Max Machinery, Inc.
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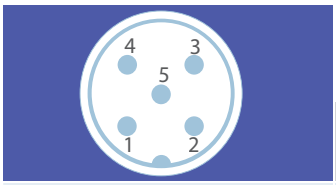
Electrical Installation Instructions - For transmitters with 5-pin Turck plugs

This document covers the installation of transmitters with 5-pin, M12 style connectors only. For hazardous location devices with 1/2" conduit connections, please refer to the EXInstall sheet.

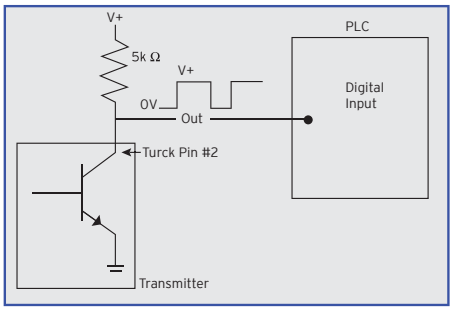
Frequency Output Transmitters (versions ending with /P..N/- or /Q..N/-)



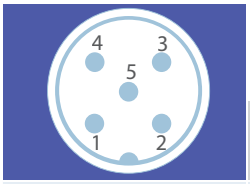
	Turck® Connector		
	PCA Label	Pin #	Mating Cable Wire Color
Power (+5 to 26 Vdc)	V+	1	Brown
Common	Com	4	Black
Pulse Output	Ph A	2	White
Output Phase B (Quad only)	Ph B	5	Grey
Case Ground	Case	3	Blue

Current Sinking Wiring (Model # 295-600-000 and versions ending with S/-)

A current sinking device uses the transmitter's transistor output to act as a switch. A positive DC voltage must be applied to the transmitter's output pin (#2). When the pulse output is triggered, this voltage will be grounded to zero volts by the transmitter. Warning: Use a 5k ohm resistor to limit current if your system does not have any other means to limit the current into the transmitter.



Current Output Transmitters (versions ending with /A..A/- or /A..B/-)
Voltage Output Transmitters (versions ending with /A..C/- or /A..D/-)



	Turck® Connector		
	PCA Label	Pin #	Mating Cable Wire Color
Power *	V+	1	Brown
Common	Com	4	Black
Signal Output (+)	Sig	5	Grey
Signal Output (–)**	Ret	2	White
Case Ground	Case	3	Blue

* Analog transmitters with part numbers 29X-XXX-000 or ending in A/- or C/- are 24Vdc power. Part numbers 29X-XXX-100 or ending in B/- or D/- are 12Vdc power.

** To minimize signal noise, analog output transmitters are fully isolated. If your PLC does not ground the negative signal input, there is a risk of a ground shift that could drive the signal out of the range of detection. To prevemt this from occuring please consider installing a 10k pull down resistor between Common and Signal Output (-).

High Temperature Instructions

Orienting the meter so that the transmitter is below or to the side will minimize heat transfer by convection from the flow meter to the transmitter. The transmitter is the most heat sensitive element in the system and the transmitter manual should be consulted for specific limits on fluid and ambient maximum temperatures. When operating in the upper temperature ranges, always insulate the meter but leave the transmitter housing exposed so it can radiate heat into the surroundings. An optional fluid heater block can be used on the flow meter to keep it at operating temperature during standby conditions. For substances that are solid at room temperature, the block may be required to keep the material molten and flowing through the meter.

Troubleshooting

LED Rotation/Output Indicators

All of the microprocessor based transmitters incorporate an alternating red/green or blue/green LED to indicate that they are detecting magnet rotation in the meter. The color will change with each 1/2 of a meter revolution. Additionally when no flow is present, a rapidly flashing red light indicates the following errors:

295/6 Frequency:	Flashes 8x a second to indicate that the magnet is not detected
295/6 Analog:	Flashes 2x a second to indicate excessive temperature Flashes 8x a second to indicate that the magnet is not detected Flashes 16x a second to indicate a wiring fault in the output circuit

Note: There are no selections or adjustments to be made on the circuit board. The only method of altering the setup parameters is through the Serial Interface Program.

Further Instruction

The following information is available for download or viewing online at www.maxmachinery.com:

- Individual specification sheets and product family manuals for viewing or downloading.
- A complete description of your transmitter
- Accessory manuals: electronic indicators and cabling
- Dimensioning information
- High temperature start-up and operation (greater than 80°F or 45°C above ambient)
- Trouble shooting and operation of the flow meter