TBEN-S
Ultra-Compact Multiprotocol I/O Modules
Digital I/O modules

- Digital inputs with channel or group diagnosis
- Digital outputs 0.5 A or 2 A
- Field Logic Controller (FLC) programmable with ARGEE
- Extended functions: Counter, PWM, impulse stretching, latched inputs

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

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.

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.
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.

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

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 mile” 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

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

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 decen-tralized 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

### Ident-no. | 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 A, PNP
6814022 | TBEN-S1-8DOP | 8 digital outputs 0.5 A, PNP
6814023 | TBEN-S1-8DXP | 8 universal digital channels, 0.5 A, PNP
6814073 | TBEN-S2-8DIP | 8 digital inputs, PNP, Input group diagnostics
6814076 | TBEN-S2-8DXP | 8 universal digital channels, 0.5 A, PNP
6814025 | TBEN-S2-4AI | 4 analog inputs, U, l, RTD or TC selectable per channel
6814028 | TBEN-S2-4AO | 4 analog outputs, U or l 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

Ident-no. | Type code | Description
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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

Name | Type code | Description
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Power supply | PKG4M-x-PG4M/TXL | M8 female straight to M8 male straight
Power supply | PKW4M-x-PG4M/TXL | M8 female angled to M8 male straight
Power supply | PKG4M-x-P5W4M/TXL | M8 female straight to M8 male angled
Power supply | PKW4M-x-P5W4M/TXL | M8 female angled to M8 male angled
Power supply | PKG4M-x/TXL | M8 female straight to open end
Power supply | PKW4M-x/TXL | M8 female angled to open end
Power supply | 8MBM8-4P2-7/8-M | Power distribution module, 1 x 7/8” male to 8 x M8 female
Power supply | PKG4M-0,2-PG4M/TXL | M8 Ethernet bridge for TBEN-S composite

x = Length in meters, variants on request

More accessories can be found on www.turck.com

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