600-180-1AA11



TB20 bus coupler

PROFINET

- Modules can be replaced during operation (hot-swapping)
- 24 V DC power supply
- Integrated power supply unit for powering peripheral modules (2.5 A)
- Supplies the system’s I/O voltage (24 VDC)
- USB device port for online diagnostics, configuring parameters, setup, and firmware updates with "TB20 ToolBox"
- TB20 ToolBox simulation for commissioning the I/O system without a higher-level controller in order to test the system's operation (I/O check)
- Concealed "factory reset" switch for restoring the module to its factory settings
- I/O device as per PROFINET IO (IEC 61158-6-10)
- Integrated 2-port switch
- Full-duplex transmission rate of 100 Mbps
- 340 byte I/O data
- Up to 63 peripheral modules
- Conformance Class C
- Media Redundancy Protocol (MRP)
- Automatic addressing / hot-swapping (LLDP, DCP)
- Topology detection
- I&M; data
- Diagnostic alarms, process alarms, pull/plug alarms

Info

A functioning TB20 configuration will always require a bus coupler and at least one peripheral module.Note: Individual modules cannot be combined with the IO systems of other manufacturers.

The PROFINET bus coupler is designed to connect a PROFINET bus to TB20 peripheral modules. It can accommodate up to 63 modules of any kind connected in series with the bus coupler. The bus coupler supports hot-swapping for replacing modules during operation.In addition, it will recognize all connected peripheral modules and assign each module the corresponding inputs/outputs from the process image table. A functioning TB20 configuration will always require a bus coupler and at least one peripheral module.

Technical data

General information	
Order number	600-180-1AA11
Article name	TB20-C, PROFINET IO bus coupler
Scope of delivery	Bus coupler PROFINET IO, 24 V power supply connector, bus cover element, base module
Dimensions (DxWxH)	73 x 35 x 110 mm
Weight	Approx. 115 g
Number of modules that can be connected in series	63
Voltage supply	24 V DC, 18...28 V DC
Power dissipation	Max. 8 W
Permissible cable cross-section	AWG 16 .. 22
Mounting position	Any
PROFINET interface	
Number	2
Protocol	PROFINET IO as defined in IEC 61158-6-10
Physical layer	Ethernet
Transmission rate	100 Mbps full duplex
I/O image size	340 bytes
Connection	RJ45
integrated switch	Yes
Features	Conformance Class C,
Alarm functions	Diagnostic alarms,
Minimum cycle time	250 µsec.
IRT bridge delay	< 3 µsec.
USB interface	
Number	1
Protocol	Full-speed USB 1.1 device
Connection	Mini-USB
Isolation voltage	1.5 kV
Electrical isolation	Yes
Current draw	
Current draw without modules (internal)	75 mA
Power supply for modules	5 V DC, max 2.5 A
Ambient conditions	
Ambient temperature	0 °C ... +60 °C
Transport and storage temperature	-20 °C ... +80 °C
Relative air humidity	95 % r H without condensation
Protection rating	IP 20
Certifications	CE, UL
UL	
Surrounding Air Temperature	0 °C ... +50 °C
Pollution degree	2
CE	
Noise immunity	DIN EN 61000-6-2 "EMC Immunity"
Interference emission	DIN EN 61000-6-4 "EMC Emission"
Vibration and shock resistance	DIN EN 60068-2-6:2008 „Vibration", DIN EN 60068-2-27:2010 „Shock"