

# Rotor Flow Switch (Reed Type)

## BW3 General Purpose Rotor Flow Switch

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### General Description

The BW3 Series Magnetic Flow Switch is a patent-designed, mechanically actuated flow sensor primarily used in water-based applications such as energy-efficient air conditioning systems, water heaters, and general water industrial fields. It operates without standby power and features a self-cleaning mechanism for reliable performance in residential and light commercial systems.

### Key Features

- **Broad Operating Temperature:**  $-30^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- **Patent-Protected Design:** Innovative magnetic actuation mechanism.
- **Zero Standby Power Consumption:** Mechanically actuated reed switch requires no external power.
- **Low Flow Activation:** Starts at minimal flow rates with minimal flow restriction.
- **Particle Self-Clean Function:** Internal design helps prevent clogging from particulates.
- **Customizable Configurations:** Options for thread couplers, cable length, and electrical connectors.
- **Durable & Stable Performance:** Robust construction for long-term reliability.

### Application

- Energy-efficient (green) air conditioning systems
- Water heaters and boilers
- Residential and commercial water circulation systems
- General water monitoring and control applications



### Environmental & Mechanical Specifications

Item	Specification
Housing Material	Plastic/Stainless steel
Actuation Mechanism	Magnetic rotor
Minimum Start-up Flow	1.2 L/min
Maximum Operating Flow	12 L/min
Minimum Operating Pressure	0.005 MPa (~0.725 PSI)
Maximum Operating Pressure	1.5 MPa (~217.5 PSI)
Inlet/Outlet Thread	G1/2 BSP (External Thread)
Operating Temperature	0°C to +100°C (for electrical components)

### Electrical Specifications

Item	Normally Open (NO)	Normally Closed (NC)
Contact Type	Form A (NO)	Form B (NC)
Max. Switched Power	10 W	5 W
Max. Switching Voltage	DC 200 V / AC 140 V	DC 175 V / AC 125 V
Max. Switching Current	DC 0.5 A / AC 0.5 A	DC 0.4 A / AC 0.28 A
Withstand Voltage	250 V	200 V
Max. Inrush Current	1.2 A	0.5 A
Min. Breakdown Current	0.2 A	0.2 A
Contact Resistance	≤ 0.2 Ω	≤ 0.2 Ω
Insulation Resistance	≥ 10 <sup>8</sup> Ω	≥ 10 <sup>8</sup> Ω
Operating Temp. (Electrical)	0°C to +100°C	0°C to +100°C

### Important Notes:

- 1, All electrical parameters are maximum ratings—operate within specified limits for safety and longevity.
- 2, The self-clean function reduces maintenance but does not eliminate the need for system filtration.
- 3, Custom configurations (threads, cable, connectors) are available upon request.
- 4, For fluids other than water or specific chemical compatibility, contact the factory.



### Part Number Naming

#### BW3 – XXX – X – X

Code	Description
BW3	Rotor Series
XXX	Flow Setting
X	Housing Material: B=Brass/ S=Stainless Steel/ P=Plastic
X	Contact Form: A = NO / B = NC / C = Changeover
XXX	Additional customize information

Part Number	Flow Setting (GPM)	Housing Material	Port Size
BW3-005-B-A	0.5	Bronze	1" NPT
BW3-005-S-A	0.5	Stainless Steel	1" NPT
BW3-010-B-A	1	Bronze	1" NPT
BW3-010-S-A	1	Stainless Steel	1" NPT
BW3-020-B-A	2	Bronze	1" NPT
BW3-005-S-A	2	Stainless Steel	1" NPT
BW3-015-B-A	1.5	Bronze	1½" NPT
BW3-030-B-A	3	Bronze	1½" NPT
BW3-020-B-A	2	Bronze	2" NPT
BW3-020-S-A	2	Stainless Steel	2" NPT
BW3-040-B-A	4	Bronze	2" NPT
BW3-040-S-A	4	Stainless Steel	2" NPT