

The Type MBD 40-**/Ex Field Device Coupler is an explosion-protected device for installation in Non-Hazardous, Class I, II, III, Division 2 Groups A-G or Class I, Zone 1 hazardous (classified) locations and provides intrinsically safe connections for four or eight field devices located in Class I, II, III, Division 1, Group A-G or Class I, Zone 0, [AEx ia] Group IIC/IIB hazardous locations according to NEC Article 504/505 as listed below.

Field device coupler Type MBD40-ab/Ex

a = number of spurs, 4 or 8

b = design of terminals, C, R, or S

C = Cage clamp

R = detachable terminal locks (at spurs only)

S = Screw type terminals

Nominal values are as follows:

	V _{nom}	I _{nom} (4 channels)	I _{nom} (8 channels)
Terminal: Trunk+/-	24VDC; (16V to 32VDC)	130mA; (200mA to 100mA)	160mA; (255mA to 120mA)

Entity parameters for wiring configurations are as follows:

Terminals SPUR 1-4 (8): +/-	V _{oc} [V]	I _{sc} [mA]	P _o [mW]	L _o	L _o	C _o	C _o	L _o /R _o	L _o /R _o
				CL I,DIV1, GP A, B/ Zone 0, GP IIC	CL I,DIV1, GP C-G/ Zone 0, GP IIB	CL I,DIV1, GP A, B/ Zone 0, GP IIC	CL I,DIV1, GP C-G/ Zone 0, GP IIB	CL I,DIV1, GP A, B/ Zone 0, GP IIC	CL I,DIV1, GP C-G/ Zone 0, GP IIB
	15.7	245	960	0.58 mH	2.9 mH	476 nF	2878 nF	37uH/Ohm	148uH/Ohm

Notes:

- For onnection detail refer to Sheet 2.
- Intrinsically safe apparatus may be one of the following: switches, thermocouples, LEDs, RTDs, or Entity device connected in accordance with the manufacturer's installation instructions.
- For Entity concept, use the appropriate parameters to ensure the following:

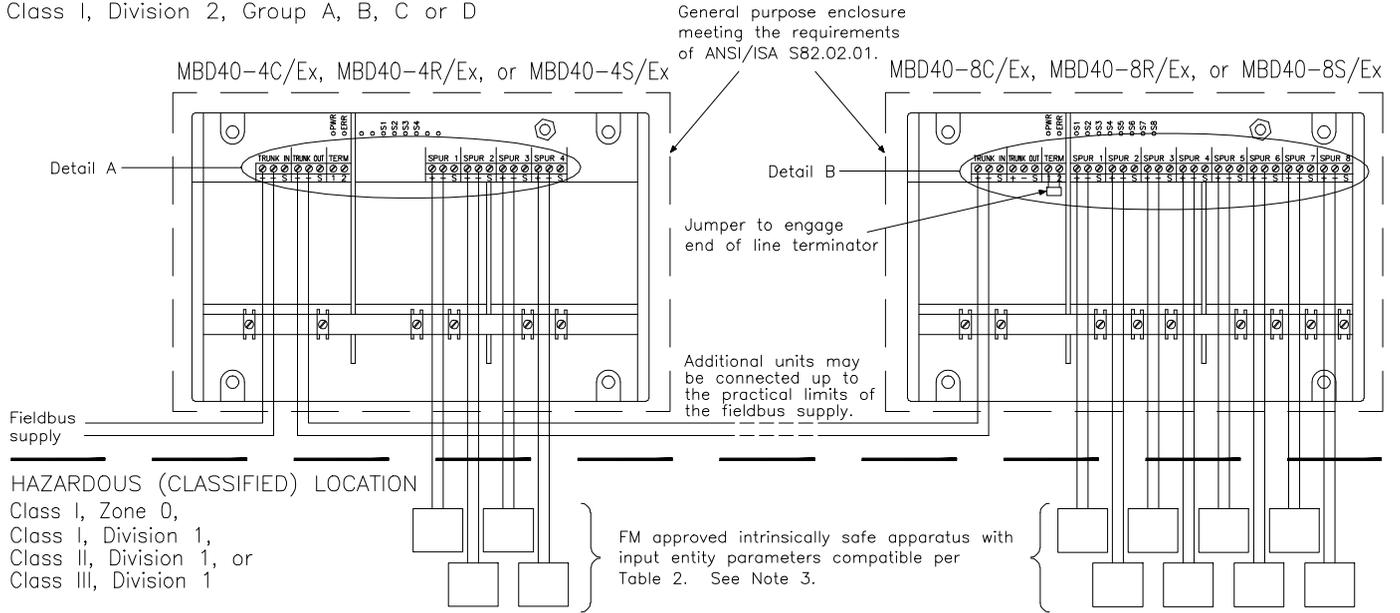
$$V_t \text{ or } V_{oc} \leq V_{max} \quad C_o, C_a \geq C_i + C_{cable} \quad P_o \leq P_i$$

$$I_t \text{ or } I_{sc} \leq I_{max} \quad L_o, L_a \geq L_i + L_{cable}$$
- Electrical apparatus connected to the non-intrinsically safe connections (Trunk IN, Trunk OUT, and Term) shall not use or generate voltages > 250V (U_{max})
- Installation should be in accordance with Article 504/505 of the National Electrical Code, ANSI/NFPA 70 and ANSI/ISA RP 12.06.01.
- Installation in Canada should be in accordance with the Canadian Electrical Code, CSA C22.1, Appendix F.
- Each channel shall be installed within a separately shielded cable or a single cable with a separate shield for each channel.
- Alternatively use Terminal "S" for connection of the cable shield for capacitive (<5.2nF) decoupled grounding or use ground busbar terminals for direct ground connection.
- Ambient temperature: -40°C . . . +75°C
- Use a general purpose enclosure meeting the requirements of ANSI/ISA S82.02.01 for use in nonhazardous or Class I, Division 2 hazardous (classified) locations.
- Use an FM Approved dust-ignition proof enclosure appropriate for environmental protection in Class II, Division 1, Groups E, F and G; and Class III hazardous (classified) locations.
- Use an AEx e enclosure meeting the requirements of ANSI/ISA-60079-7 for use in in Class I, Zone 1 hazardous (classified) locations.
- The devices are to be snap mounted on DIN rail or screw mounted on a rail or plate.

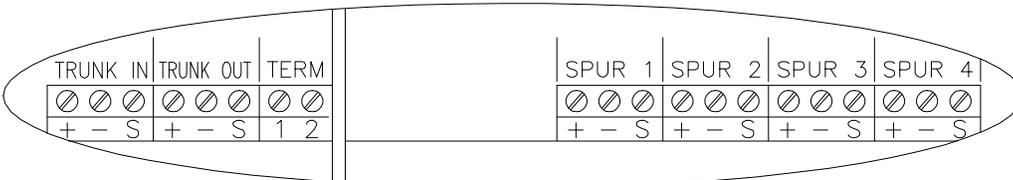
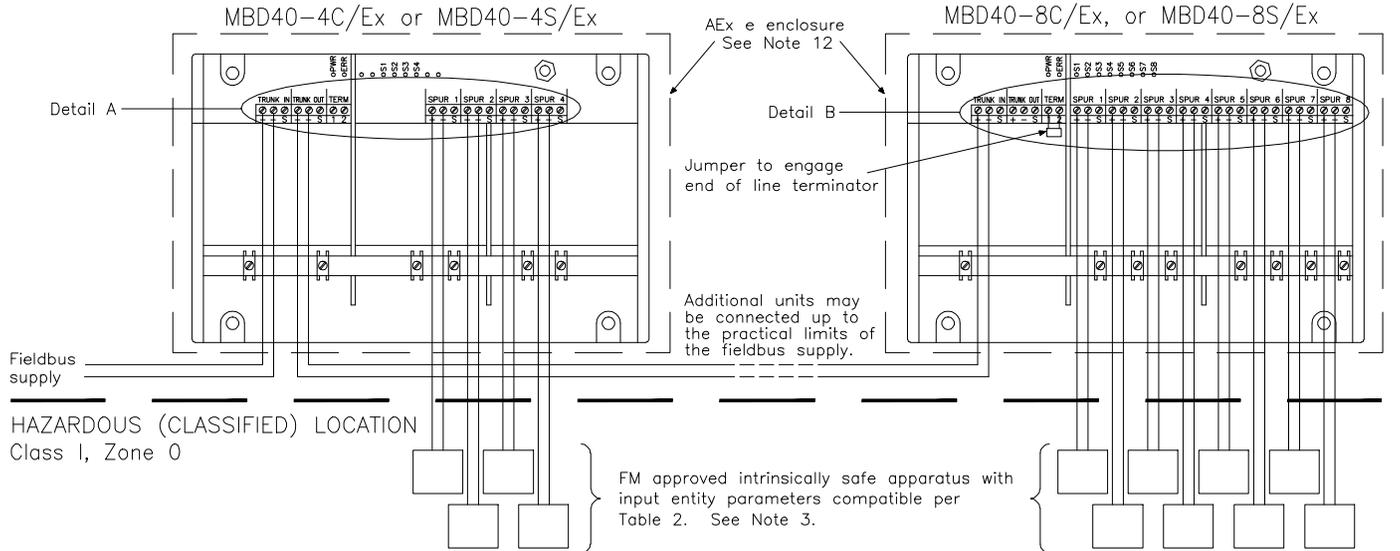
Drawing No.:	IS-2.535	TURCK 3000 Campus Drive Plymouth, MN 55441 Phone: (612) 553-7300
Title:	Control Drawing for FM Approved MBD40-../Ex	
Scale:	NONE	Sheet 1 of 2

A	Release	BVL	2/9/12
Rev	Description	Drft	Date

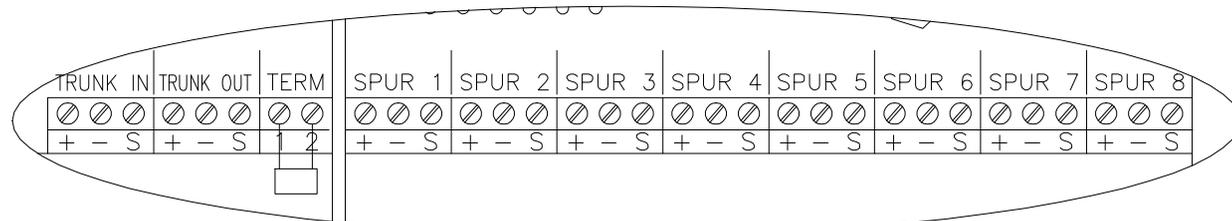
NON-HAZARDOUS LOCATION or
Class I, Division 2, Group A, B, C or D



NON-HAZARDOUS LOCATION or
Class I, Zone 1, Group IIC



Detail A - 4 Spur Version Connections



Detail B - 8 Spur Version Connections

A	Release	BVL	2/9/12	Drawing No.:	IS-2.535
Rev	Description	Drft	Date	Scale:	NONE
					Sheet 2 of 2