter (mm)	AWG solid	AWG 7-wire
M12 D-coded plug, straight, colour coding acc. to PROFINET					
21700647	ED-IE-AX-M12D-5-PN-67-FC	6,2	9,7	24 - 22	26 - 22
M12 D-coded plug, straight, colour coding acc. to TIA 568					
21700648	ED-IE-AX-M12D-5-67	5,0	6,1	24 - 22	26 - 22

Photographs are not to scale and do not represent detailed images of the respective products.

Cables and connectors

A harmonized solution

In the times of Internet of Things the requirements to cabling technology are changing enormously. Growing data rates require a high-performance network. Continuity through all communication levels is needed, with a suitable cabling solution which withstands also the challenges of a rough industrial environment. You can rely on the continuous and high-quality overall system of cabling solutions from the Lapp Group to prevent failures, downtime and quality-related issues.

The Lapp Group offers a wide range of cables, ready to use assemblies and field mountable connectors with the fitting tools for an even easier and faster installation. With Lapp you will find for every cable the right connector. For Lapp it is important, that every connector is easy to assemble on to the fitting connector – preferably without special tools.

EPIC DATA M12D		Fitting cable			Fitting tool	
M12 D-coded connector, straight, PROFINET colour coding		**PROFINET cables Cat.5/Cat.5e**			**Fitting tool**	
Part number	**Article description**	**Application**	**Part number**	**Article description**	**Part number**	**Article description**
21700647	ED-IE-AX-M12D-5-PN-67-FC	Fixed installation	2170891	ETHERLINE® PN Cat.5e Y	61735820	STAR STRIP
			2170893	ETHERLINE® Y FC Cat.5	21124030	FC STRIP
			2170879	ETHERLINE® TRAY ER PN Y FC		
		Flexible use	2170886	ETHERLINE® PN Cat.5 Y FLEX FC		
			2170890	ETHERLINE® PN Cat.5e FRNC FLEX FC		
			2170889	ETHERLINE® MARINE FRNC FC Cat.5		
		Drag chain	2170894	ETHERLINE® FD P FC Cat.5		
		Armoured	2170496	ETHERLINE® Cat.5 ARM		
		Torsion	2170888	ETHERLINE® TORSION P Ct.5 AWM	61735820	STAR STRIP
		Outdoor use	2170901	ETHERLINE® Y Cat.5e BK		
		Extended temperature range	2170636	ETHERLINE® Cat.5e 105 plus		
		Food & Beverage	2170451	ETHERLINE® ROBUST PN Cat.5		
			2170454	ETHERLINE® ROBUST PN FR Cat.5		
M12 D-coded connector, straigjt, TIA 568 colour coding		**Industrial Ethernet cables Cat.5/Cat.5e**			**Fitting tool**	
Part number	**Article description**	**Application**	**Part number**	**Article description**	**Part number**	**Article description**
21700648	ED-IE-AX-M12D-5-67	Fixed installation	2170280	ETHERLINE® H Cat. 5e	61735820	STAR STRIP
			2170281	ETHERLINE® P Cat.5e		
		Flexible use	2170283	ETHERLINE® H FLEX Cat.5		
			2170284	ETHERLINE® P FLEX Cat.5		
		Flexible use	2170430	ETHERLINE® Y EC FLEX Cat.5e		
			2170431	ETHERLINE® P EC FLEX Cat.5e		

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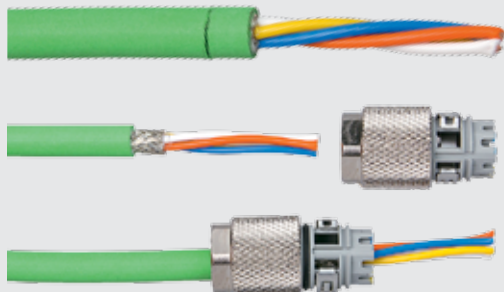# Mounting instructions PROFINET/TIA

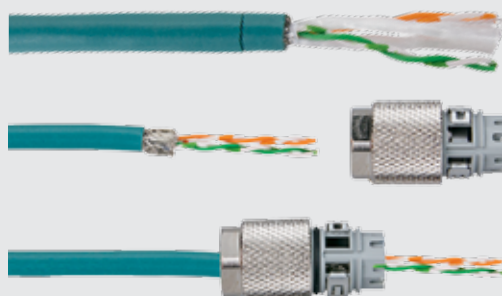## PROFINET colour coding
Article number 21700647

TIA colour coding
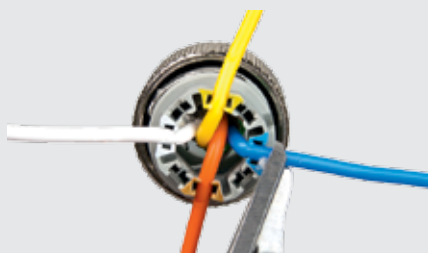Article number 21700648

Preparing the cable

- Remove outer sheath
- Guide the cable into the stuffer cap until the braided shield is positioned at the height of the braided clamps

- Press the braided clamps into the latching

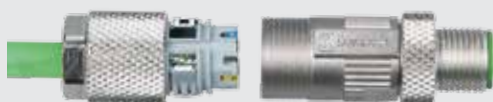### Positioning the cores in the stuffer cap

- Positioning the cores in the stuffer cap...

- ...and shorten the wires flush with the edge of the IDC loader.

Joining the stuffer cap to the housing

- Align the guiding groove of the stuffer cap and the strip of the housing with one another

- Securely screw together the stuffer cap and the housing

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Power and control cables

UNITRONIC®
Data communication systems

ETHERLINE®
Data communication systems
for ETHERNET technology

HITRONIC®
Optical transmission systems

EPIC®
Industrial connectors

SKINTOP®
Cable glands

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Protective cable conduit systems
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Marking systems