

# SMART SHUT-OFF VALVE (WIRED M-Bus / LoRaWAN)

Model Series: BC- SV-XX



## Product Overview

This intelligent shutoff valve is designed for cutting off chilled water flow in HVAC system. Equipped with wired M-Bus and LoRaWAN communication, it enables seamless integration into Tenant Billing Software for remote monitoring and control. The valve is mains-powered (230 V AC, 50 Hz) for dependable operation.

## Key Features and Benefits

- ▶ **Wired M-Bus /LoRaWAN Communication:** Ensures reliable and secure data transmission for remote monitoring and control via standard M-Bus protocol or LoRaWAN protocol.
- ▶ **Durable Construction:** Copper alloy body and stainless-steel ball provide excellent corrosion resistance and long service life in water applications.
- ▶ **Powerful Actuation:** 5 Nm and 10 Nm motor torque ensures positive and reliable shut-off under pressure.
- ▶ **Power Supply:** 230 V AC, 50 Hz (mains powered).
- ▶ **High Environmental Protection:** IP67 rated enclosure offers robust protection against dust and water ingress, suitable for demanding environments.
- ▶ **High Pressure Rating:** PN25 rating allows for use in systems with operating pressures up to 25 bar.
- ▶ **Versatile Application:** Suitable for controlling flow in both chilled water and domestic water systems.
- ▶ **Easy Integration:** Compliant with the wired M-Bus or LoRaWAN standard for straightforward integration with compatible building management systems and data loggers.

## Applications

- ▶ Chilled water distribution systems in HVAC applications.
- ▶ Domestic water supply networks in residential and commercial buildings.
- ▶ Zone control in heating and cooling systems.
- ▶ Leakage prevention and isolation.
- ▶ Remote monitoring and control of water flow

## Technical Specifications

| <u>Feature</u>          | <u>Specification</u>                                                                       |
|-------------------------|--------------------------------------------------------------------------------------------|
| Valve Body Material     | Copper Alloy CW511L (Equivalent to C57)                                                    |
| Ball Material           | Stainless Steel 304 (1.4301)                                                               |
| Actuator Type           | Electric Motorized                                                                         |
| Motor Torque            | 5 Nm                                                                                       |
| Power Supply            | 230 V AC, 50 Hz (mains powered).                                                           |
| Enclosure Rating        | IP67                                                                                       |
| Maximum Pressure Rating | PN25                                                                                       |
| Nominal Pressure        | 25 bar                                                                                     |
| Communication Protocol  | Wired M-Bus (EN 13757) / LoRaWAN                                                           |
| Application Media       | Chilled Water, Domestic Water                                                              |
| Durability              | The valve has been opened and closed continuously for 100000 times without any malfunction |
| Nominal Diameter:       | Valve Body Length:                                                                         |
| DN15                    | [0.03 – 3] m3/h                                                                            |
| DN20                    | [0.05 – 5] m3/h                                                                            |
| DN25                    | [0.07 – 7] m3/h                                                                            |
| DN32                    | [0.12 -12] m3/h                                                                            |
| DN40                    | [0.2 - 20] m3/h                                                                            |
| DN50                    | [0.5 - 28] m3/h                                                                            |
| DN65                    | [2.0 - 35] m3/h                                                                            |
| DN80                    | [3.0 - 70] m3/h                                                                            |

Valve Body: Copper Alloy CW511L

Ball: Stainless Steel 304

**(Detailed dimensional drawings available upon request)**

## **Installation and Operation**

- ▶ Installation should be performed by qualified personnel in accordance with relevant regulations and guidelines.
- ▶ Ensure proper alignment and sealing during installation.
- ▶ Refer to the product manual for detailed wiring and communication setup instructions.
- ▶ The valve is controlled via M-Bus / LoRaWAN commands for opening and closing.

## **Ordering Information**

Please specify the following when ordering:

- ▶ Product Name: Wired M-Bus / LoRaWAN Smart Shut-off Valve
- ▶ Valve Size (DN)
- ▶ Connection Type and Size
- ▶ Any specific requirements

## **Notes**

- ▶ Specifications are subject to change without notice.
- ▶ Refer to the latest product manual for the most up-to-date information.
- ▶ Contact our sales team for pricing and availability.

## **Safety Precautions**

- ▶ Ensure the system is depressurized and cooled down before installing or maintaining the valve.
- ▶ Do not exceed the specified pressure and temperature limits.
- ▶ Follow all electrical safety guidelines when connecting external power (if applicable).
- ▶ Dispose of batteries according to local environmental regulations.

