

TURCK

Your Global Automation Partner

TBEN-S Ultra-Compact Multiprotocol I/O Modules



Products are linked with further information.

Ultra-Compact Multiprotocol I/O Modules in IP67

Your advantages

The ultra-compact TBEN-S block I/O modules are the smallest multiprotocol Ethernet block I/O modules on the market.

- Multiprotocol: one module, three protocols
- Extended temperature range -40...+70 °C
- High protection classes IP65, IP67 and IP69K
- Ultra-compact design (32 x 144 x 31 mm)
- Lightweight construction
- Easily mounted
- Two M8 connectors for Ethernet
- End-to-end diagnostics concept
- Easily configured
- Web server integrated in each module



1:1 scale



Digital I/O modules

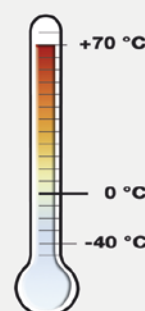
The TBEN-S product series includes digital modules in 8 x M8 and 4 x M12 connectivity.

- Digital inputs with channel or group diagnosis
- Digital outputs 0.5 A or 2.0 A
- Field Logic Controller ARGEE (FLC) programmable with
- Extended functions: Counter, PWM, impulse stretching, latched inputs



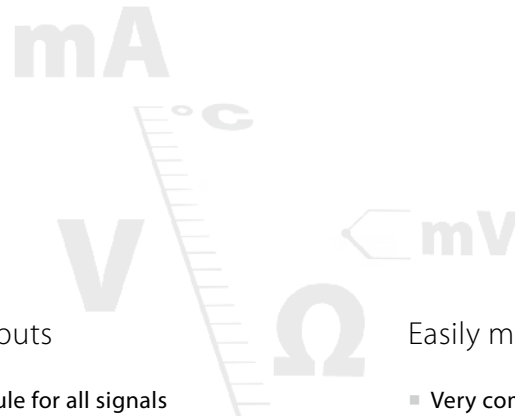
Ethernet multiprotocol

Each module speaks PROFINET, EtherNet/IP™ or Modbus TCP. During the start-up phase, the module automatically identifies the bus protocol. This reduces the required device variants and enables operation of one machine on different control systems.



Harsh environmental conditions

In addition to the fully potted module electronics, the extended temperature range of -40...+70 °C and the high protection classes IP65, IP67 and IP69K contribute to the robust overall concept. This increases the application possibilities in industrial environments.



Four analog inputs

- One combi module for all signals
- Current, voltage, RTD or thermocouple selectable per channel

Easily mounted

- Very compact design: 32 x 144 mm
- Two M4 bores in line
- Lightweight construction
- Adjustable grounding concept

Four analog outputs

- One combi module for all signals
- Current or voltage selectable per channel

IO-Link master

The 4-channel IO-Link master is the link for digital communication, covering the "last meter" to the sensor or field level. It enables the simple integration of IO-Link devices such as

- Sensors and field devices
- I/O hubs (digital passive junction boxes)
- Valve manifolds



2 serial ports

- RS232 and RS485 selectable per interface
- Integrated Modbus RTU master
- Additional four universal digital inputs/ outputs

TBEN-S composite

- TBEN-S modules can be combined to form a compact unit to simplify installation
- Spacer for mounting on panel or DIN rail
- Matched bridges for Ethernet and supply



Control via Labview

Selected modules can be controlled directly from Labview. This allows test benches to benefit from decentralized architectures based on IP67 modules. Using Labview to control and visualize system components entirely without a PLC saves further costs.



Web server

The web server provides further support for commissioning, maintenance and diagnostics. IP address or PROFINET name can also be set without additional tools. The web server displays diagnoses and information clearly in plain text - also on mobile devices thanks to responsive design.

TBEN-S – Types and Features

TBEN-S1: 8 x M8 I/O-Ports	TBEN-S2: 4 x M12 I/O-Ports	ID	Type code	Description
		6814020	TBEN-S1-8DIP	8 digital inputs, PNP, Input group diagnostics
		6814034	TBEN-S1-8DIP-D	8 digital inputs, PNP, Input diagnostics per channel
		6814021	TBEN-S1-4DIP-4DOP	4 digital inputs, PNP and 4 digital outputs 2.0 A, PNP
		6814022	TBEN-S1-8DOP	8 digital outputs 2.0 A, PNP
		6814023	TBEN-S1-8DXP	8 universal digital channels, 2.0 A, PNP
		00006468	TBEN-S1-4DXP	4 universal digital channels, 2.0 A, PNP
		6814073	TBEN-S2-8DIP	8 digital inputs, PNP, Input group diagnostics
		6814076	TBEN-S2-8DXP	8 universal digital channels, 2.0 A, PNP
		6814025	TBEN-S2-4AI	4 analog inputs, U, I, RTD or TC selectable per channel
		6814028	TBEN-S2-4AO	4 analog outputs, U or I selectable per channel
		6814024	TBEN-S2-4IOL	4 IO-Link master channels and 4 universal digital channels, 0.5 A, PNP
		6814031	TBEN-S2-2COM-4DXP	2 serial interfaces and 4 universal digital channels, 0.5 A, PNP

Spacer	ID	Type code	Description
	6814040	TBNN-S0-DRS-01	Spacer for TBEN-S composite on DIN rail, 1 item per unit
	6814041	TBNN-S0-DRS-05	Spacer for TBEN-S composite on DIN rail, 5 items per unit
	6814042	TBNN-S0-DRS-10	Spacer for TBEN-S composite on DIN rail, 10 items per unit
	6814043	TBNN-S0-STD-01	Spacer for TBEN-S composite on mounting panel, 1 item per unit
	6814044	TBNN-S0-STD-05	Spacer for TBEN-S composite on mounting panel, 5 items per unit
	6814045	TBNN-S0-STD-10	Spacer for TBEN-S composite on mounting panel, 10 items per unit

Ethernet cables	Type code	Description
	PSGS4M-PSGS4M-4416-xM	M8 male to M8 male
	RSSD-PSGS4M-4416-xM	M12 male to M8 male
	PSGS4M-RJ45S-4416-xM	M8 male to RJ45 male
	PSGS4M-4416-xM	M8 male to open end
	PSGS4M-0,2-PSGS4M/TXN	M8 Ethernet bridge for TBEN-S composite

x = Length in meters, variants on request

Power supply	Type code	Description
	PKG4M-x-PSG4M/TXL	M8 female straight to M8 male straight
	PKW4M-x-PSG4M/TXL	M8 female angled to M8 male straight
	PKG4M-x-PSW4M/TXL	M8 female straight to M8 male angled
	PKW4M-x-PSW4M/TXL	M8 female angled to M8 male angled
	PKG4M-x/TXL	M8 female straight to open end
	PKW4M-x/TXL	M8 female angled to open end
	PKG4M-0,2-PSG4M/TXL	M8 Ethernet bridge for TBEN-S composite

x = Length in meters, variants on request

More accessories can be found on www.turck.com



Products are linked with further information.

Over 30 subsidiaries and
60 representatives worldwide!

