TB20-C, bus coupler DeviceNet Slave

DeviceNet Slave

- 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
- Group 2 server
- UCMM-compatible
- Polled, Bit-Strobe, COS/Cyclic connections
- Supports Offline Connection Set, Device Heartbeat, and Device Shutdown messages
- MAC ID and transfer rates can be set via software and hardware (DIP switch)
- Supports 125, 250, and 500 kbps
- Up to 64 TB20 modules
- 1024 bytes of input data / 1024 bytes of output data
- 120 bytes of parameter data per module
- Modules can be freely configured via "TB20-ToolBox"
- Configuration with Rockwell RSNetWorx© possible using explicit messaging
- Reading out of coupler status possible using explicit messaging
- Six LEDs, four of them bi-color (three DeviceNet LEDs and one TB20-specific)
- Offers an Open Style Connector

The DeviceNet Slave bus coupler connects the DeviceNet bus to peripheral modules. As a group 2 server, the coupler supports the "Predefined Master/Slave Connection Set" in accordance with sections 3-6 of the "CIP Networks Library Vol. 3." In addition, the slave software, with the help of an "Unconnected Message Manager" (UCMM), enables the dynamic setting up of multiple communications channels. You can also choose from various combination possibilities for your I/O data and three kinds of DeviceNet connections: "Polled-I/O", "Bit-Strobed-I/O," and "COS/Cyclic-I/O." It is also equipped with a 2 kByte I/O data image table. It recognizes all connected peripheral modules and assigns each module the inputs/outputs from the process image table. Thanks to the TB20-ToolBox, it is easy to configure the system and the various module parameters and transfer them 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.

Technical specifications

General information	
Order number	600-165-1AA11
Article name	TB20-C, DeviceNet Slave bus coupler
Scope of delivery	Bus coupler DeviceNet Slave, 24 V power supply connector, bus cover element, base module
Dimensions (DxWxH)	110 x 35 x 73 mm
Weight	Approx. 115 g
DeviceNet interface	
Number	1

Protocol	DeviceNet
Transmission rate	125, 250, and 500 kbps
I/O image size	1024/1024 bytes
Parameters per module	120 bytes
Connection	DeviceNet Open Connector
USB interface	
Number	1
Protocol	Full-speed USB 1.1 device
Connection	Mini-USB
Isolation voltage	1.5 kV
Electrical isolation	Yes
Number of modules that can be connected in series	64
Voltage supply	24 VDC, 18–28 VDC
Current draw	
Current draw without modules (internal)	75 mA
Power supply for modules	5 V DC, max 2.5 A
Power dissipation	Max. 8 W
Installation position	Any
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 pending
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 60068-2-8:2008 “Vibration”, DIN EN 60068-27:2010 “Shock“
RoHS	Yes
REACH	Yes