

1. (North America) Control equipment connected to the Associated Apparatus must not use or generate more than 250 Vrms or Vdc.

2. (North America) The IS Barriers or Equipment (Associated Apparatus) must be FM Approved and CSA certified and the configuration of associated Apparatus must be FM Approved and CSA certified under the Entity Concept. The Associated Apparatus must be installed within the Hazardous (Classified) location for which it is certified. The Associated Apparatus and hazardous location loop apparatus manufacturer's control drawings must be followed when installing this equipment. An AEx [ib] Associated Apparatus is suitable only for connection to Class I, Zone 1, Hazardous (Classified) Locations and is not suitable for Class I, Zone 0, or Class I, Division 1 Hazardous (Classified) Locations.

(ATEX) The IS Barriers or other Associated Apparatus shall comply with the ATEX directive 94/9/EC.

3. (US) Installation should be in accordance with ANSI/ISA RP12.06.01 "Installation of Intrinsically Safe Systems for Hazardous (Classified) Locations" and Article 500 of the National Electrical Code (ANSI/NFPA 70)

(Canada) Installation should be in accordance with Section 18 of the Canadian Electrical Code.

(ATEX) Installation shall be in accordance with the applicable local installation rules Energy Limitation Parameters specified.

4. (North America) Units must be mounted in a suitable enclosure for Type 4X installations.

5. (North America) Units are suitable for Class I, Division 2, Groups A, B, C, and D hazardous (classified) locations. Transducers to be installed in accordance with the

(US) National Electrical Code (ANSI/NFPA 70) Division 2 hazardous (classified) location wiring techniques

(Canada) Canadian Electrical Code.

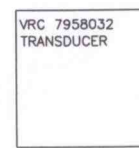
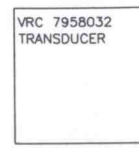
6. The Intrinsic Safety Entity concept allows the interconnection of two Intrinsically safe devices with entity parameters not specifically examined in combination as a system when:

U_i or $V_{max} > U_o$ or V_{oc}
 I_i or $I_{max} > I_o$ or I_{sc} or I_t
 C_a or $C_o > C_i + C_{cable}$
 L_a or $L_o > L_i + L_{cable}$
 $P_i > P_o$.

Entity Parameters for VRC 7958032

U_i (V_{max}) = 40 V
 I_i (I_{max}) = 150 mA
 $C_i = 0$
 $L_i = 0$
 $P_i = 0.7$ watts

7. No revision to this drawing is permitted without prior FM Approval and CSA Certification.



HAZARDOUS LOCATION

NONHAZARDOUS LOCATION

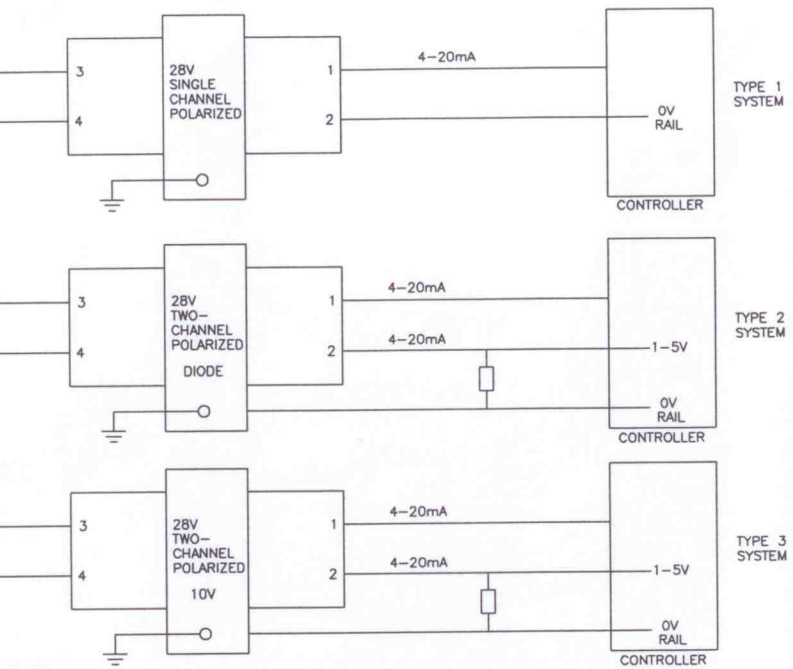
HAZARDOUS LOCATION UNITS:
 FM & CSA
 INTRINSICALLY SAFE:
 CLASS I, DIV. 1, GROUPS A, B, C, D
 NON INCENDIVE FOR:
 CLASS I, DIV. 2, GROUPS A, B, C, D

HAZARDOUS LOCATION UNITS:
 ATEX(FM)
 FM07ATEX02X II 1 G Ex ia IIC T4* Ta=-55°C TO +85°C
 FM07ATEX03X II 3 G Ex nL IIC T4* Ta=-55°C TO +85°C
 II 3 G Ex nA nL IIC T6** Ta=-55°C TO +85°C

* SEE ENERGY LIMITING PARAMETERS TABLE BELOW
 ** T6 TEMPERATURE CLASS FOR SELF PROTECTED ENERGY LIMITED APPARATUS, THE 4-20 mA INPUT VOLTAGE OF 40Vdc.

ENERGY LIMITING PARAMETERS

TEMP. CLASS	Ta	Li	Ui	Pi
T6	60°C	50 mA	42.5 V	2.125 W
T6	55°C	60 mA	38.8 V	2.328 W
T5	70°C	60 mA	38.8 V	2.328 W
T5	55°C	100 mA	30.0 V	3.0 W
T5	45°C	120 mA	28.0 V	3.36 W
T4	85°C	60 mA	38.8 V	2.328 W
T4	85°C	100 mA	30.0 V	3.0 W
T4	80°C	120 mA	28.0 V	3.36 W
T4	70°C	150 mA	25.5 V	3.825 W
T5	85°C	23 mA	6.75 V	0.155 W



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TOLERANCES	REVISIONS			INTERCONNECTION DIAGRAM					
	NO.	DATE	BY	VRC 7958032					
DECIMAL .XX ± .01 .XXX ± .005	1								
FRACTIONAL ± 1/64	2								
	3			DRAWN BY	KJM	SCALE	NONE	MATERIAL	SEC ABOVE
ANGULAR ± 1/4°	4			CHECKED		DATE	7-2-07	DRAWING NO.	
	5			TRACED		APP'D		531-990-053	