

# TBE-D5016-TRI-001

# SIL3 16-pos Term. Board for Tricon Al cards 3704E and 3720

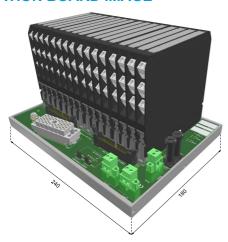
This Termination Board with Enclosure (TBE) provides direct connection between the I/O Card of the system and D5000 / D6000 Series modules. The Intrinsically Safe protection and signal isolation between Safe and Hazardous Area, is provided by D5000 Series Associated Apparatus. The 24 Vdc Power Supply of the TBE is connected to two plug-in terminal blocks, for a redundant power supply.

### **FEATURES**

- SIL 3 / SC 3
- Zone 2/Div. 2 Installation
- Tricon Al Cards board interfaces
- Connection to external GMI HART Mux 5700
- 16 positions Termination Board for up to 32 channels
- Lower cables installation and maintenance costs
- Power supplies fault monitoring
- Mounting hardware provided for single DIN Rail mounting kit

SYSTEM	I/O CARD	CARDS / BOARDS	MODULES
Tricon	3704E 3720		D5011D, D5014D, D5072D, D6001D, D6011D, D6014D, D6072D

# **TERMINATION BOARD IMAGE**



# **TECHNICAL DATA**

### General

Number of positions: 16

Maximum number of channels: 32

24 Vdc nom (20 to 30 Vdc), reverse polarity protected, double terminal blocks for redundant power supply, with OR diodes to mix supply

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 mm<sup>2</sup>.

Protection fuse: 4 A time lag.

### **Fault detection**

The on-board diagnostic monitors both power supplies integrity and the module cumulative fault. Any malfunction is reported by deactivating a solid-state relay and activating the corresponding LEDs.

- Alarm is issued if:
- 1) Power supply 1 or 2 < 17 Vdc or 2) Power supply 1 or 2 > 33 Vdc or
- 3) Module cumulative fault ON.

Alarm is removed if:

- 1) 20 Vdc < Power supply 1 and 2 < 30 Vdc and
- 2) No module cumulative fault.

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

Ouptut rating: 100 mA 35 V (≤ 1 V voltage drop).

Connection: 1 x ELCO 8016, 56-poles receptacle connector (require male mating connector).

Connector Keys: CON1, Large Key pos.5, Small Key pos.1

Cable: system cable 4000206-5xx.

# **HART Mux Interface**

Connection: 2 x 34-poles receptacle connector (require female mating

Cable: flat cable CABF032. **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.

Hardware included for mounting on single DIN-rail 35 mm.

Weight: about 1 kg, excluding modules (+ 50 g plastic clips or 380 g

Location: installation in Safe Area or Zone 2, Group IIC T4, or Class 1,

Div. 2. Group A. B. C. D. T4.

Dimensions: Width 240 mm, Depth 180 mm, Height 154 mm.

### ORDERING INFORMATION

# **Ordering codes**

TBE-D5016-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.

Plastic DIN-rail clips TBE-FIX-PL-001(x2) TBE-FIX-MT-001(x2) Metal DIN-rail clips

Factory assembly of TBE-FIX-MT-001 TBE-MNT-001(x2)

TBE-CTG-002 Conformal coating

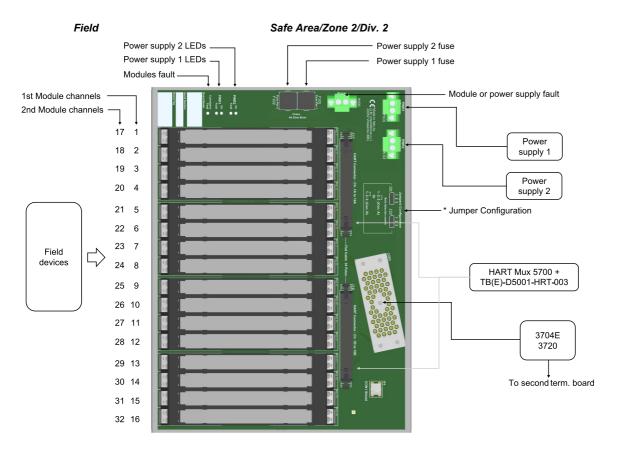
Functional Safety Management Certification:

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.

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# **FUNCTION DIAGRAM**

Additional installation diagrams may be found in Instruction Manual.



### \*Jumper Configuration

To cover all 64 channels provided with 3704E / 3720 cards, two termination boards are required with the following jumper configuration:

	3704E 3720
TB n.1	J21 2-3 J22 2-3
TB n.2	J21 1-2 J22 1-2

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