

TBE-D5001-TRI-001

SIL3 HART® Mux Term. Board for Tricon AI Cards 3700, 3700A, 3721 and Tricon CX AI Card 3722X

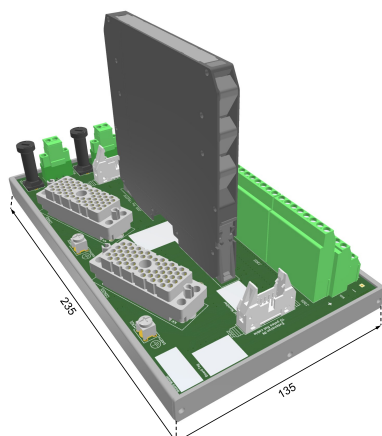
This Termination Board with Enclosure (TBE) provides direct connection between the I/O Card of the system and 2-wire passive or active transmitters. At the same time, it makes available an interface for the remote monitoring of any HART®-compatible 4/20 mA field device. This is obtained by a locally mounted HART® Multiplexer Modem 5700 series and by terminal block connectors to access the loops. The single TBE-D5001-TRI-001 Termination Board supports 32 channels. Yet, it could be extended with additional units (up to 8) to manage all 256 channels available on the HART® Modem 5700 series. The Mux unit connects, via the RS-485 interface, to an external PC running an FDT-based software package (PACTware™, etc...) through a dedicated Device Type Manager (DTM). The PC can communicate with multiple Mux units, located on different boards, in a multi-drop RS-485 mode. The 24 Vdc Power Supply of the TBE is connected to two plug-in terminal blocks, for a redundant power supply.

FEATURES

- SIL 3 / SC 3
- HART® Multiplexing Board of up to 32 analog signals (extendable to 256)
- Tricon AI Cards board interfaces up to 32 channels
- Field terminals for 2-wire passive/active transmitters
- On-board voltage/current protections against unintentional short circuits
- 4/20 mA HART® loops isolated with dual capacitors (short circuit proof)
- Double terminal to ease RS-485 cable multi-drop
- Lower cables installation and maintenance costs
- Redundant power supply
- Mounting hardware provided for single DIN Rail mounting kit

SYSTEM	I/O CARD	CARDS / BOARDS	MODULES
Tricon	3700 3700A 3721	1	-
Tricon CX	3722X	1	-

TERMINATION BOARD IMAGE



TECHNICAL DATA

General

Number of positions: 1 x HART® Multiplexer Modem 5700 series.
Maximum number of channels: 32 on a single board, extendable to 256 with 8 boards and 1 HART® Multiplexer Modem 5700 series. Up to 16128 smart devices in full topology with 504 boards and 63 HART® Multiplexer Modem 5700 series.

Supply

24 Vdc nom (20 to 30 Vdc), reverse polarity protected, double terminal blocks for redundant power supply, with OR diodes to mix supplies.
Current consumption: 44 mA @ 24 Vdc with full topology (8 boards) with no transmitters, typical.
Max allowed current consumption: 1.5 A (as total supply).
Connection: by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm².
Protection fuse: 2 A time lag.

I/O Card Interface

Connection: 2 x ELCO 8016, 56-poles receptacle connector (require male mating connector).
Cable: system cable 4000189-5xx.

Field Interface

Connection: by screw with terminations up to 2.5 mm².
Max supply current per channel: 50 mA (resettable fuse protected).
Signal current range: 0 to 25 mA.

Serial Interface

Connection: by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm².
Protocol: HART® over RS-485.

Additional TBs Interface

Connection: 2 x flat cable 10 poles male connectors (requires female mating connector).
Cable: flat cables CABF022, CABF023, CABF024.

Environmental conditions

Operating temperature: temperature limits -40 to +70 °C.
Max altitude: 2000 m a.s.l.
Storage temperature: temperature limits -45 to +80 °C.

Mounting

Hardware included for mounting on single DIN-rail 35 mm.
Weight: about 778 g (+ 50 g plastic clips or 380 g metal clips).
Location: installation in Safe Area.
Dimensions: Width 235 mm, Depth 135 mm, Height 154 mm.

ORDERING INFORMATION

Ordering codes

TBE-D5001-TRI-001

Accessories

The Termination Board is already provided with plastic DIN-rail clips. Metal clips, replacement plastic clips as well as conformal coating must be ordered as a separate accessory according to the following items.

TBE-FIX-PL-001(x2)	Plastic DIN-rail clips
TBE-FIX-MT-002(x2)	Metal DIN-rail clips
TBE-MNT-001(x2)	Factory assembly of TBE-FIX-MT-002

TBE-CTG-001	Conformal coating
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CABF022	15 cm extension cable
CABF023	30 cm extension cable
CABF024	50 cm extension cable

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

