Features

- 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
- CANopen protocol as defined in DSP301 and DS401
- Transfer rates of 50 kbps to 1 Mbps
- 24 TPDOs / 24 RPDOs
- 1 SDO server
- Heartbeat producer
- Two heartbeat consumers
- Node guarding
- SYNC object
- Flexible parameter configuration
- Up to 64 peripheral modules

TB20 bus coupler
CANopen

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 CANopen bus coupler is designed to connect a CAN bus to TB20 peripheral modules.

It supports the CANopen protocol as defined in DS301 and uses the DSP-401 profile for digital and analog I/O modules.
Up to 64 modules of any kind can be connected in series with the bus coupler.
This coupler makes it possible to use SDOs to freely access all I/O values, parameters, and diagnostics, and can manage up to 192 bytes of I/O data with the PDO protocol.

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.

General information

Order number	600-160-1AA11
Article name	TB20-C, CANopen slave bus coupler
Scope of delivery	Bus coupler CANopen Slave, 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

CAN interface

Number	1
Type	ISO/DIN 11898-2 , CAN high-speed, physical layer
Transmission rate	50, 100, 125, 250, 500, 800, 1000 kbps
Protocol	CANopen Slave as defined in DSP301 V4.2 and DS401 V3.0
Connection	Connector, SUB-D, 9-pin

TPDOs	24
RPDOs	24
Features	Node guarding,
	heartbeat,
	SYNC,
	saving of the configuration

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"