

### DESCRIPTION

The B170110 is a 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%.

B170110 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 B170110 is configured for sourcing output.

### INSTALLATION

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

1. Make sure that the flow meter sensor cavity is free of debris prior to installing the pickup.
2. Make sure the sensor mounting screws line up with the mounting holes. If they do not, remove and rotate the sensor 180 degrees.

### Electrical Connection for Pin Connector

Pin Number	Function
1	NC
2	NC
3	NC
4	Output
5	Ground
6	Supply

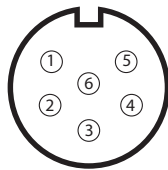


Figure 1: Pinout at male connector on sensor

### Wiring Color Code

	Pin Number	Wire Color
Signal 1	4	White
Ground	5	Black
Supply Voltage	6	Red

### 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...185° F (-40...85° C)

### DIMENSIONS

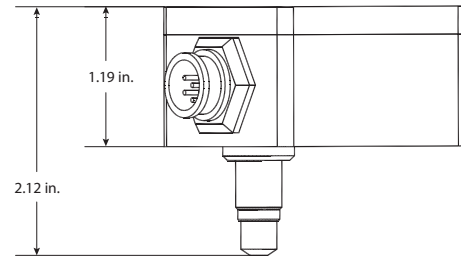


Figure 2: Dimensions

### SOURCING OUTPUT CIRCUIT

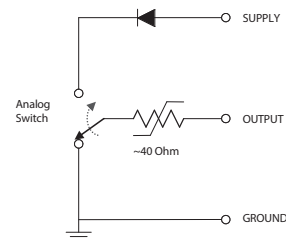


Figure 3: Sourcing output circuit

- 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

## Control. Manage. Optimize.

BLANCETT is a registered trademark of Badger Meter, Inc. Other trademarks appearing in this document are the property of their respective entities. Due to continuous research, product improvements and enhancements, Badger Meter reserves the right to change product or system specifications without notice, except to the extent an outstanding contractual obligation exists. © 2017 Badger Meter, Inc. All rights reserved.

[www.badgermeter.com](http://www.badgermeter.com)

---

**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