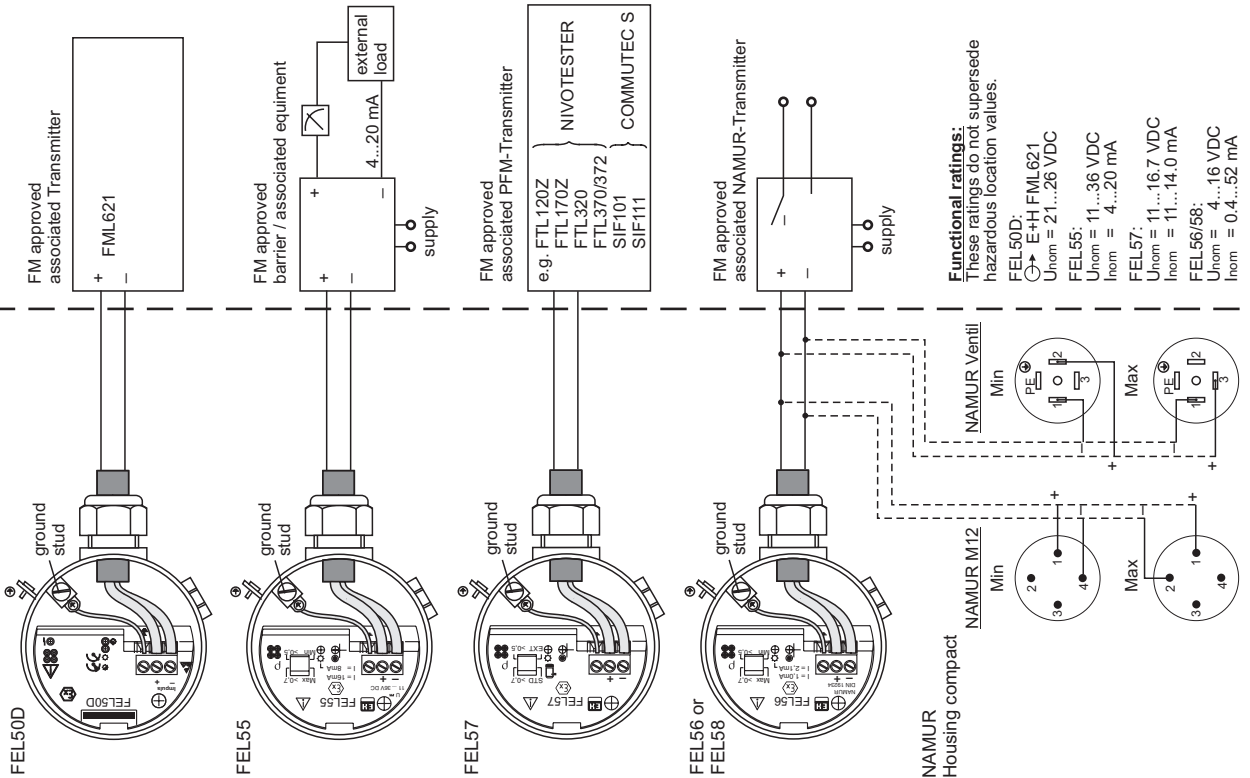


Hazardous classified location

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



Functional ratings:
 These ratings do not supersede hazardous location values.
 FEL50D:
 U_{nom} = 21...26 VDC
 FEL55:
 U_{nom} = 11...36 VDC
 I_{nom} = 4...20 mA
 FEL57:
 U_{nom} = 11...16.7 VDC
 I_{nom} = 11...14.0 mA
 FEL56/58:
 U_{nom} = 4...16 VDC
 I_{nom} = 0.4...52 mA

Non hazardous location

Intrinsically safe (entity), Class I, Div. 1, Groups A, B, C, D Hazardous locations installations

- Control room equipment may not use or generate over 250 V_{rms}.
- 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:

FEL50D insert:
 Entity Parameters:
 $V_{max} \leq 27.6$ V
 $I_{max} \leq 93$ mA
 $P_i \leq 640$ mW
 $C_i \leq 2$ nF
 $L_i \leq 0.133$ mH

FEL57 insert:
 Entity Parameters:
 $V_{max} \leq 16.7$ V
 $I_{max} \leq 150$ mA
 $P_i \leq 1$ W
 $C_i \approx 0$
 $L_i \approx 0$

FEL56/FEL58 insert:
 NAMUR housing compact Entity Parameters:
 $V_{max} \leq 16$ V
 $I_{max} \leq 52$ mA
 $P_i \leq 169$ mW
 $C_i \approx 0$
 $L_i \approx 0$

- 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.
- NEC, cl. 50 70-394: "Flammable fluid seals" classification according ANSI/ISA 12.27.01.
 Single seal device; Gas tight conduit seal not required.

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:

FEL50D insert (current controlled circuit):
 NIFW Parameters:
 $V_{max} \leq 27.6$ V
 $I_{max} =$ see note 9
 $C_i \leq 2$ nF
 $L_i \leq 0.133$ mH

FEL55 insert (voltage controlled circuit):
 NIFW Parameters:
 $V_{max} \leq 36$ V
 $I_{max} =$ see note 9
 $C_i \approx 0$
 $L_i \approx 0$

FEL56/FEL58 insert (voltage controlled circuit):
 NAMUR housing compact NIFW Parameters:
 $V_{max} \leq 16$ V
 $I_{max} =$ see note 9
 $C_i \approx 0$
 $L_i \approx 0$

- For these current and voltage controlled circuits, the parameter I_{max} is not required and need not to be aligned with parameters I_{sc} and I_t 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.

- NEC, cl. 50 70-394: "Flammable fluid seals" classification according ANSI/ISA 12.27.01.
 Single seal device; Gas tight conduit seal not required.

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.

Temperature code	Permissible ambient temperature electronic compartment	Device
T6	-50°C...+60°C	FEL50D
T5	-50°C...+70°C	FEL5x without FEL50D
T4	-50°C...+70°C	All electronic inserts
T3	-50°C...+70°C	FEL5x

XA00613F-J/00/EN/13.11
 CCS/FM6.0
 FM/J 16.12.10



71145356

FM Control Drawing
960392-1060 J
 Liquiphant M/S
 FTL50(H), FTL51(H), FTL51C, FTL70/71
 Current output PFM, NAMUR
 (IS / NI)

Endress+Hauser
 People for Process Automation