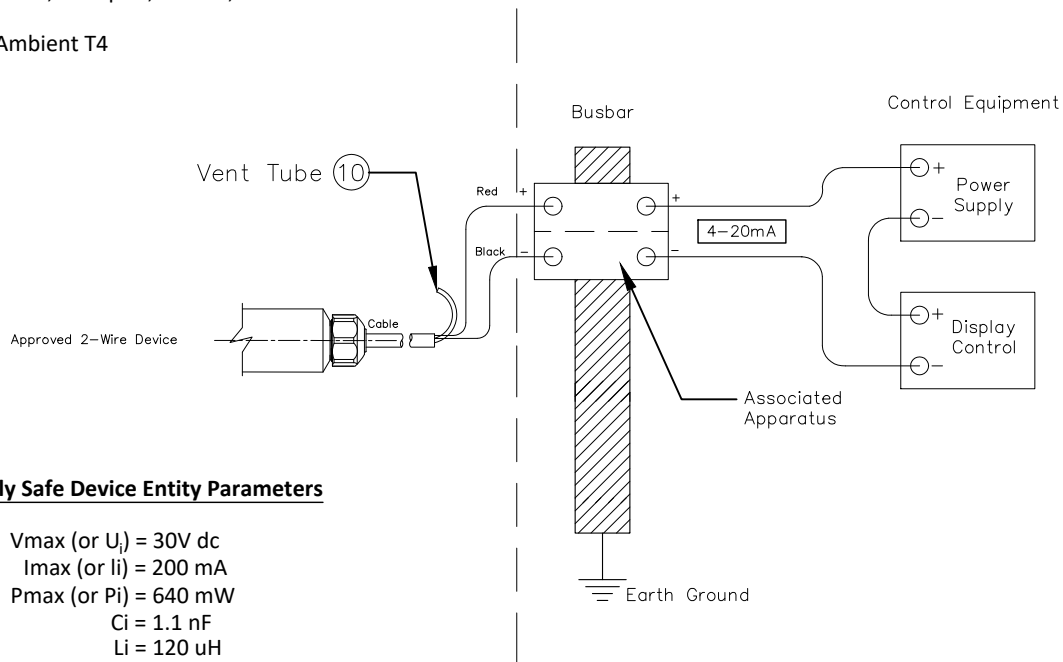


Hazardous Location

Class I, Division 1, Groups A,B,C and D,
 Class I, Division 2, Groups A,B,C and D,
 Class II, Division 1, Groups E,F and G,
 Class III
 -10C to 60C Ambient T4

Non-Hazardous Location



Intrinsically Safe Device Entity Parameters

V_{max} (or U_i) = 30V dc
 I_{max} (or I_i) = 200 mA
 P_{max} (or P_i) = 640 mW
 C_i = 1.1 nF
 L_i = 120 μ H

Notes:

- Cable parameters: $L < .36 \mu\text{H}/\text{ft}$ where C_c = conductor -to- conductor.
 $C_c < 20\text{pF}/\text{ft}$ C_s = conductor -to- shield.
 $C_s < 30\text{pF}/\text{ft}$
 $R = 37.7 \text{ ohm}/1000\text{ft}$
- Selected associated apparatus must be third party listed as providing intrinsically safe circuits for the application, and have V_{oc} or V_t not exceeding V_{max} (or U_o not exceeding U_i), I_{sc} or I_t not exceeding I_{max} (or I_o not exceeding I_i), and the P_o of the associated apparatus must be less than or equal to the P_{max} or P_i of the intrinsically safe equipment, as shown in Table 1.
- Associated apparatus output current must be limited by a resistor such that the output voltage-current plot is a straight line drawn between open-circuit voltage and short-circuit current.
- Cable shield is connected to the transmitter housing. To avoid potential ground loops, any earth connection of the shield must follow local codes. Refer to Article 504.30(B) of the National Electrical Code (ANSI/NFPA 70), Instrument Society of America Recommended Practice ISA RP12.06 for installing intrinsically safe equipment, and or Section 18 of the Canadian Electrical Code.
- Capacitance and inductance of the field wiring from the intrinsically safe equipment to the associated apparatus shall be calculated and must be included in the system calculations as shown in Table 1. Cable capacitance, C_{cable} , plus intrinsically safe equipment capacitance, C_i , must be less than the marked capacitance, C_a (or C_o), shown on any associated apparatus used. The same applies for inductance (L_{cable} , L_i and L_a or L_o , respectively). Where the cable capacitance and inductance per foot are not known, the following values shall be used for two or three core cables: $C_{cable} = 60 \text{ Pf}/\text{FT.}$, $L_{cable} = 0.2 \mu\text{H}/\text{ft.}$

TABLE 1:

IS. Equipment	Associated Apparatus
V_{max} (or U_i) \geq	V_{oc} or V_t (or U_o)
I_{max} (or I_i) \geq	I_{sc} or I_t (or I_o)
P_{max} (or P_i) \geq	P_o
$C_i + C_{cable} \leq$	C_a (or C_o)
$L_i + L_{cable} \leq$	L_a (or L_o)

Rev. B	8-7-23	MTB	Attention! This is an agency-approved drawing! All revisions must be submitted for agency approval.			
REVISION NO.	DATE	BY	DESCRIPTION			
TITLE			DWN BY		DWN	
Control Drawing, UL			A.Woodbury		MTB	7-18-23
SCALE					CHECKED	D.M 7-18-23
					APPROVED	D.M 7-18-23
SERIES	SHT. 1 of 3		351 BELL KING ROAD NEWPORT NEWS, VA 23606 TEL: 757-596-6680 FAX: 757-596-6659 HTTP://WWW.KELLERAMERICA.COM			DWG #
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