

# PS-910-QD

## Hall Effect Sensor

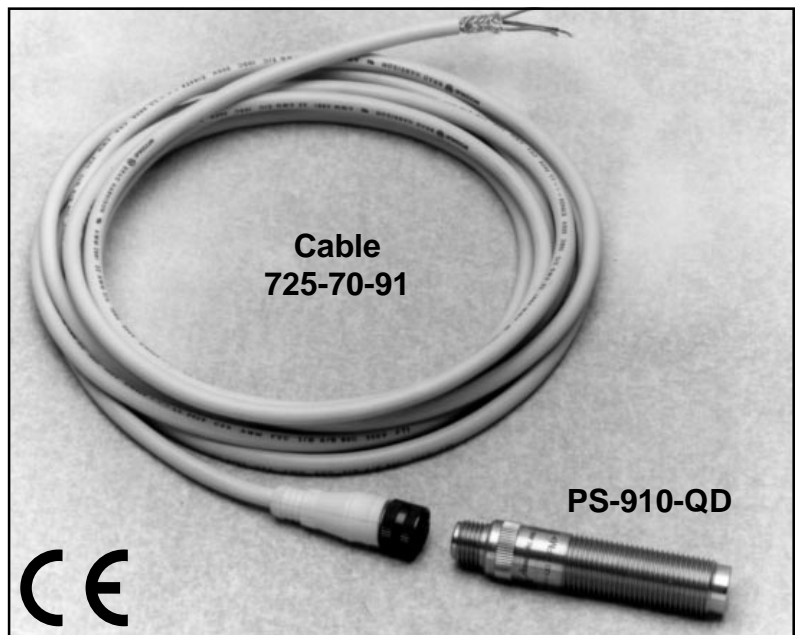


### Description

The Hall Effect Sensor serves as a simple, but versatile sensor for Flowdata flowmeters. It is an integrated circuit device activated by magnetic field reversals. The magnets in the impellers of a flowmeter trigger the latching circuit in the sensor, which in turn transmits a square wave pulse to any connected signal conditioner, monitoring device, or controller. The sensor can handle a broad range of input frequencies and operating conditions. The PS-910-QD combines the sensitivity of a Hall Effect Sensor with the durability and easy installation of a Micro-C connector. The quick-disconnect fitting makes installation and maintenance quick and effortless. Simply screw the sensor body into a Flowdata flowmeter, plug in the cable, and lock firmly in place with a few twists of the connector coupling nut.

### Features

- Digital Logic Instrument Compatible
- Easy Installation
- NEMA 4 Rating
- -40°F to 250°F Operating Temperatures
- 5 to 24 VDC Operation
- Non-Intrusive
- Micro-C Connections
- Stainless Steel Construction
- FM Approved Intrinsically Safe
- CE Certified



### Application

Hall Effect Sensors are recommended when the desired output signal is a square-wave pulse and the requisite power is available. All Flowdata electronic flow controllers or transmitters designed to interface with the Hall Effect Sensors have DC sensor excitation capability when they are AC-powered. Hall Effect Sensors are recommended when the output frequency from the meter over any part of the application flow range is 10 Hz or less. This frequency typically occurs at approximately the 10 to 1 turndown point for Flowdata flowmeters. For frequencies above 10 Hz, either Hall Effect Sensors or magnetic pick-up sensors are applicable. If the desired output is an analog signal and the liquid to be measured has a low viscosity with variable flow rates; the Hall Effect Sensor may be used with linearizing frequency to analog transmitters. Contact Flowdata for information on our full range of transmitters for use with this sensor.

## Ordering - Sensor:

**PS-910-QD** Pulse output equal to supply voltage  
**PS-910-QD-O** Open collector output with pull-up resistor

## Ordering - Cable:

**725-70-91** 12 Ft. Cable  
**725-70-92** 50 Ft. Cable  
**725-70-93** 100 Ft. Cable

## Specifications

**Supply Voltage:** 5 to 24 VDC  
**Supply Current:** 7 mA  
**Operating Frequency:** 0 to 20 KHz

### Output:

**Type:** NPN open collector with 2.2 K ohm resistor for pull-up to supply (straight open collector version available)

**Rise Time:** 0.04  $\mu$ S Typ., 2.0  $\mu$ S Max.

**Fall Time:** 0.18  $\mu$ S Typ., 2.0  $\mu$ S Max.

### Temperature Range:

**Sensor:** -40°F to 250°F (-40° to 125°C)

**Cable:** -76°F to 221°F (-60° to 105°C)

**FM Approved, Intrinsically Safe** (When used with intrinsic safety barriers)

**Groups:** A,B,C,D,E,F,G Per Drawing 85003

**CE:** marked compliant w/ EMC directive 89/336/EEC (1989) Light Industrial Class 1  
Note: PS-910-QD only

### Maximum Transmitting Distance:

1500 Ft. to monitoring instrumentation

### Sensor Body:

304 stainless steel  
Threaded 5/8-18UNF

### Cable:

PVC insulation and jacket

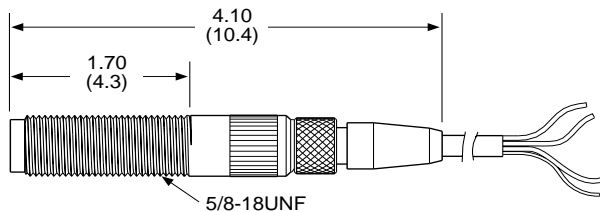
### Micro-C Quick Disconnect:

**Plug Shell & Coupling Nut:** Anodized Aluminum

**Receptacle Body:** 304 Stainless Steel

**Insert Material:** UL recognized plastic

## Dimensions, inches (cm)



## Installation

<b>PS-910-QD</b>	Red/Blk	+5 to +24 VDC Supply
	Green	DC Common
	Red/Wht	Square-Wave Signal
	Bare Shield	RFI Shield

**Caution:** Finger Tighten sensor into meter body

### Limited Warranty

For a period of not less than one (1) year nor more than two (2) years from the original date of shipment. Seller warrants that the products described in this Warranty are free from defects in workmanship and materials only. For specific Warranty periods please refer to Seller's Warranty schedule. Seller shall not be liable for any special, incidental or consequential damages. This Warranty extends to the original purchaser of the product warranted hereunder and to each transferee owner of the product during the term of the Warranty. In the event of a defect, malfunction, or failure of the product not caused by any misuse or damage to the product while in possession of the owner, the warrantor will remedy the failure or defect, within a reasonable amount of time after written notification from the owner of same. The remedy will consist of repair or replacement of the product only, at the warrantor's option. The owner must return the defective or malfunctioning component part(s) to the factory for such repair or replacement. If this product or one of its component parts is modified in any way by the owner, transferee owner, his agent or employee, this Warranty shall become null and void.

### Local Representative:



1817 Firman Drive  
Richardson, TX 75081

Phone: (972) 907-2787

Fax: (972) 907-8016

Toll Free: (800) 833-2448

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<http://www.flowdata.com>