

# TBE-D5001-HRT-003

## SIL3 HART® Mux Term. Board for GMI Term. Board Connection

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 by interface connectors to access field smart devices.

The single TBE-D5001-HRT-003 Termination Board supports 64 channels. Yet, it could be extended with additional units (up to 4) 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.

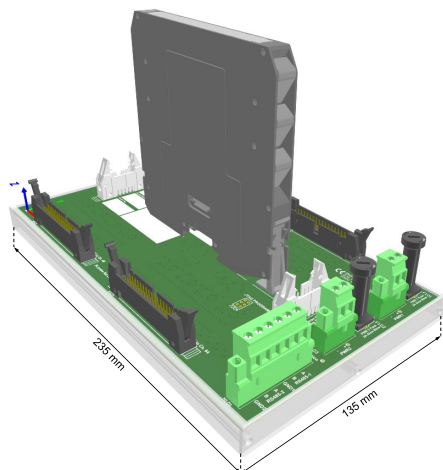
The HART® Termination Board TBE-D5001-HRT-003 is SIL 3 certified as non-interfering with the signal loops.

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 64 analog signals (extendable to 256)
- 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:** 64 on a single board, extendable to 256 with 4 boards and 1 HART® Multiplexer Modem 5700 series. Up to 16128 smart devices in full topology with 252 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:** 35 mA @ 24 Vdc with full topology (4 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:** 4 x 34-poles receptacle connector (require female mating connector).

**Cable:** flat cable CABF032.

**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 710 g (+ 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-003

#### 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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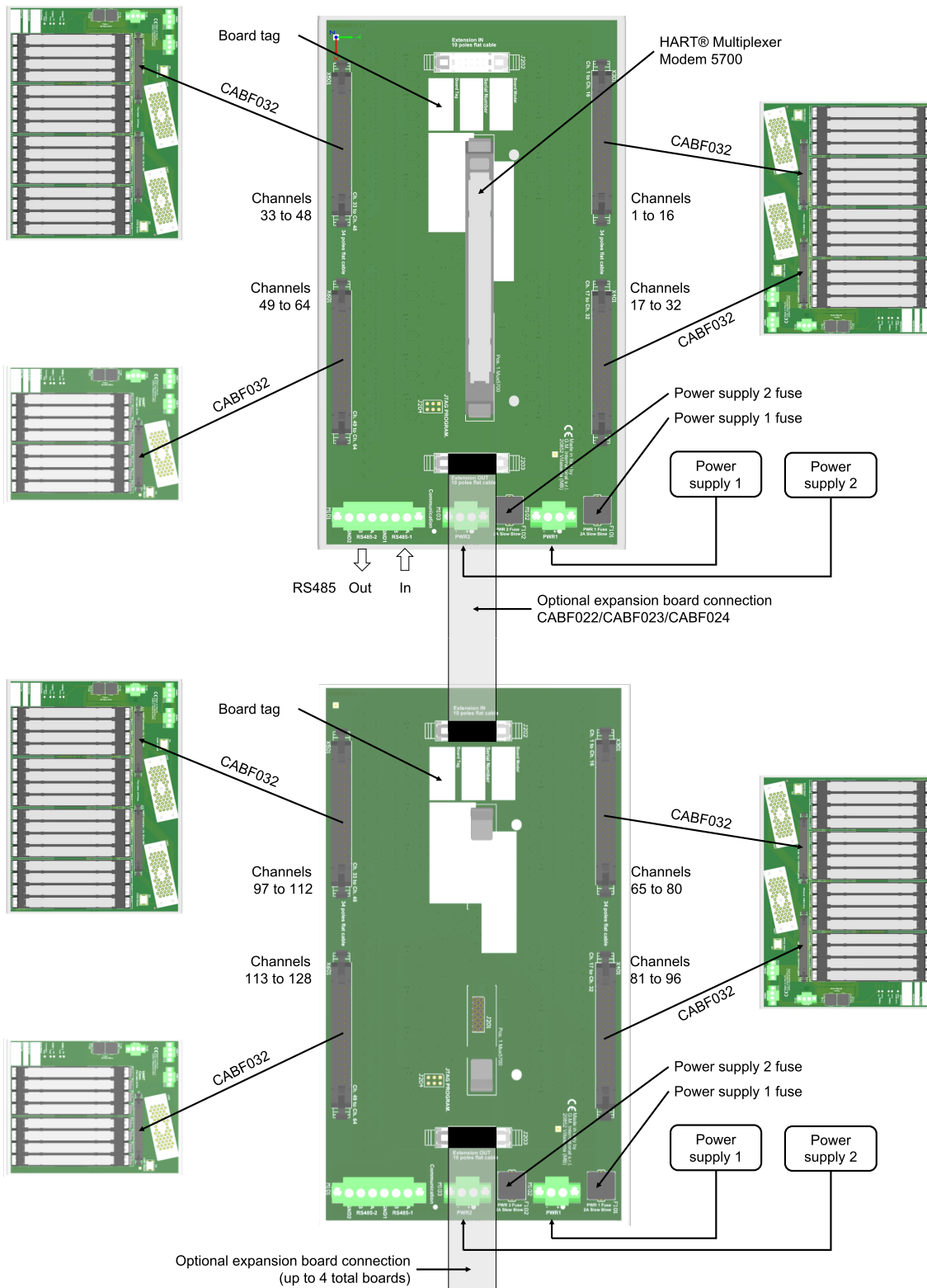
CABF022	15 cm extension cable
CABF023	30 cm extension cable
CABF024	50 cm extension cable

CABF032	1 m term. board flat cable
CABF032/xx	xx m term. board flat cable

# FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

## Safe Area/Zone 2/Div. 2



# TERMINATION BOARD NETWORK

