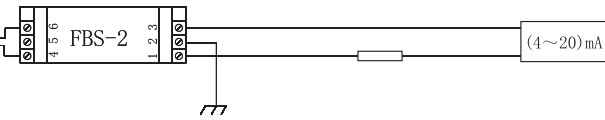
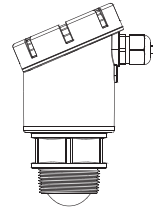


**Hazardous (Classified) Location**

**Unclassified Location**

Ex ia IIC  
Ex ta IIIC



LR8X series Radar Level transmitter

**ASSOCIATED APPARATUS WITH ENTITY PARAMETERS**

Po < 1 Watt  
Uo < 30.6V  
Io < 131mA  
Co >= Ci + C(cable)  
Lo >= Li + L(cable)

Type	Type of protection	Electrical Data
LR83, LR85	Ex ia	<b>2-wire 4-20mA HART:</b> Supply and output circuit (+, -): Supply voltage: 12-30 VDC Signal output: 4-20mA, two-wire, HART 7 Max. consumption: 22.5 mA The entity parameters for the product are: Ui=30.6V, Ii=131mA, Pi=1.0W, Ci=0, Li=131.3uH
LR81	Ex ia	<b>2-wire 4-20mA HART:</b> Supply and output circuit (+ (Red wire), - (Black wire)): Supply voltage: 12-30 VDC Signal output : 4-20mA, two-wire, HART 7 Max. consumption: 22.5 mA The entity parameters for the product are: Ui=30.6V, Ii=131mA, Pi=1.0W Ci=L <sub>cable (ft)</sub> *36pF, Li=132.6uH+ L <sub>cable (ft)</sub> *0.083uH

Note1: The capacitance and inductance of the cable used in Model LR81 are 36pF/ft and 0.083uH/ft respectively, where L<sub>cable (ft)</sub> denotes the length of the cable. (unit ft). The maximum allowable length of the cable is 656.17 feet (200m).

For LR81(I.S.), the maximum cable length is 200m(656.168Ft),  
Li=132.6uH+ L<sub>cable (ft)</sub> \*0.083uH =132.6+656.168\*0.083=187uH  
Ci=656.168\*0.036=24nF  
below the safety barrier Lo and Co

	Name /	Date /	
Drawn /			
Appr. /		2025-9-2	
Rev. / V1.0	INTRINSIC SAFETY CONTROL DRAWING FOR LR8X series Radar Level transmitter		DrawingNo. / 8X-CONWIRE