

DESCRIPTION

The B170210 is a MAG Hall Effect sensor that is compatible with the Aluminum and 303 Stainless Steel body B1750 series of flow meters. The sensor detects the rotation of the flow meter's 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%.

B170210 signal outputs are protected with a self-resetting fuse. The fuse has a 50 mA nominal trip point. When a trip occurs, turn off power to the sensor and remove output load and reset fuse.

The B170210 is configured for sourcing output.

INSTALLATION

NOTE: Wiring should be installed by a qualified instrumentation technician.

A swivel fitting is required for mounting the sensor. To receive the correct swivel fitting with your sensor, you must specify the meter part number when ordering.

1. Make sure that the flow meter sensor cavity is free of debris prior to installing the pickup.
2. Securely fasten the swivel fitting on the flow meter.
3. Turn the setscrews counterclockwise until they are not visible inside the swivel fitting.
4. Install the sensor into the swivel fitting until the sensor bottoms out in the sensor hole.
5. Turn the setscrews clockwise to tighten them. DO NOT OVERTIGHTEN THEM OR YOU WILL DAMAGE THE SENSOR.

Electrical Connection for Pin Connector

| Pin Number | Function |
|------------|----------------|
| 1 | Not used |
| 2 | +24V |
| 3 | Common |
| 4 | Open collector |
| 5 | Open emitter |

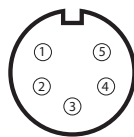


Figure 1: Pinout looking at male connector on sensor

SPECIFICATIONS

| | |
|-------------------|--|
| Supply Voltage | 10...28V DC |
| Supply Current | 8 mA @ 12V DC; 12 mA @ 24V DC |
| Duty Signal | 50% ± 15% |
| Minimum Signal | 0.5 Hz |
| Frequency Output | Flow dependent, up to 2000 Hz |
| Driving Capacity | 50 mA maximum resistive load |
| Output Impedance | ~ 40 Ohm analog switch and self-resetting fuse |
| Temperature Range | -40...250° F (-40...120° C) |
| Magnetization | 475 ±25 gauss |

DIMENSIONS

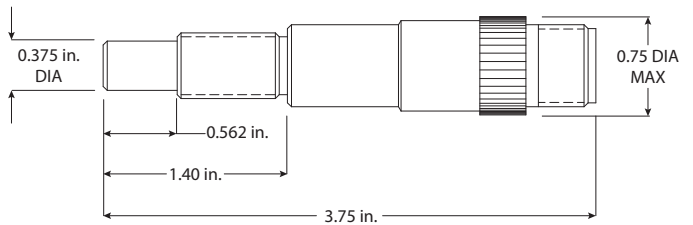


Figure 2: Dimensions

SOURCING OUTPUT CIRCUIT

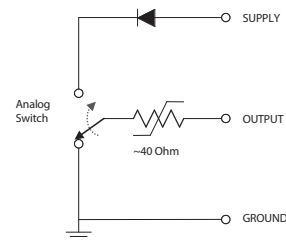


Figure 3: Sourcing output circuit

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

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The Americas | Badger Meter | 4545 West Brown Deer Rd | PO Box 245036 | Milwaukee, WI 53224-9536 | 800-876-3837 | 414-355-0400
México | Badger Meter de las Americas, S.A. de C.V. | Pedro Luis Ogazón N°32 | Esq. Angelina N°24 | Colonia Guadalupe Inn | CP 01050 | México, DF | México | +52-55-5662-0882
Europe, Eastern Europe Branch Office (for Poland, Latvia, Lithuania, Estonia, Ukraine, Belarus) | Badger Meter Europe | ul. Korfantego 6 | 44-193 Knurów | Poland | +48-32-236-8787
Europe, Middle East and Africa | Badger Meter Europa GmbH | Nurtinger Str 76 | 72639 Neuffen | Germany | +49-7025-9208-0
Europe, Middle East Branch Office | Badger Meter Europe | PO Box 341442 | Dubai Silicon Oasis, Head Quarter Building, Wing C, Office #C209 | Dubai / UAE | +971-4-371 2503
Slovakia | Badger Meter Slovakia s.r.o. | Racianska 109/B | 831 02 Bratislava, Slovakia | +421-2-44 63 83 01
Asia Pacific | Badger Meter | 80 Marine Parade Rd | 21-06 Parkway Parade | Singapore 449269 | +65-63464836
China | Badger Meter | 7-1202 | 99 Hangzhong Road | Minhang District | Shanghai | China 201101 | +86-21-5763 5412
Switzerland | Badger Meter Swiss AG | Mittelholzerstrasse 8 | 3006 Bern | Switzerland | +41-31-932 01 11