

TBE-D5001-HRT-006

SIL3 HART® Mux Term. Board with Terminal Outputs (for Al 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 Al 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.

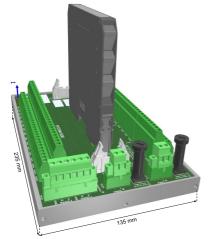
The HART $\ensuremath{\textcircled{\sc bar}}$ Termination Board TBE-D5001-HRT-006 is SIL 3 certified as non-interfering with the signal loops.

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 $\tilde{\Omega}$ 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 mm².

Protection fuse: 2 A time lag.

HART Interface

Connection: 32+32 screw terminal blocks to accommodate terminations up to 2.5 mm².

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

TBE-CTG-001

Conformal coating

CABF022 CABF023 CABF024 15 cm extension cable30 cm extension cable50 cm extension cable

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Temp. TMP0031 R

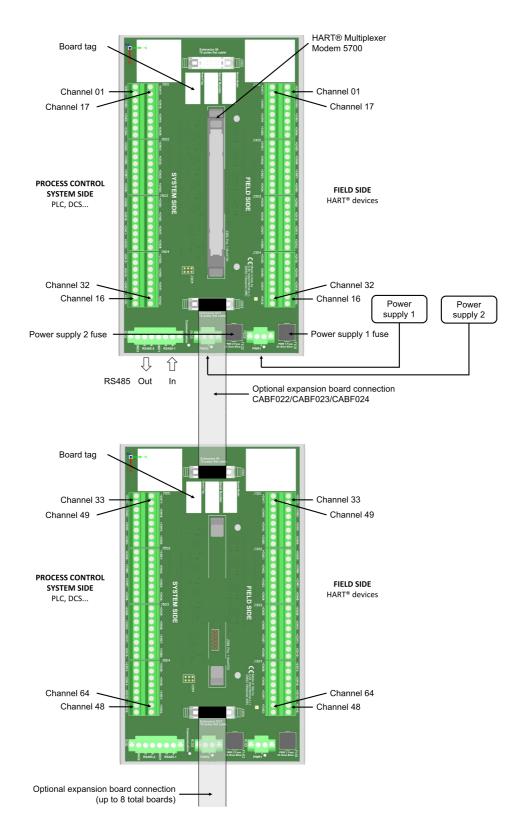
Functional Safety Management Certification:

GM International is certified to conform to IEC61508:2010 part 1 clauses 5-6 for safety related systems up to and included SIL3. In addition, GM International products have been granted I.S. certificates from the most credited Notified Bodies in the world.

Data specified in this document are merely descriptive of the products and should be integrated with relevant technical specifications. Our products are in constant development and the information presented herein refers to the time of document issue. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. Terms & Conditions can be found at our website. For more information refer to istruction manual.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.



Safe Area/Zone 2/Div. 2

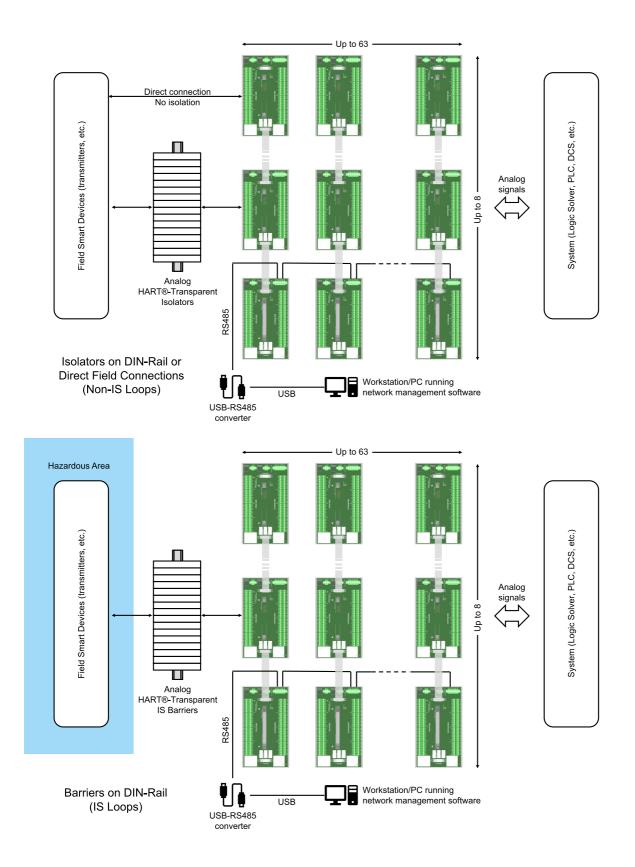
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