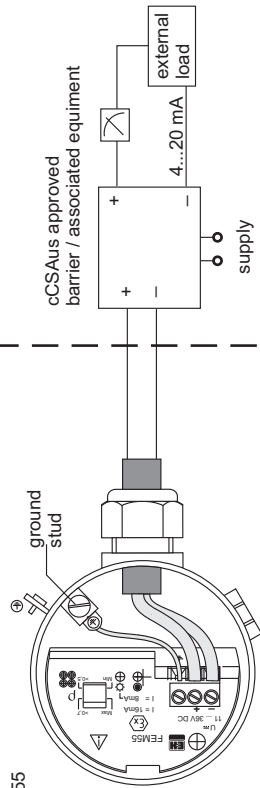


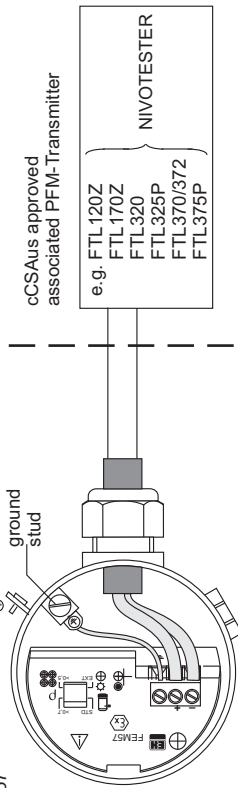
Hazardous classified location

Class I, Div. 1, 2, Groups A, B, C, D
 Class I, Zone 0
 Class II, Div. 1, 2, Groups E, F, G
 Class III

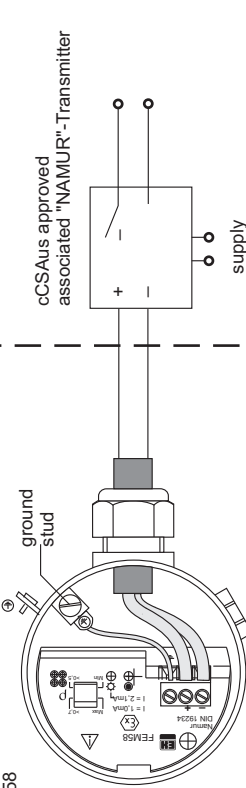
FEM55



FEM57



FEM58



Non hazardous location

- Control room equipment may not use or generate over 250 V_{rms}.
- Wire all circuits for power supply per Canadian Electrical Code, Part I (CEC) resp. National Electrical Code NFPA70 (NEC).
- Use entity approved safety barrier or other associated equipment that satisfy the following conditions:
 $V_{oc} \leq V_{max}$, $I_{sc} \leq I_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$ transmitter entity parameters are as follows:

FEM55 insert	FEM57 insert	FEM58 insert
Entity Parameters:	Entity Parameters:	Entity Parameters:
$V_{max} \leq 36\text{ V}$	$V_{max} \leq 16.7\text{ V}$	$V_{max} \leq 18\text{ V}$
$I_{max} \leq 100\text{ mA}$	$I_{max} \leq 150\text{ mA}$	$I_{max} \leq 52\text{ mA}$
$P_i \leq 1\text{ W}$	$P_i \leq 1\text{ W}$	$P_i \leq 170\text{ mW}$
$C_i \approx 0$	$C_i \approx 0$	$C_i \approx 0$
$L_i \approx 0$	$L_i \approx 0$	$L_i \approx 0$

4) **WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.**

- Ex ia is defined as Intrinsically Safe.
- Use supply wires suitable for 5°C above surrounding ambient.
- Single seal device per ANSI/ISA 12.27.01. Installation of a secondary process seal is not required.

Division 2 and Zone 2 installation

- Installation shall be in accordance with manufacturer's instructions and CEC resp. NEC using threaded conduit or other wiring methods in accordance with Section 18; CEC Part I.

9) Nonincendive field wiring installation

The Nonincendive Field Wiring Circuit Concept allows interconnection of nonincendive field wiring apparatus with associated nonincendive field wiring apparatus or associated apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when: $V_{max} \geq V_{oc}$ or V_i , $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$

Transmitter parameters are as follows:

FEM55 insert	FEM57 insert	FEM58 insert
(current controlled circuit)	(voltage controlled circuit)	(voltage controlled circuit)
NIFW Parameters:	NIFW Parameters:	NIFW Parameters:
$V_{max} \leq 36\text{ V}$	$V_{max} \leq 16.7\text{ V}$	$V_{max} \leq 18\text{ V}$
$I_{max} = \text{see note 10}$	$I_{max} = \text{see note 10}$	$I_{max} = \text{see note 10}$
$P_i \leq 1\text{ W}$	$P_i \leq 1\text{ W}$	$P_i \leq 170\text{ mW}$
$C_i \approx 0$	$C_i \approx 0$	$C_i \approx 0$
$L_i \approx 0$	$L_i \approx 0$	$L_i \approx 0$

- For these current and voltage controlled circuits, the parameters I_{max} is not required and need not to be aligned with parameters I_{sc} and I_i of the associated nonincendive field wiring or associated apparatus.
- WARNING: EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2 OR CLASS I, ZONE 2.**

12) Single seal device per ANSI/ISA 12.27.01. Installation of a secondary process seal is not required.

Class II, III installation (without barrier)

- Installation shall be in accordance with manufacturer's instructions and CEC resp. NEC using threaded conduit or other wiring methods in accordance with Section 18; CEC Part I, resp. NEC.
- Single seal device per ANSI/ISA 12.27.01. Installation of a secondary process seal is not required.

Functional ratings

These ratings do not supersede Hazardous Location values.

FEM55:	$U_{nom} = 11...36\text{ VDC}$
	$I_{nom} = 4...20\text{ mA}$
FEM57:	$U_{nom} = 9.5...12.5\text{ VDC}$
	$I_{nom} = 10...13\text{ mA}$
FEM58:	$U_{nom} = 8.2\text{ VDC} \pm 20\%$
	$I_{nom} = 0.4...4.8\text{ mA}$

