

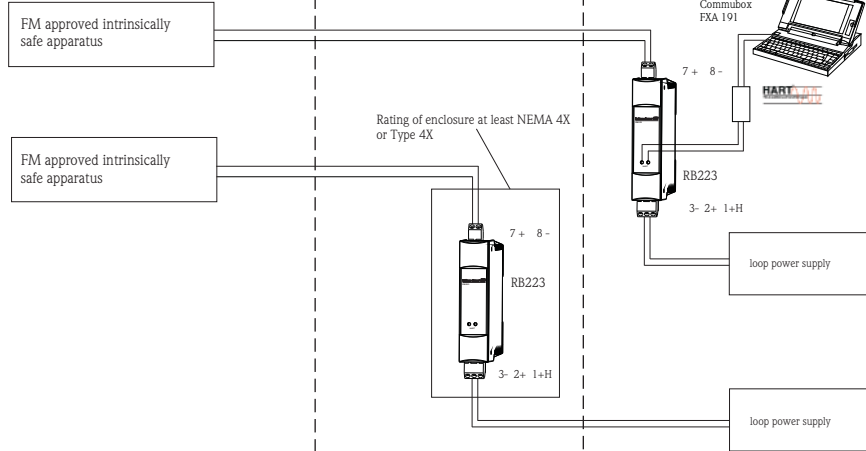
**Hazardous (Classified) Locations**  
 Class I, Groups ABCD  
 Class II, Groups EFG  
 Class III  
 Class I, Zone 0 Group IIC  
 Class I, Zone 2 Group IIC



Class I, Division 2, Groups ABCD  
 Class I, Zone 2 Group IIC



Non-hazardous area



**Transmission from hazardous (classified) to Non-hazardous area:**

(Terminals 1+ H, 2+, 3- and optionally 4+ H, 5+, 6-)  
 $U_m \leq 30$  VDC (loop powered)  $I_m \leq 100$  mA

(Terminals 7 + 8 – and optionally 9+, 10-)  
 $V_{max}$  or  $U_i = 30$  V  $I_{max}$  or  $I_i = 100$  mA  $P_i = 750$  mW  $C_i = 0$   $L_i = 0$



**Installation Notes RB223**

- FM Approved Apparatus must be installed in accordance with manufacturer's instructions and the control drawing.
- Depending on location install per National Electrical Code (NEC) using wiring methods described in article 500 through article 510.
- Use supply wires suitable for 5°C above surroundings.
- For Non-hazardous area install the device of Protection Ratings of least IP20, NEMA 1, Type 1.

**INTRINSICALLY SAFE CONNECTION TO**

**Class I, II, III / Div. 1+2 / Groups ABCDEFG**

- The device is an Associated intrinsically safe equipment and must be installed in Division 2 or nonhazardous locations only.
- Installation should be in accordance with ANSI/ISA RP 12.06.01 "Installation of Intrinsically safe systems for Hazardous (classified) locations" and the National Electrical Code (ANSI/NFPA 70).
- For entity installations use certified equipment that satisfy the following condition  
 $U_o/V_o \leq V_{max}/U_i$   $I_o/I_{sc} \leq I_{max}/I_i$   $P_o \leq P_i$   $C_o/C_a \geq C_i + C_{cable}$   $L_o/L_a \geq L_i + L_{cable}$
- The Terminal of the intrinsically safe circuit must be placed at a distances of least 50mm from terminals of the non intrinsically safe circuits, or adequate separators (e.g. ground metal partitions) must be used.

**NONINCENDIVE Field WIRING CONNNECTION TO Class I, II, III / Div. 2 / Groups ABCDEFG**

- The device is an Associated Nonincendive safe equipment and must be installed in Division 2 or nonhazardous locations only.
- The Nonincendive Field Wiring Circuit Concept allows interconnection of Nonincendive Field Wiring Apparatus with Associated Nonincendive Field Wiring Apparatus or Associated Intrinsically Safe Apparatus or Associated Apparatus not specifically examined in combination as a system using any of the wiring methods permitted for unclassified locations, when  $V_o \leq V_{max}$ ,  $C_a \geq C_i + C_{cable}$ ,  $L_a \geq L_i + L_{cable}$ .

**Temperature range**

$T_a$  -20°C ... +60°C

**AIS**

Class I, II, III, Div. 1+2, Groups ABCDEFG  
 Cl. I, Zone 0 [AEx ia] IIC

**ANI**

Class I, II, III, Div. 2, Groups ABCDEFG

**NI**

Class I, Div. 2, Groups ABCD

$T_4$  -20°C ... +60°C

**Transmission from Non-hazardous to hazardous (classified) area:**

Supply (Terminals 1+ H, 2+, 3- and optionally 4+ H, 5+, 6-)  
 $U_m \leq 30$  VDC (loop powered)  $I_m \leq 100$  mA

Output (Terminals 7 + 8 – and optionally 9+, 10-)  
 $U_o$  or  $V_o = 28.2$  V  $I_o$  or  $I_{sc} = 94.5$  mA  $P_o = 666$  mW

Group A, B	resp.	[AEx ia] IIC	$C_o$ or $C_a = 81$ nF	$L_o$ or $L_a = 2$ mH
Group C	resp.	[AEx ia] IIB	$C_o$ or $C_a = 641$ nF	$L_o$ or $L_a = 5$ mH
Group D	resp.	[AEx ia] IIA	$C_o$ or $C_a = 2110$ nF	$L_o$ or $L_a = 5$ mH

Approved	Pfanzelt	Date (yyyy-mm-dd)	2006-09-05	Drawing No.	02 20 00 111	Dwg.rev.		Revision no.		Revision date (yyyy-mm-dd)		Name		Material	71064250 ZD 066R/09/en/08.07	<b>Endress+Hauser</b>
Designed	Pfanzelt	Date (yyyy-mm-dd)	2006-07-25	Unit	RB 223	Scale	1:1	Title	CONTROL DRAWING		Series					
Refer to protection notice	Edge of working parts	Geometrical tolerancing		Part No.	-	Format	A4	FM			Objekt version	Sheet	1 of 1	Endress + Hauser	Wetzer GmbH+Co. KG Nesselwang / Germany	