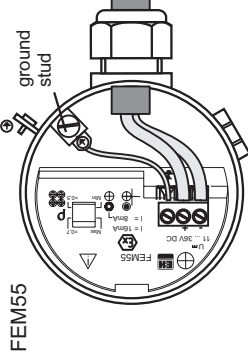


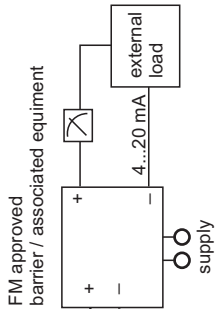
### Hazardous classified location

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

### Non hazardous location

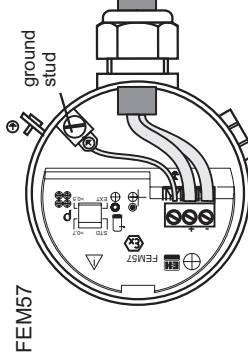


FM approved barrier / associated equipment

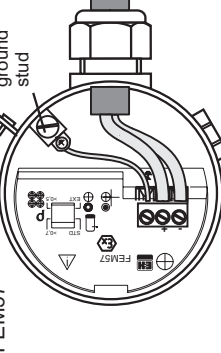
4...20 mA

external load

supply



FEM57



FM approved barrier / associated equipment

4...20 mA

external load

supply

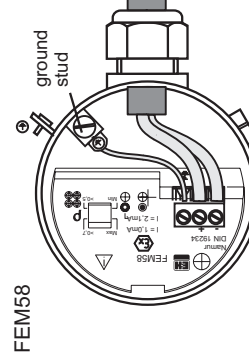
e.g. FTL120Z  
 FTL170Z  
 FTL320  
 FTL325P  
 FTL370/372  
 FTL379P

FM approved barrier / associated equipment

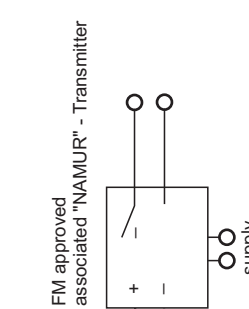
4...20 mA

external load

supply



FEM58



FM approved barrier / associated equipment

4...20 mA

external load

supply

**Functional ratings:**  
 These ratings do not supersede Hazardous Location values.

FEM55:  
 Unom = 11...36 V DC  
 Inom = 4...20 mA

FEM57:  
 Unom = 9.5...12.5 V DC  
 Inom = 10...13 mA

FEM58:  
 Unom = 8.2 V DC ±20%  
 Inom = 0.4...4.8 mA

### Intrinsically safe (entity), Class I, Div. 1, Groups A, B, C, D Hazardous Location Installations

- Control room equipment may not use or generate over 250 Vrms.
- Wire all circuits for power supply per NEC ANSI/NFPA 70 and ISA RP 12.06.01.
- 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 Entity Parameters:	FEM57 insert Entity Parameters:	FEM58 insert Entity Parameters:
$V_{max} \leq 36 V$	$V_{max} \leq 16.7 V$	$V_{max} \leq 18 V$
$I_{max} \leq 100 mA$	$I_{max} \leq 150 mA$	$I_{max} \leq 52 mA$
$P_i \leq 1 W$	$P_i \leq 1 W$	$P_i \leq 170 mW$
$C_i \approx 0$	$C_i \approx 0$	$C_i \approx 0$
$L_i \approx 0$	$L_i \approx 0$	$L_i \approx 0$

- 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.

### Division 2 and Zone 2 installation

- Installation shall be in accordance with NEC using threaded conduit or other wiring methods in accordance with articles 500 to 510.
- 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 (voltage controlled circuit) NIFW Parameters:	FEM57 insert (voltage controlled circuit) NIFW Parameters:	FEM58 insert (voltage controlled circuit) NAMUR housing, compact NIFW Parameter:
$V_{max} \leq 36 V$	$V_{max} \leq 16.7 V$	$V_{max} \leq 18 V$
$I_{max} \leq$ see note 9	$I_{max} \leq$ see note 9	$I_{max} \leq$ see note 9
$P_i \leq 1 W$	$P_i \leq 1 W$	$P_i \leq 170 mW$
$C_i \approx 0$	$C_i \approx 0$	$C_i \approx 0$
$L_i \approx 0$	$L_i \approx 0$	$L_i \approx 0$

- For these current and voltage controlled circuits, the parameters  $I_{sc}$  and  $I_i$  of the associated nonincendive field wiring need not 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.**

### Class II, III installation (without barrier)

- Installation of transmitter circuit wiring according to NEC using threaded conduit or other wiring methods in accordance with articles 500 to 510.

Agency controlled drawing.  
 No changes without prior agency approval

