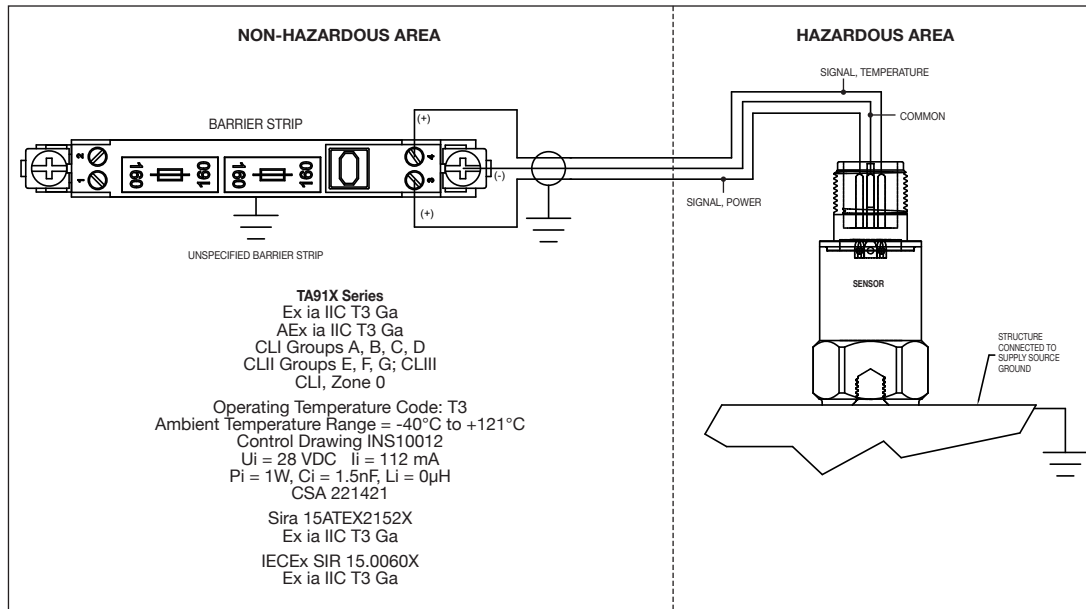


Intrinsic Safety Control Drawing



Overview & Requirements

- A barrier is required for the installation of IS sensors. The barrier passes signals in either direction as required but limits the voltage and current that can reach the hazardous area under fault conditions. The barrier is put in series and is installed in a safe area (see Typical Connection Diagram).
 - Proper IS Barrier must be used with this sensor to ensure compliance with entity parameters**
 - IS131 and IS231 barriers are compatible with TA91X series sensors
 - Please contact a CTC Representative if you require assistance in specifying the correct barrier for CTC sensors
- Approved cabling (maximum 1600 ft./488 m) of CB191 or CB212 must be used to bring the signal from the sensor to the Zener diode barrier or galvanic isolator, which is the energy-limiting interface. The standard cable, for integral cables is CB191 TPE jacketed, 3 conductor shielded cable
- Sensors must be grounded to a grounded structure by stud mounting the sensor directly to the machine surface, ensuring metal (of the sensor) to metal (of the machine surface) contact




Entity Parameters

This information is used to specify the barrier required for the installation of CTC intrinsically safe sensors.

Model	Description	V _{max}	C _i	I _{max}	L _i	P _i	
TA91X Series	Accelerometer	28 Vdc	1.5 nF	112 mA	0 uH	1 W	

V_{max} = Maximum Voltage
C_i = Total Capacitance of Circuit Allowable
I_{max} = Maximum Allowable Current
L_i = Total Inductance of Circuit Allowable
P_i = Total Power of Circuit Allowable

Regulatory Approvals

Regulatory Approvals	US & Canada:	ATEX:	IECEX:
	 Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III; CL1, Zone 0 Temperature Code T3; ambient temperature range -40°C to +121°C Canada: Ex ia IIC T3 Ga USA: AEx ia IIC T3 Ga	 Ex ia IIC T3 Ga Temperature Code T3; ambient temperature range -40°C to +121°C	 IECEX Ex ia IIC T3 Ga Temperature Code T3; ambient temperature range -40°C to +121°C