

16-519FM-12 1/8

LUC-M10, LUC-M20, LUC-M40
FM control drawing (F**, IS-HART)



71032956

HAZARDOUS LOCATION

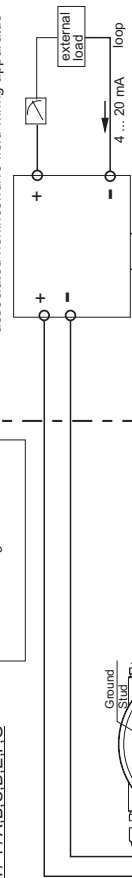
Class I, Div. 1, 2, Groups A, B, C, D
Class I, Zone 0, IIC; Zone 2, IIC
Class II, Div. 1, 2, Groups E, F, G
Class III

*F-Type- Housing:
IS / I, II, III / 1 / A, B, C, D, E, F, G

Option 1:
Prepared to connect
FM approved remote
display type LUC-Z40-Ex1*
refer to adequate
Control Drawing

NON HAZARDOUS LOCATION

Any FM approved associated apparatus or
associated nonincendive field wiring apparatus



Notes:

- Intrinsically safe installation**
Intrinsically safe (entity), Class I, Div. 1, Group A, B, C, D or Zone 0 IIC Hazardous Location Installation
- Control room equipment may not use or generate over 250 Vrms.
 - Installation should be in accordance with the National Electrical Code NFPA 70 (NEC) and ANSI / ISA RP12.06.01.
 - Warning: Substitution of components may impair intrinsic safety.
 - Use FM Approved Entity-Approved intrinsic safety barrier with $U_0/V_{OC} \leq U_{Vmax}$, $I_0/I_{SC} \leq I/I_{max}$, $C_0/C_1 > C_1 + C_{cable}$, $L_0/L_L \geq L_1 + L_{cable}$
- Barrier must be capable of delivering more than 1 Watt to a matched load.
Transmitter entity parameters are as follows:

U_{Vmax} (V)	I/I_{max} (mA)	P/P_{max} (W)	C_1 (nF)	L_1 (μ H)
30	300	1.0	≤ 13	0

- Use supply wires suitable for 5K above surrounding ambient.
- Intrinsic safety barrier manufacturer's installation drawing must be followed when installing this equipment. The configuration of the intrinsic safety barrier(s) must be approved by FM Approvals.
- This version of Prosonic M may be provided with a connection to an external display unit already installed or via a set up kit. This connection is for the use of the FM approved display unit LUC-Z40-Ex1* only. Refer to safety instructions of the external display unit LUC-Z40-Ex1*.

Division 2 and Zone 2 installation

- Nonincendive Class I, Div. 2, Group A, B, C, D Hazardous Location Installation**
- Installation shall be in accordance with NEC using threaded conduits or other wiring methods in accordance with Article 500 through Article 510. Intrinsic safety barrier not required. Max. supply voltage 30 V. For T-code see table.
 - 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_1 , C_0 or $C_1 \geq C_1 + C_{cable}$, L_0 or $L_L \geq L_1 + L_{cable}$
- Transmitter non incendive field wiring parameters for this current controlled circuit are as follows:
 $V_{max} = 30V$, $C_1 \leq 13nF$, $L_1 = 0\mu H$, I_{max} * see note 3
- For this current controlled circuit, the parameter I_{max} is not required and need not be aligned with parameter I_{sc} or I_0 of the barrier or associated nonincendive field wiring apparatus
 - Warning: Explosion Hazard - Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
Warning: Explosion hazard - substitution of components may impair suitability for Class I, Div. 2.

Class II, III installation

- DIP for Class II and III, Div. 1, Group E, F, G Hazardous Location Installation**
- Installation shall be in accordance with NEC using threaded conduits or other wiring methods in accordance with Article 500 through Article 510.
 - Use a dust tight seal at the conduit entry.

Functional Ratings

These ratings do not supersede Hazardous Locations Values
 $V_{nom} = 14, \dots, 30V$, $I_{nom} = 4, \dots, 20mA$

Temperature class with / without Display YU 331	Permissible maximum medium temperature at the sensors	Permissible maximum ambient (T_a) of electronic compartment (F-Type enclosure)	
		LUC-M10-	LUC-M20-
T6	+60 °C	+60 °C	+60 °C
T5	+80 °C	+80 °C	+80 °C

Area of application:
The compact instruments are suitable for use in areas subject to explosion caused by gases, vapours or mists.

Permissible ambient temperature:
Electronic: *F-Type enclosure -40 ... +80 °C resp. -40 ... +176 °F

Type	Type of sensor	Operation temperature [°C resp. °F]
LUC-M10-	1 1/2"-sensor	-40 to +80 resp. -40 to +176
LUC-M20-	2"-sensor	-40 to +80 resp. -40 to +176
LUC-M40-	3"-sensor	-40 to +80 resp. -40 to +176

