

APPLICATION NOTES

Analog Input Module:
3722X (32 Channels without HART)
3723X (32 Channels with HART)

AND

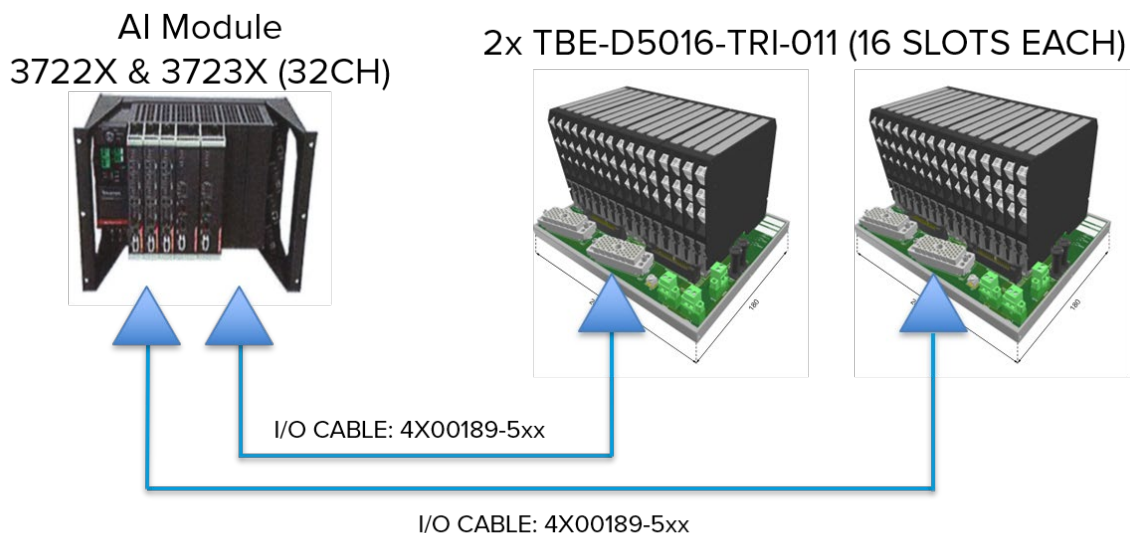
GMI Termination Board:
TBE-D5016-TRI-011 (16 Slots) through
I/O CABLE: 4X00189-5xx

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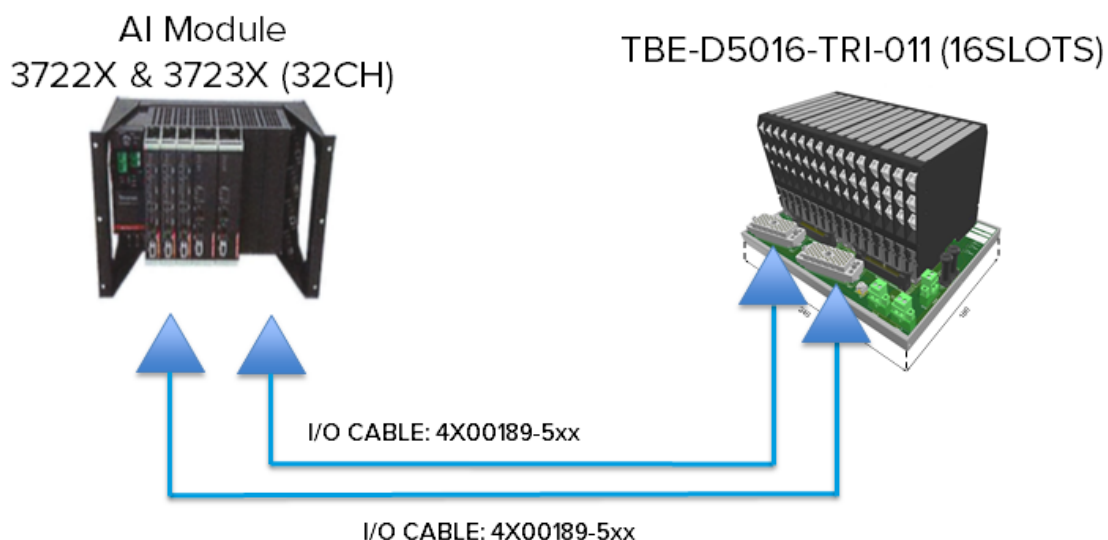
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1. INTRODUCTION

WITH SINGLE CHANNEL GMI MODULES

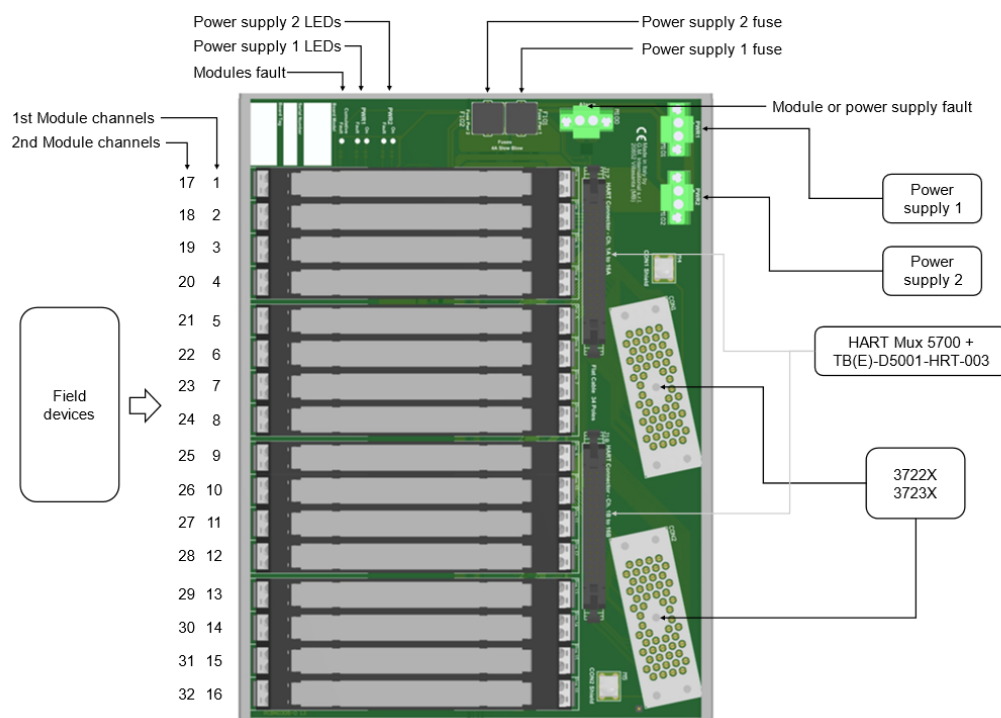
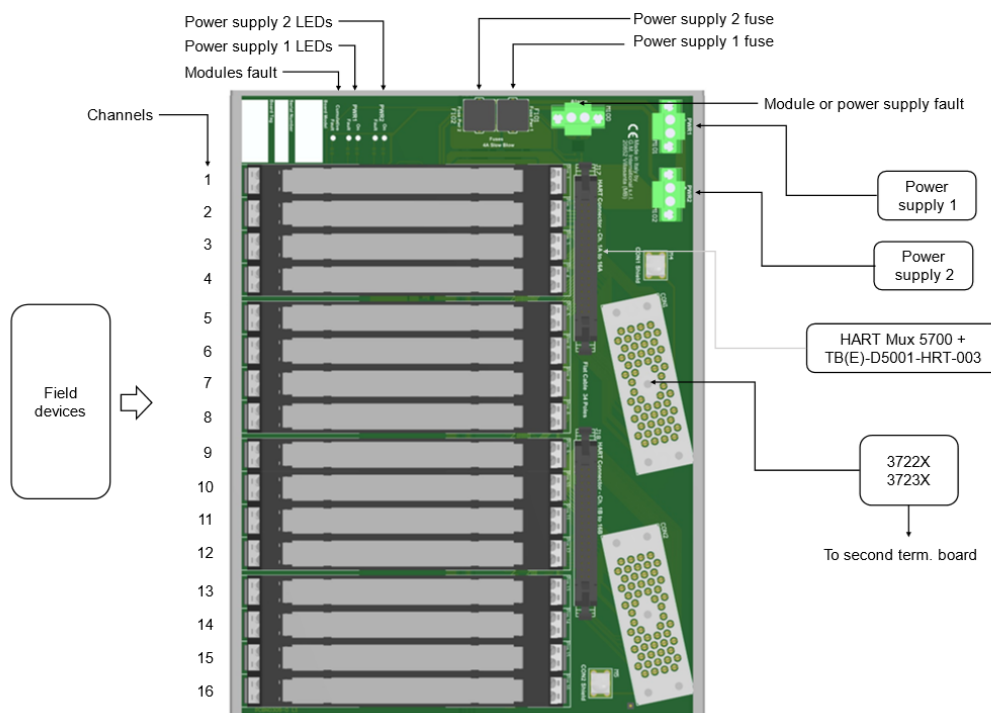


WITH DOUBLE CHANNEL GMI MODULES



The Termination Board TBE-D5016-TRI-011 is also designed for AI Card 3722X, because it provides the same functionality of the 3723X, except for the HART communication, not supported by 3722X. 3723X and 3722X use the same FET, ETPs and I/O cables, with the same pin-out.

TBE-D5016-TRI-011 has 16 slots available for GMI modules



2. EQUIPMENT TO BE USED

2.1 Tricon CX I/O Module

3722X – TMR Analog Input Module, 32 Channels
3723X – TMR Analog Input HART Module, 32 Channels

2.2 GMI Termination Boards

TBE-D5016-TRI-011 SIL3 Termination Board 16 Positions for Tricon CX 3722X/3723X (Single/Dual Channel).

2.3 GMI Interface Modules

2.3.1 ANALOG INPUT – AI IS

MOD.	DESCRIPTION	L.F. DET.	L.F. TRANSP.	FIELD	SIL	HART	REMARKS	ZONE2 /DIV2
D5011S	TRANSMITTER POWER SUPPLY	YES	YES	PASSIVE TRANSMITTER	3	YES		YES
D5014S	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE/PASSIVE	3	YES		YES
D5015SS	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE/PASSIVE	2	YES		YES
D5016SS	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE TRANSMITTER	3	YES	FUTURE	YES
D5072S	TEMPERATURE SIGNAL CONVERTER, MULTIFUNCTION	YES	YES	TC/RTD/POT	2			YES
D5011D	TRANSMITTER POWER SUPPLY	YES	YES	PASSIVE TRANSMITTER	3	YES	DUAL CHANNEL	YES
D5014D	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE/PASSIVE	3	YES	DUAL CHANNEL	YES
D5016DS	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE TRANSMITTER	3	YES	FUTURE DUAL CHANNEL	YES
D5072D	TEMPERATURE SIGNAL CONVERTER, MULTIFUNCTION	YES	YES	TC/RTD/POT	2		DUAL CHANNEL	YES

2.3.2 ANALOG INPUT – AI NIS

MOD.	DESCRIPTION	L.F. DET.	L.F. TRANSP.	FIELD	SIL	HART	REMARKS	ZONE 2/DIV2
D6011S	TRANSMITTER POWER SUPPLY	YES	YES	PASSIVE TRANSMITTER	3	YES		NO
D6014S	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE/PASSIVE	3	YES		NO
D6015SS	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE/PASSIVE	2	YES		NO
D6016SS	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE TRANSMITTER	3	YES	FUTURE	NO
D6017SS	TRANSMITTER POWER SUPPLY	YES	YES	2/3/4-WIRE TRANSMITTERS	3	YES		YES
D6072S	TEMPERATURE SIGNAL CONVERTER, MULTIFUNCTION	YES	YES	TC/RTD/POT	2			YES
D6001S	PASS THROUGH MODULE	YES	YES	PASS THROUGH	3	YES		YES
D6004S	PASS THROUGH MODULE	YES	YES	PASS THROUGH - SUITABLE FOR 2/3/4-WIRE TRANSMITTERS	3	YES		YES
D6011D	TRANSMITTER POWER SUPPLY	YES	YES	PASSIVE TRANSMITTER	3	YES	DUAL CHANNEL	NO
D6014D	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE/PASSIVE	3	YES	DUAL CHANNEL	NO
D6016DS	TRANSMITTER POWER SUPPLY	YES	YES	ACTIVE TRANSMITTER	3	YES	FUTURE DUAL CHANNEL	NO
D6072D	TEMPERATURE SIGNAL CONVERTER, MULTIFUNCTION	YES	YES	TC/RTD/POT	2		DUAL CHANNEL	YES
D6001D	PASS THROUGH MODULE	YES	YES	PASS THROUGH	3	YES	DUAL CHANNEL	YES
D6004D	PASS THROUGH MODULE	YES	YES	PASS THROUGH - SUITABLE FOR 2/3/4-WIRE TRANSMITTERS	3	YES	DUAL CHANNEL	YES

3. TRICON CX – System Configuration and Remarks

- Install the 3722X (3723X) in proper slot.
- Connect the I/O cables between FET and GMI Termination Board.
- Power Monitor not supported
- Typical AI card Point Setup Field Fault Monitoring:
 - Point Option = Used
 - Field Fault Mon = Enable
 - Field Fault Low Lim = 3,6
 - Field Fault High Lim = 21,6
- Behavior of Fault Diagnostic Barriers D5072S/D (and D6072S/D) depends on module Software Configuration

4. TERMINATION BOARD CONNECTION & SETUP

- **TBE-D5016-TRI-011** has NO Hardware Switch Setting.
- Connect the I/O Cable between FET and GMI termination board.
- Connect the Power Supply 24VDC to Terminals Supply 1 (+,-) and Supply 2 (+,-).

5. GMI MODULE SETTINGS AND CONFIGURATION

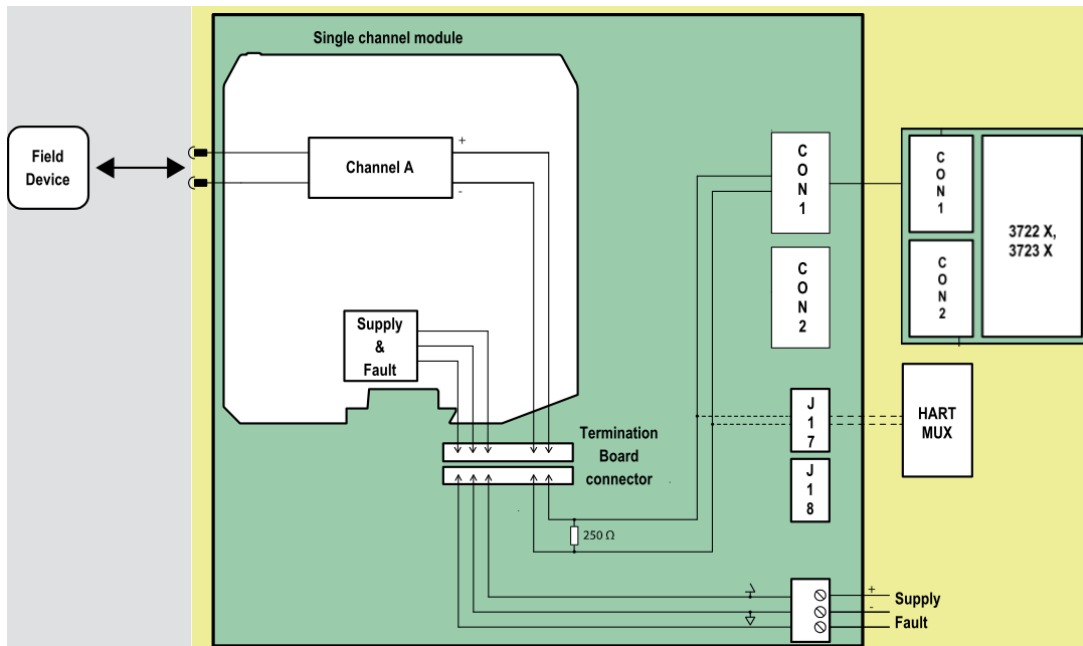
5.1 GMI Modules Switch Settings

TBE-D5016-TRI-011	No Hardware Setting
D5011S / D6011S	No Setting
D5011D / D6011D	No Setting
D5014S / D6014S	SW1, Factory Default, 1-2 ON, 3-4 OFF, Output Source Mode
D5014D / D6014D	SW1, Factory Default, 1-2-5-6 ON, 3-4-7-8 OFF, Output Source Mode
D5015SS / D6015SS	No Setting
D5016SS / D6016SS	No Setting
D5016DS / D6016DS	No Setting
D5072S / D6072S	SW Configurable, Configured 0-100mV In / 4-20mA Out
D5072D / D6072D	SW Configurable, Configured 0-100mV In / 4-20mA Out
D6001S	No Setting
D6001D	No Setting
D6004S	No Setting
D6004D	No Setting
D6017SS	No Setting

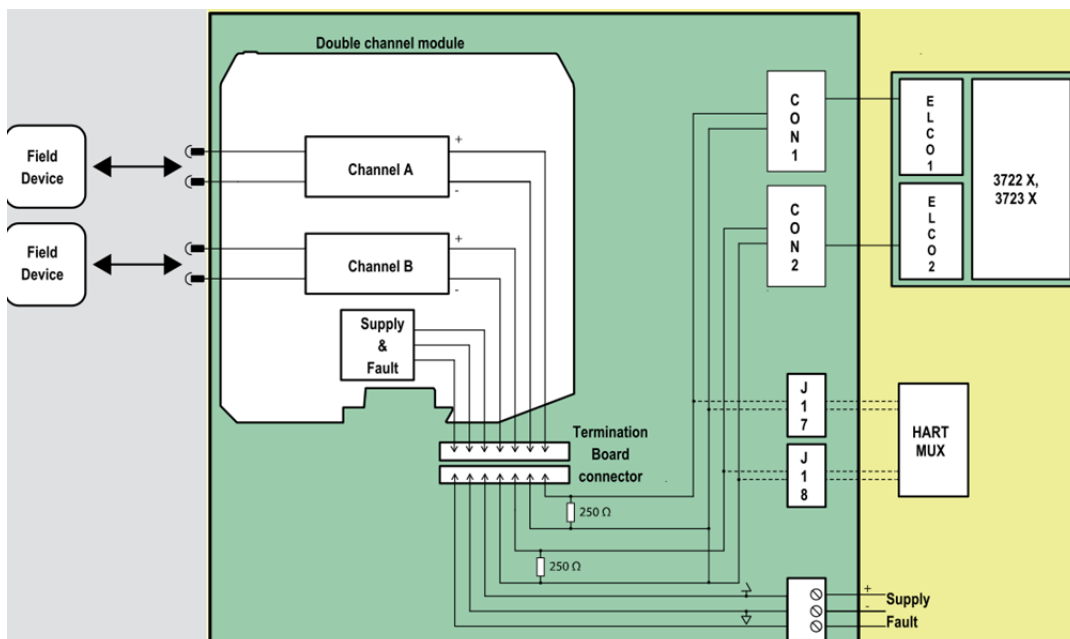
Above switch settings refer to the interface between GMI Modules and Triconex CX I/O module. Additional settings might be considered depending on field specific requirements; please refer to GMI Data Sheets and Instruction Manuals for further details.

5.2 GMI Configurations and Remarks

The Termination Board TBE-D5016-TRI-011 can be used with Single and Dual Channel Barriers/Isolators. It provides two ELCO connectors (CON1, CON2) for direct connection to 3722X or 3723X AI Cards. When used with single channel barriers, only CON1 shall be used.



When used with dual channel barriers, CON1 connects all channel “A” of the barriers (points 1 to 16 of AI card), while CON2 connects all channel “B” of the barriers (points 17 to 32 of AI card).



6. REFERENCE DOCUMENTS

6.1 Triconex

Document No.	Title
9791042-002	Tricon™ CX Products Addendum to Tricon User Guides

6.2 G.M. International

Document No.	Title
DTS0893	TBE-D5016-TRI-011 Datasheet
DTS0347	D5011 Datasheet
ISM0124	D5011 Instruction Manual
ISM0381	D5011 Safety Manual
DTS0467	D6011 Datasheet
ISM0211	D6011 Instruction Manual
ISM0399	D6011 Safety Manual
DTS0280	D5014 Datasheet
ISM0103	D5014 Instruction Manual
ISM0382	D5014 Safety Manual
DTS0459	D6014 Datasheet
ISM0210	D6014 Instruction Manual
ISM0400	D6014 Safety Manual
DTS0629	D5015 Datasheet
ISM0397	D5015 Instruction Manual
ISM0398	D5015 Safety Manual
DTS0668	D6015 Datasheet
ISM0445	D6015 Instruction Manual
ISM0446	D6015 Safety Manual
DTS0880	D5016 Datasheet
ISM	D5016 Instruction Manual
ISM	D5016 Safety Manual
DTS0881	D6016 Datasheet
ISM	D6016 Instruction Manual
ISM	D6016 Safety Manual
DTS0288	D5072 Datasheet
ISM0157	D5072 Instruction Manual
ISM0390	D5072 Safety Manual
DTS0464	D6072 Datasheet
ISM0216	D6072 Instruction Manual
ISM0419	D6072 Safety Manual
DTS0810	D6001 Datasheet
ISM0386	D6001 Instruction Manual
ISM0384	D6001 Safety Manual
DTS0848	D6004 Datasheet
ISM0447	D6004 Instruction Manual
ISM0451	D6004 Safety Manual
DTS0856	D6017 Datasheet
ISM0453	D6017 Instruction Manual
ISM0471	D6017 Safety Manual