

IR-P Infrared Optical Sensor FOR CLEAR FLUIDS ONLY

Installation and Technical Data Guide

Rev 09/05

Description:

The IR-P is an infrared optical sensor which is compatible with the AW Company's JVK series Positive Displacement plastic gear flow meters. The sensor detects the rotation of the flow meter gears and emits a frequency signal proportional to flow. The output signal is a square wave pulse which has a duty cycle of approximately 50%.

IR-P signal outputs are protected with a self-resetting fuse. This fuse has a 50mA nominal trip point. When a trip occurs, turn off power to the sensor and remove output load to reset fuse.

The IR-P sensor's output configuration is: IR-PA for a sinking output, IR-PB for a sourcing output.

Installation:

- Ensure that the flowmeter sensor cavity is free of debris prior to installing pickup
- A mounting bracket is required for sensor mounting
- 4 Steps to properly install sensor:
 - 1- Securely fasten mounting bracket on flow meter
 - 2- Turn set screws counter clockwise until they are not visible inside the mounting bracket
 - 3- Install sensor into mounting bracket until sensor bottoms out in the sensor hole
 - 4- Tighten set screws by turning clockwise

NOTE: DO NOT OVER TIGHTEN SET SCREWS OR SENSOR DAMAGE WILL OCCUR!

NOTE: WIRING SHOULD BE INSTALLED BY A QUALIFIED INSTRUMENTATION TECHNICIAN

AW Company wiring color code:

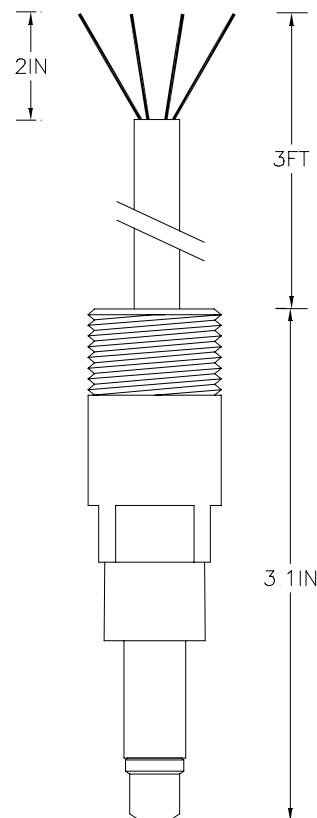
<u>IR-PA</u>	<u>IR-PB</u>	<u>Wire Color</u>
NC	NC	Green
Output	Output	White
Ground	Ground	Black
Supply	Supply	Red

Part number configuration:

IR-P sensors can be used with all AW Company JVK Positive Displacement gear flow meters only.

IR-PA for a sinking output, IR-PB for a sourcing output

Note: In order to receive correct mounting bracket with your sensor - you must specify meter part number when ordering



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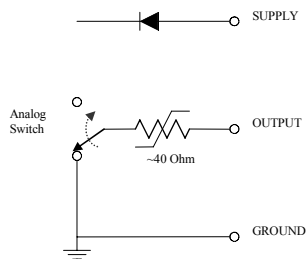
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Technical Data:

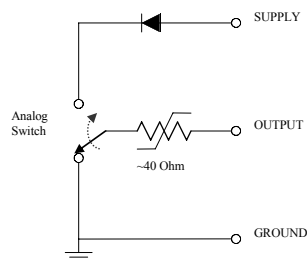
Supply Voltage:	+10 to 26 Volt DC
Supply Current:	20 mA \pm 0.10
Duty Signal:	50% \pm 15%
Minimum Signal:	0.5 Hz
Frequency Output:	TBD
Driving Capacity:	50 mA Max resistive load
Output Impedance:	\sim 40 Ohm - analog switch and self-resetting fuse
Temperature Range:	-40° F to 185° F (-40° C to 85° C)

IR-PA Sinking Output Circuit



- User may need to add external components to interface to displays or other instruments
- User must limit output voltage to Supply -1V
- Max current sinking capability: 50mA

IR-PB Sourcing Output Circuit



- Signal output square wave :
 $V_{high} = \text{Supply} - 1V$ @ no output load
 $V_{low} = 0.1V$
- Max sourced output voltage: Supply -0.5V
- Max current sourcing capabilities: 50mA