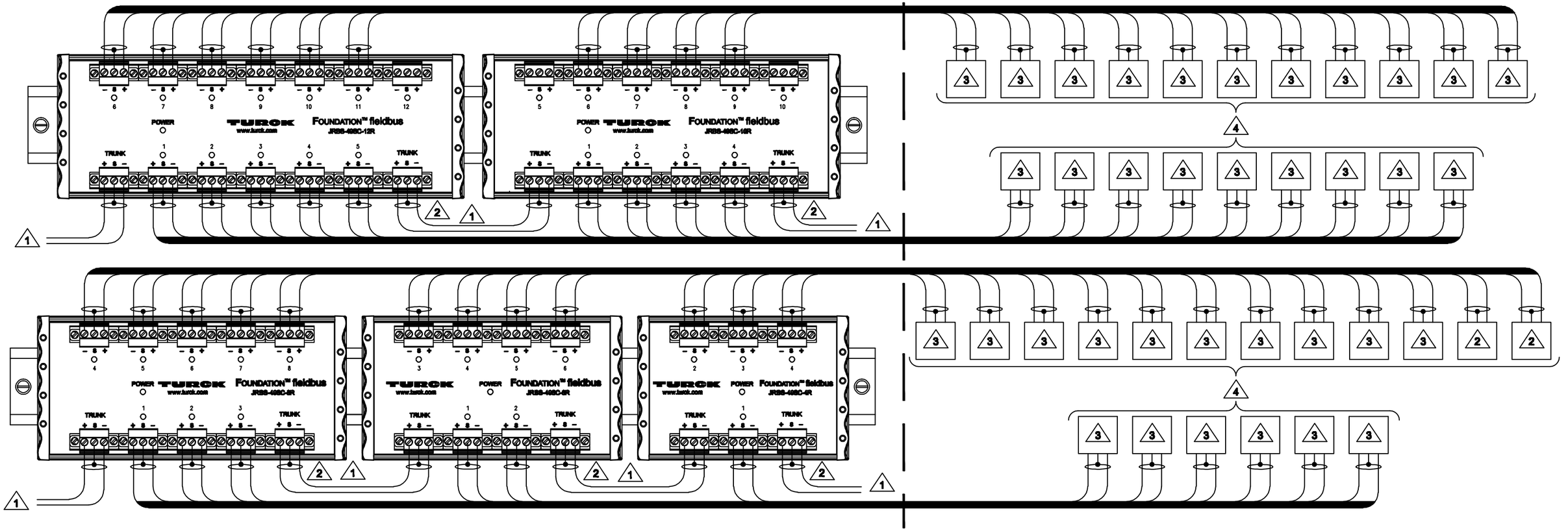
FM Approved JRBS Fieldbus Junctions

Junctions and Trunk–line installed in Class I, Division 2, Group A, B, C, or D with Nonincendive Field Wiring Circuit Spurs in Group C or D

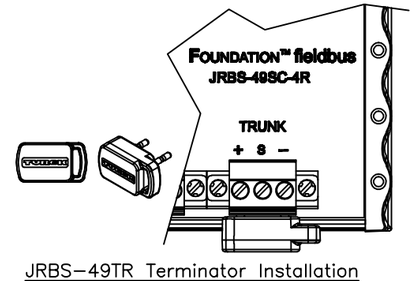
FM C US APPROVED

HAZARDOUS (CLASSIFIED) LOCATION
Class I, Division 2
Group A, B, C, or D

HAZARDOUS (CLASSIFIED) LOCATION
Class I, Division 2
Group C or D



1. The trunk line must be installed using a Class I, Division 2 wiring method per the National Electrical Code (NEC), ANSI/NFPA 70 for US jurisdictions, or the Canadian Electrical Code (CEC), CSA C22.1 for Canadian jurisdictions. The fieldbus power supply must not exceed 30 V dc and must not be referenced to ground. See also Note 4.
2. The second trunk connection may be connected to additional FM approved JRBS junctions, or may be terminated using a Turck JRBS–49TR terminator (see installation detail).
3. Field devices must be FM approved Nonincendive Field Wiring Apparatus with Nonincendive Field Wiring parameters as follows:
   $V_{max} \geq$ The supply voltage from the fieldbus power supply; $I_{max} \geq 63mA$; $C_i + C_{cable} \leq 0.1uF$; $L_i + L_{cable} \leq 1.0mH$
   If the electrical parameters of the cable are unknown, the following values may be used: Capacitance – 60pF/ft. Inductance – 0.2 µH/ft.
4. Installed as shown above, the JRBS junctions are Associated Nonincendive Field Wiring Apparatus. The spur circuits 1–12, 1–10, 1–8, 1–6 or 1–4 (per model) are Nonincendive Field Wiring circuits with the following Nonincendive Field Wiring parameters with right angle output characteristic:
   V_{oc} = The supply voltage from the fieldbus power supply, which must not be > 30V.
   When $V_{oc} \leq 28V$, $I_{sc} = 63mA$, $C_a = 0.1uF$, $L_a = 1.0mH$. When $V_{oc} \leq 30V$, $I_{sc} = 63mA$, $C_a = 0.06uF$, $L_a = 1.0mH$.
   The spur circuits may thus be installed using any NEC or CEC (as appropriate to the jurisdiction) wiring method suitable for equivalent non–hazardous locations.
5. The junctions must be installed in a suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
6. The specific configurations shown above are for illustration purposes. The number of JRBS junctions and the combination of JRBS junction models in a given fieldbus segment is limited only by the practical considerations of fieldbus design.



JRBS–49TR Terminator Installation

Rev	Description	Drft	Date
A	Release	BVL	1/15/09

TURCK
3000 CAMPUS DRIVE
MINNEAPOLIS, MN 55441
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(763) 553–7300
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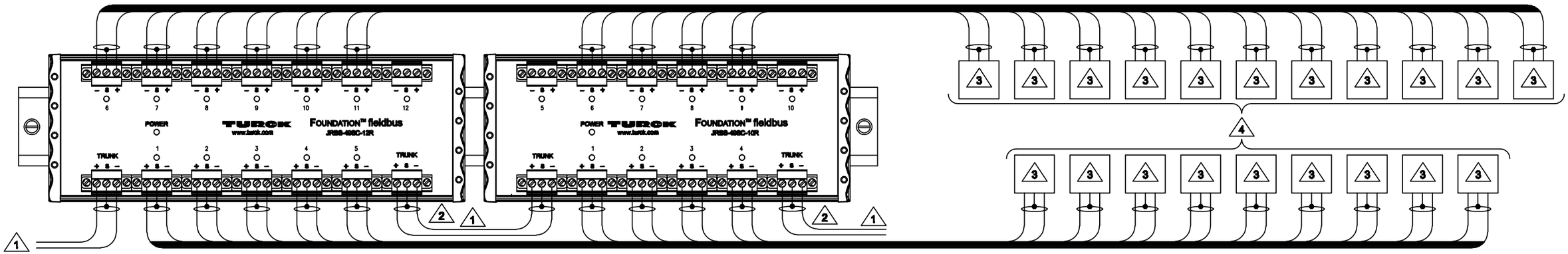
Drawing No.	Ni-2.410	Rev	A
Title	FM APPROVED JRBS JUNCTIONS FOR CLASS I, DIVISION 2		
Scale	None	Sheet	1 of 2

FM Approved JRBS Fieldbus Junctions

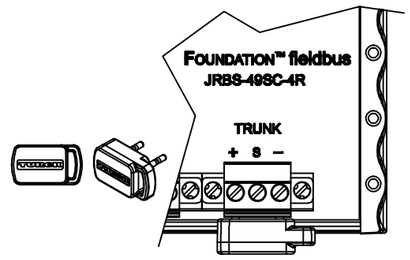
Junctions, Trunk–line, and Spurs installed in Class I, Division 2, Group A, B, C or D using Division 2 wiring methods

FM C US APPROVED

HAZARDOUS (CLASSIFIED) LOCATION
Class I, Division 2
Group A, B, C, or D



1. The trunk line must be installed using a Class I, Division 2 wiring method per the National Electrical Code (NEC), ANSI/NFPA 70 for US jurisdictions, or the Canadian Electrical Code (CEC), CSA C22.1 for Canadian jurisdictions. The fieldbus power supply must not exceed 30 V dc and must not be referenced to ground.
2. The second trunk connection may be connected to additional FM approved JRBS junctions, or may be terminated using a Turck JRBS–49TR terminator (see terminator installation detail).
3. Field devices must be FM approved for use in Class I, Division 2 hazardous (classified) locations and be rated for the fieldbus supply voltage.
4. The spur circuit must be installed using a Class I, Division 2 wiring method per the National Electrical Code (NEC), ANSI/NFPA 70 for US jurisdictions, or the Canadian Electrical Code (CEC), CSA C22.1 for Canadian jurisdictions.
5. The junctions must be installed in a suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
6. The specific configurations shown above are for illustration purposes. The number of JRBS junctions and the combination of JRBS junction models in a given fieldbus segment is limited only by the practical considerations of fieldbus design.



JRBS–49TR Terminator Installation

B	Release	BVL	1/15/09	Drawing No.: NI-2.410	
Rev	Description	Drft	Date	Scale: None	Sheet 2 of 2