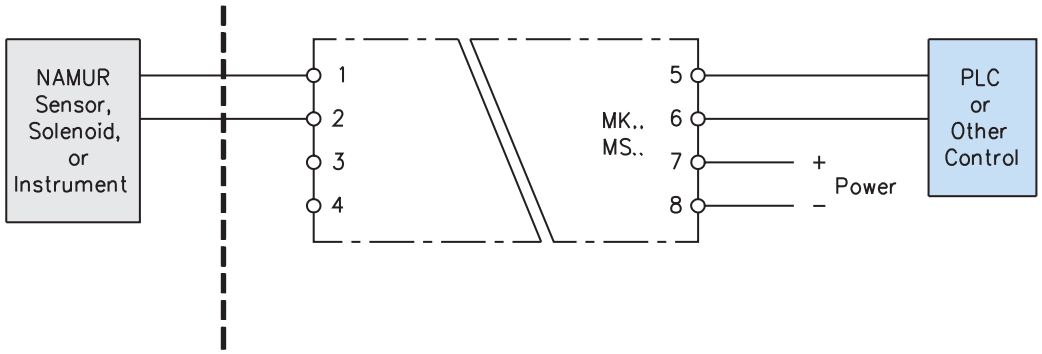
Typical Intrinsically Safe Installation

Figure 4



For guidance on installation of TURCK intrinsically safe systems, refer to the Instrument Society of America publication ISA-RP12.6-1995, “Wiring Practices for Hazardous (Classified) Locations Instrumentation".

The complete line of Intrinsically Safe and Associated Apparatus is featured in the TURCK “Isolated Barriers and Amplifiers” catalog.

Custom Interface Circuits

Figure 5

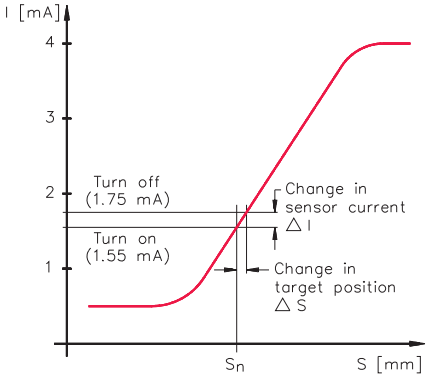
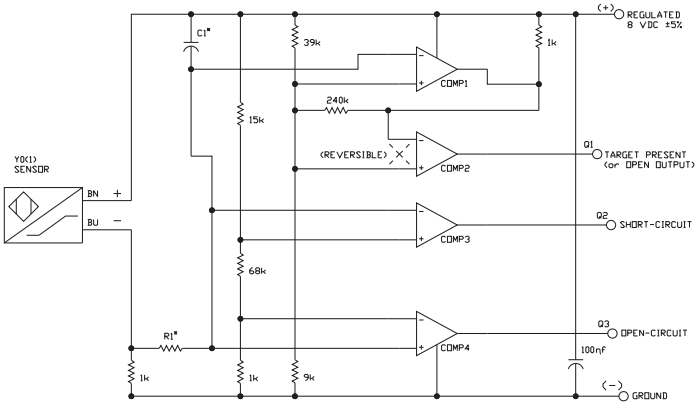


Figure 6



NAMUR sensors can operate outside the nominal operating values when the sensor is used in a nonhazardous area. The supply voltage limits are: V_{min} = 5 VDC; V_{max} = 30 VDC

Within this voltage range the load resistance R_i must be adjusted for the supply voltage. The following table gives typical values:

V_{supply} (DC)	R_i (kΩ)	I_{sn} (mA)	Δ I (mA)
5	0.39	≈0.7	≈0.1
12	1.8	≈2.3	≈0.3
15	2.2	≈2.9	≈0.4
24	3.9	≈3.8	≈0.5

If these values are used, the current I_{sn} corresponds to the rated operating distance (S_n) of the sensor. NAMUR sensors are short-circuit protected up to 15 VDC and reverse polarity protected up to 10 VDC.