600-151-1AA11



TB20 bus coupler
PROFIBUS

- Modules can be replaced during operation (hot-swapping)
- 24 VDC 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 setting up the I/O system without a higher-level controller in order to test the system`s operation (I/O check)
- PROFIBUS DP slave as defined in EN 50170/IEC 61158
- Supports all PROFIBUS baud rates
- DP-V0 and DP-V1 support
- Up to 64 peripheral modules
- Up to 244 bytes of input data and 244 bytes of output data
- One class 1 master connection with 240 bytes of payload data
- Up to three class 2 master connections with 240 bytes of payload data (as a DP-V1 slave)
- I&M; data
- 3 LEDs, one of them bi-color
- Concealed "factory reset" switch for restoring the module to its factory settings

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 PROFIBUS-DP bus coupler is designed to connect a PROFIBUS bus to TB20 peripheral modules. It supports the DP-V0 and DP-V1 protocols.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, but can accommodate up to 64 modules of any kind connected in series with the bus coupler. The bus coupler supports hot-swap for replacing modules during operation. Bit packing:Starting with firmware version 1.20, the states of 2-bit and 4-bit I/O modules can be packed together in bytes, making it possible to take full advantage of all the space in the process image table. Parameters Diagnostic alarm: On | OffProcess alarm: On | OffPull/plug alarm: On | OffStartup when expected/actual configuration differ: On | Off (hot-swaping allowed: Yes | No)Identifier-related diagnostics: On | OffSubmodule status: On | OffChannel-related diagnostics: On | Off Note: Individual modules cannot be combined with the IO systems of other manufacturers.

Technical data

General information	
Order number	600-151-1AA11
Article name	TB20-C, PROFIBUS-DP bus coupler
Scope of delivery	Bus coupler PROFIBUS-DP, 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	64
Voltage supply	24 VDC, 18–28 VDC
Power dissipation	Max. 8 W
Permissible cable cross-section	AWG 16 .. 22
Mounting position	Any
PROFIBUS interface	
Number	1
Protocol	PROFIBUS DP/V0 & DP/V1
Transmission rate	9.6 Kbaud ... 12 Mbaud, automatic detection
I/O image size	244/244 bytes
Parameter configuration length	244 bytes
Interface	RS485
Connection	9-pin D-sub female connector
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"