MDI interface for 10BASE-T1
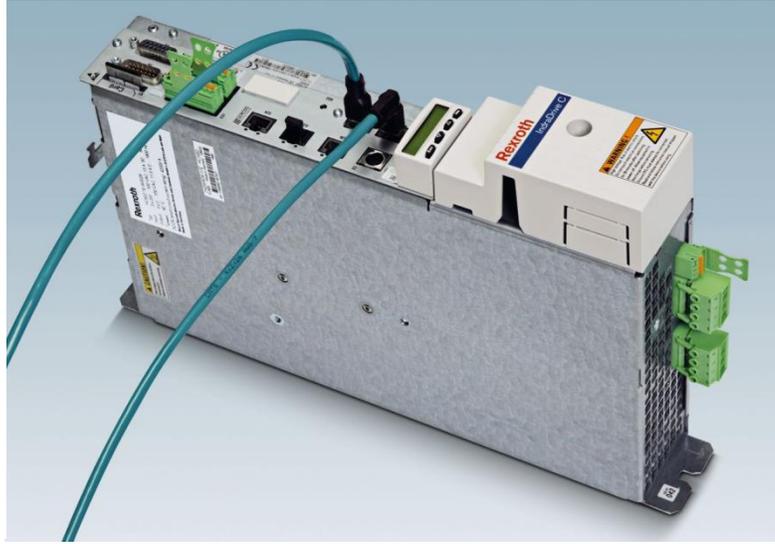
Bernd Horrmeyer

Phoenix Contact

IEEE 802.3cg

Long Beach, Jan.2019

Comment 315 and 320

IoT and the installation practice

10BASE-T1 is intended to connect IoT-devices: Sensors, Thermostats, Luminaires, Controls

10BASE-T1 is intended to be used in lighting, building-,factory- and process-automation

10BASE-T1 is going to replace other communication technologies

It seems to be wise to incur the practice in these industries

Photos by Phoenix Contact

Comment 315 and 320

- Different applications need different interface solutions

- Several applications uses pcb terminal blocks instead of connectors

- Cables up to AWG14 are not suitable for the defined connectors

- IEC 63171- series nor IEC 61076-3-125 is suitable for an interface at the device

- Senseless to mention any MDI connector for 10BASE-T1

- Suggest to modify 146.8.1 as follows:

> The mechanical interface to the balanced cabling is a 3-pin connector (BI_DA+, BI_DA–, and optional SHIELD) or alternatively a 2-pin connector with an optional additional mechanical shield connection or any other interface which conforms to the link segment specification defined in 146.7.
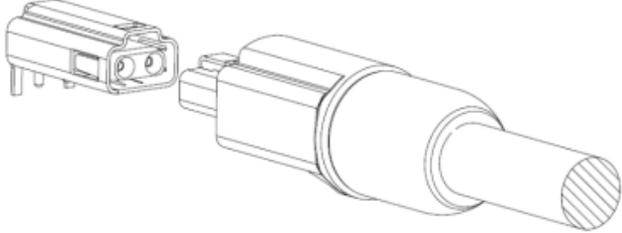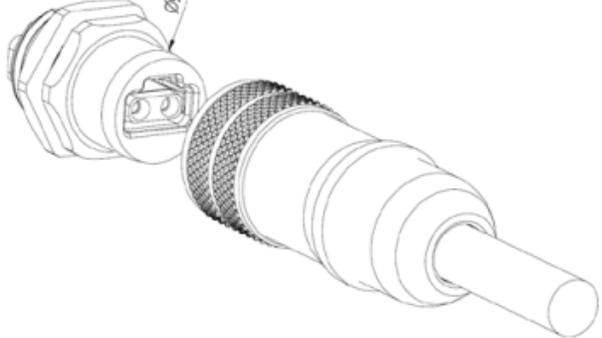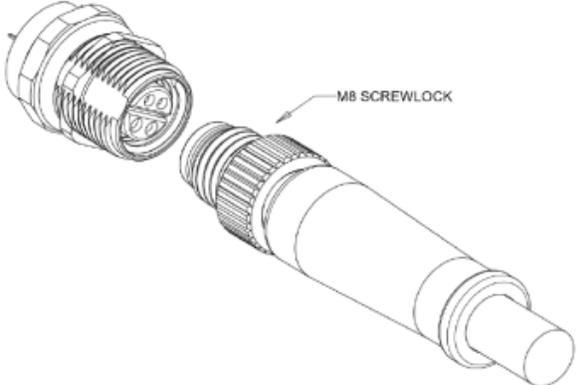
Comment 314 and 321

IEC 63171-6 ED1 = IEC 61076-3-125 ED1
Latest document: 48B/2600/CD COMMITTEE DRAFT (CD)

„IP20" does not fulfill MICE 2/3,
the connector may fulfill MICE 1

„High protection" variants likely fulfill MICE 2/3

Describe only one MICE 2/3 variant in the figures and the text

IEC SC 48B – Electrical connectors Specification available from: IEC General secretariat or from the addresses shown on the inside cover.	IEC 61076-3-125 Ed. 1
ELECTRONIC COMPONENTS DETAIL SPECIFICATION in accordance with IEC 61076-1	
	2-PIN IP20
	2-PIN High protection degree
	2 + 2 PIN (Hybrid, Power + Data) High protection degree