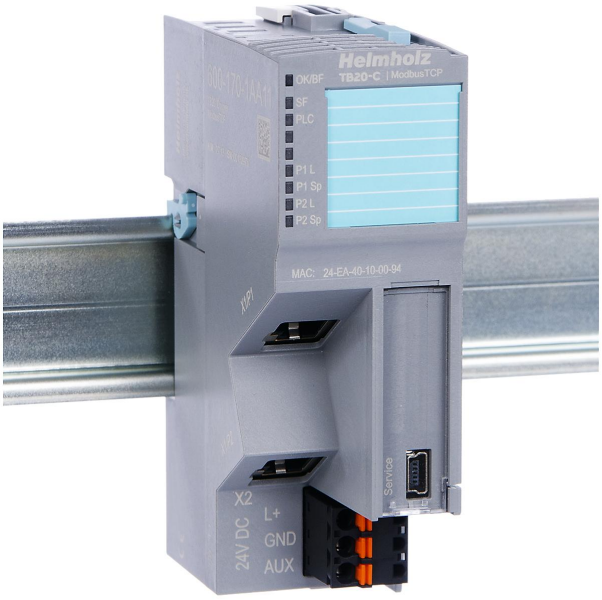
600-170-1AA11



TB20 bus coupler

ModbusTCP

- 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 functionality (I/O check)
- Concealed "factory reset" switch for restoring the module to its factory settings
- Connection watchdog for connection monitoring
- Simultaneous access to up to 10 stations (TCP connections)
- Integrated two-port switch
- Up to 64 peripheral modules
- 2 x RJ45 connections
- 2048 bytes of input, 2048 bytes of output data
- 126 bytes of parameter data per module
- The coupler's behavior can be configured using control registers
- The coupler's status can be read out using status registers
- 7 LEDs, one of them bi-color

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 ModbusTCP bus coupler makes it possible to access data from peripheral modules using the ModbusTCP protocol, but can accommodate up to 64 modules of any kind connected in series with the bus coupler.The ModbusTCP bus coupler features an integrated two-port switch that allows for star and line topology configurations.A large I/O image table size of 2 kbytes makes it possible to implement comprehensive and complex systems.The control and status registers can be used to configure and monitor the coupler's behavior with ModbusTCP.TB20 ToolBox can be used to easily configure the system structure and the various module parameters, and transfer the corresponding settings to the coupler. A functioning TB20 configuration will always require a bus coupler and at least one peripheral module. The bus coupler supports hot-swapping for replacing modules during operation. Note: Individual modules cannot be combined with the IO systems of other manufacturers.

Technical data

General information	
Order number	600-170-1AA11
Article name	TB20-C, ModbusTCP bus coupler
Scope of delivery	Bus coupler ModbusTCP, 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
ModbusTCP interface	
Number	2
Protocol	ModbusTCP
Transmission rate	10/100 Mbps, automatic detection
I/O image size	2048/2048 bytes
Parameters per module	126 bytes
Connection	RJ45
integrated switch	Yes
Supports Modbus function codes	1, 2, 3, 4, 5, 6, 15, 16, 22, 23
TCP connection	10 stations
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"