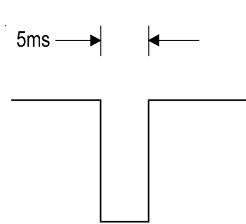


Series 200/PLC Interface Using 24V Circuit

Data Industrial has developed new sensor electronics. This redesign, necessary for FM approval for use in hazardous locations, incorporates other features as well. One feature is the ability to operate at voltage levels as high as 24 Volts DC. Since many industrial PLCs (Programmable Logic Controllers) have an internal 24VDC Power Supply, this allows the sensor to interface directly. Current limiting circuitry in the sensor offers protection from mis-wiring or transient surges for both the PLC and the sensor.

The following describes our circuitry and recommendations for interconnection.

When wired to a PLC as shown below, the signal across our sensor will be as follows.



V_{HIGH} - equal to the PLC INPUT OPEN CIRCUIT VOLTAGE - Less drop resulting from the 600uA leakage current. 8VDC -35 MAX 8VDC Minimum - 35VDC Maximum

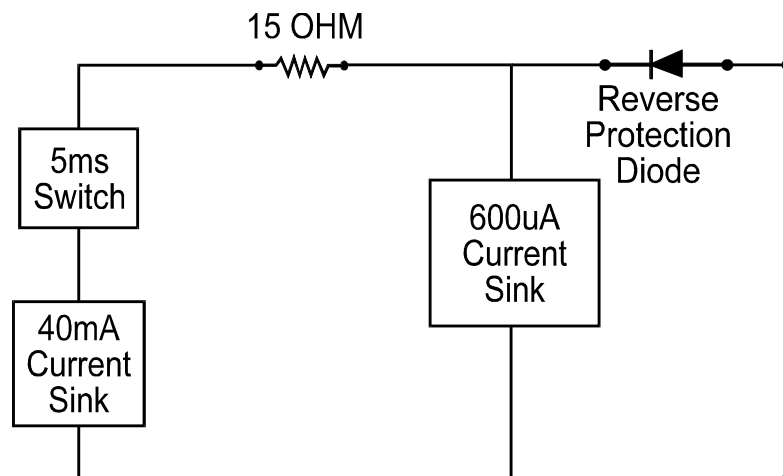
V_{LOW} - equal to PLC INPUT SHORT CIRCUIT CURRENT, applied across 15Ω MAX. 1.2VDC @ 40mA limit

0.0 VDC

V_{HIGH} and V_{LOW} will be a function of the PLC input circuitry, the PLC input circuitry as stated above.

Care must be taken to insure that the input threshold levels of the PLC are reliably crossed, and that the 5ms pulse width is long enough to be recognized by PLC circuitry.

INTERNAL BLOCK DIAGRAM OF FM SERIES FLOW SENSOR



See back side for PLC wiring recommendations

PRODUCTS	
200	✓
4000	
310	
320	
600	
800	
1400	
1500	
2100	
2200	
2300	
HTT	
WSS	

