

# TBE-D5001-HRT-006

## SIL3 HART® Mux Term. Board with Terminal Outputs (for AI cards with 100 Ω to 150 Ω input impedance)

This Termination Board with Enclosure (TBE) allows the remote monitoring of any HART®-compatible 4/20 mA field loop. This is obtained by one locally mounted HART® Multiplexer Modem 5700 series and terminal block interface connectors to access the relevant loops. The board is installed in series to the loops and is totally transparent to both transmitter and receiver. This model is suitable for interfacing AI cards of safety PLCs with input impedance from 100 Ω to 150 Ω.

The single TBE-D5001-HRT-006 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® Multiplexer 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.

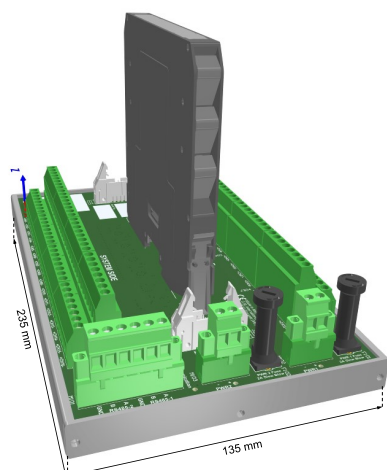
The HART® Termination Board TBE-D5001-HRT-006 is SIL 3 certified as non-interfering with the signal loops.

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
- Installation in Zone 2/Div. 2
- HART® Multiplexing Board of up to 32 analog signals (extendable to 256)
- Up to 16128 smart devices in full topology network
- Suitable for AI cards with 100 Ω to 150 Ω input impedance
- 4/20 mA loops isolated with dual capacitors (short circuit proof)
- Dedicated terminal to connect RS-485 cable shield
- 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

### 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 supply voltages.

**Current consumption:** 45 mA @ 24 Vdc with full topology (8 boards), typical.

**Connection:** by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm<sup>2</sup>.

**Protection fuse:** 2 A time lag.

#### HART Interface

**Connection:** 32+32 screw terminal blocks to accommodate terminations up to 2.5 mm<sup>2</sup>.

**Channel-to-channel isolation voltage:** 50 V.

#### 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 1.08 kg (+ 50 g plastic clips or 380 g metal clips).

**Location:** installation in Safe Area or Zone 2, Group IIC T4, or Class 1, Div. 2, Group A, B, C, D, T4.

**Dimensions:** Width 235 mm, Depth 135 mm, Height 154 mm.

### ORDERING INFORMATION

#### Ordering codes

TBE-D5001-HRT-006

#### 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

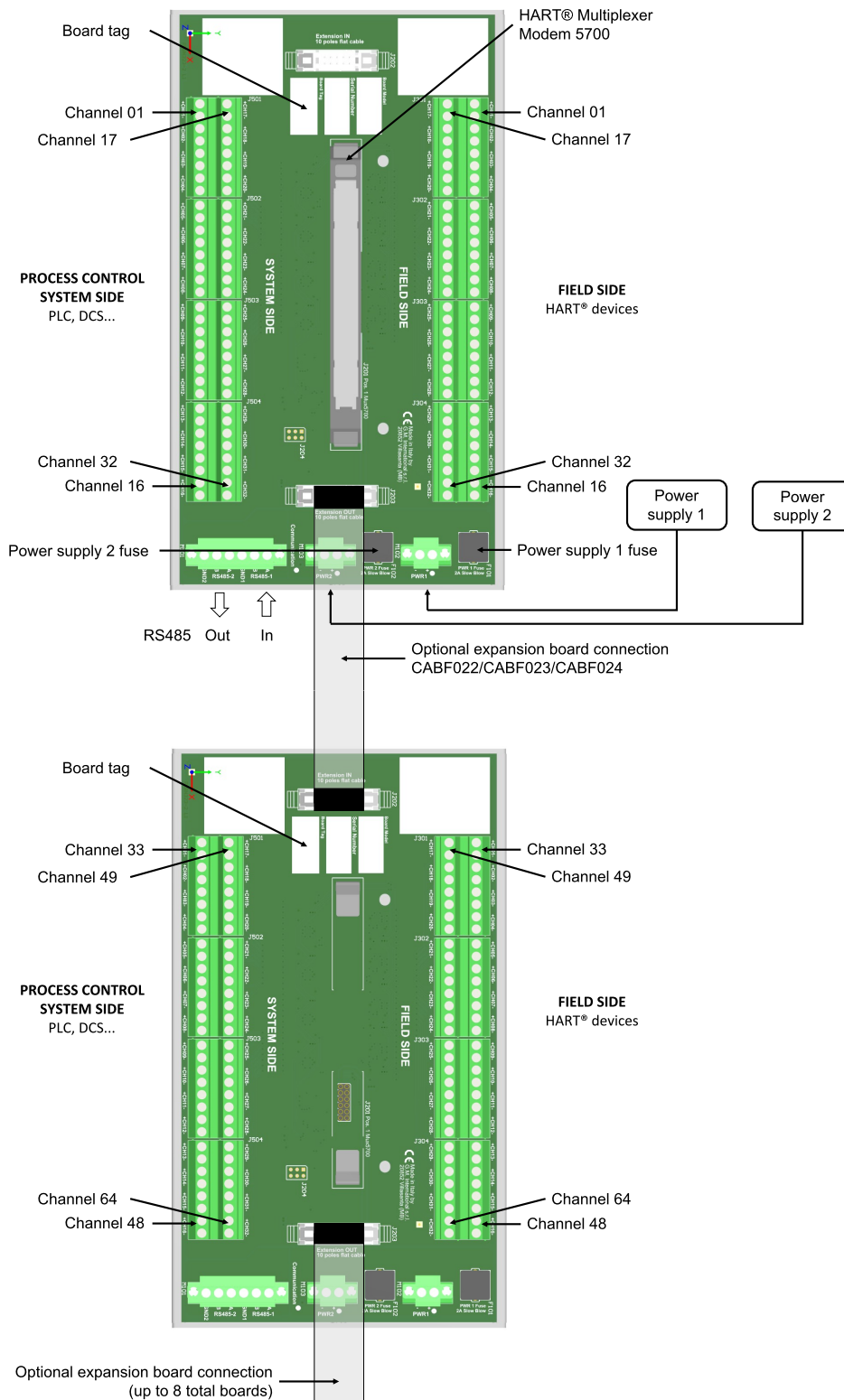
TBE-CTG-001	Conformal coating
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CABF022	15 cm extension cable
CABF023	30 cm extension cable
CABF024	50 cm extension cable

# FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

## Safe Area/Zone 2/Div. 2



# TERMINATION BOARD NETWORK

