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

(Endpoints 1+, 2+, 3- and optionally 4+, 5+, 6-)

- $Um \leq 30 \text{VDC}$ (loop powered)  
  - $Im \leq 100 \text{mA}$

(Endpoints 7 + 8 – and optionally 9+, 10-)

- $V_{max} or V_{i} = 30 \text{V}$  
  - $I_{max} or I_{i} = 100 \text{mA}$  
  - $Pi = 750 \text{mW}$  
  - $Cl = 0$  
  - $Li = 0$

**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
  
  $U_{o}/U_{c} \leq V_{max}$
  
  $C_{o} or C_{a} \geq C_{i} + C_{	ext{cable}}$

  $L_{o} or L_{a} \geq L_{i} + L_{	ext{cable}}$

  - 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 CONNECTION 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
  
  $V_{o} or U_{c} \leq V_{max}$

  $C_{o} or C_{a} \geq C_{i} + C_{	ext{cable}}$

  $L_{o} or L_{a} \geq L_{i} + L_{	ext{cable}}$

- Transmission from Non-hazardous to hazardous (classified) area:
  
  **Supply (Endpoints 1+ H, 2+, 3- and optionally 4+ H, 5+, 6-)**

  - $Um \leq 30 \text{VDC}$ (loop powered)  
    - $Im \leq 100 \text{mA}$

  **Output (Endpoints 7 + 8 – and optionally 9+, 10-)**

  - $V_{o} or U_{c} = 28.2 \text{V}$  
    - $Io or I_{c} = 94.5 \text{mA}$  
    - $Po = 666 \text{mW}$

- *Group A, B resp.*  
  - $[\text{AEx ia}] \text{IIC}$
  - $Co or Ca = 81 \text{nF}$  
  - $Lo or La = 2 \text{mH}$

- *Group C, D resp.*  
  - $[\text{AEx ia}] \text{IIA}$
  - $Co or Ca = 641 \text{nF}$  
  - $Lo or La = 5 \text{mH}$

- *Group D resp.*  
  - $[\text{AEx ia}] \text{II}A$
  - $Co or Ca = 2110 \text{nF}$  
  - $Lo or La = 5 \text{mH}$