Engineering Specification

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

Sensor Control Monitor Connection Kit

⚠ WARNING

Only a certified technician should make the electrical connections to install the Sensor Control Monitor and connect equipment to the unit. Follow all local, state, federal and other governmental requirements, and all building and construction codes and standards.

When connected to equipment incorporating sensor technology—such as an automatic control valve (ACV), strainer, backflow preventer, or boiler/water heater relief valve—the Sensor Control Monitor collects data from up to three pressure sensors and monitors relief valve discharges. Data displayed on the control screen are transmitted through RS-485 Modbus to a building automation system (BAS), or by Wi-Fi to the Nexa® platform. For connected equipment, the system automatically generates alerts when maintenance or service is needed.

The control features a color touchscreen graphical user interface and can be configured by the Setup Wizard or manually through menus. The control supports BAS Modbus (RS 485) alerts and data polling as well as Nexa Wi-Fi alerts and data streaming. Two relay output closures provide medium- and high-level alerts in custom configurations. A 24 Vdc, 1 A actuator output is available for equipment control. The unit can be mounted on a wall or DIN rail.

Features

- Color touchscreen graphical user interface
- Functions include configuration menus, Setup Wizard, sensor calibration algorithm, differential pressure gauge, event log, and color-coded alert levels
- BAS Modbus (RS-485) support for alerts and data polling
- Wi-Fi connectivity for alerts and data streaming to Nexa
- Two relay output closures for medium- and high-level alerts in custom configurations
- 24 Vdc, 1 A power output for separate valve options
- Mountable to wall or DIN rail

Contents

Sensor Control Monitor

24 Vdc power adapter

Mounting hardware

NOTE: Depending on the equipment being supported, some kits may include additional items, such as sensor cables for pressure monitoring.

Call customer service if you need assistance with technical details.

ORDERING CODE	BRAND
1000000788	Watts
1000000737	
1000000725	
1000000726	
1000000591	Mueller Steam Specialty
1000000592	
1000001091	
1000001092	
1000001093	
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NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

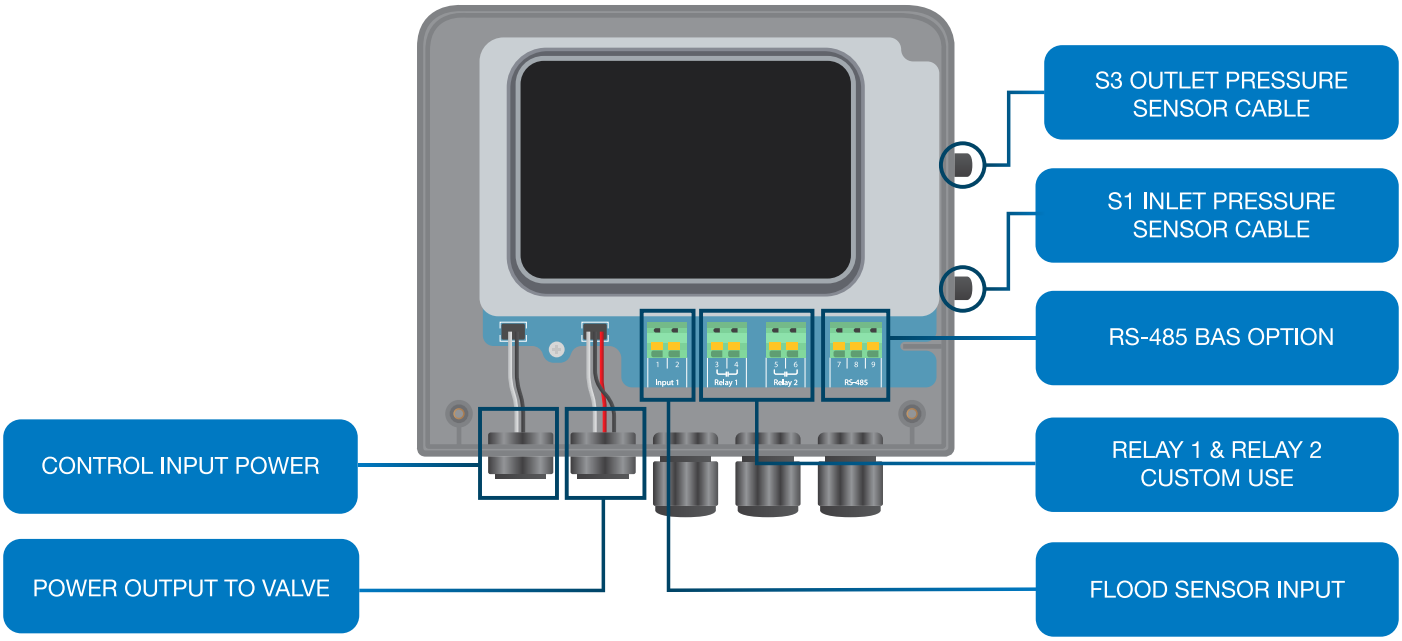
NOTICE

Use of the Sensor Control Monitor technology does not replace the need to comply with all required instructions, codes, and regulations related to the installation, operation and maintenance of the monitored equipment.

Watts is not responsible for the failure of alerts due to connectivity issues, power outages, or improper installation.

WATTS®

Wiring Schematic



DESCRIPTION	NAME	FUNCTION	NOTE
2-pin plug	Power	Power input to control (24V, ground)	
3-pin plug	Valve	Power output to valve (open signal, ground, close signal)	For valve option such as motorized ball valve or Solenoid valve
Terminal 1	Input 1	Digital input (Accepts open or close signal)	
Terminal 2	Input 1	Digital input (Accepts open or close signal)	
Terminal 3	Relay 1	Dry contact relay (no polarity)	For custom use such as Cellular Gateway, BAS alarm circuit, or external LED stalk
Terminal 4	Relay 1	Dry contact relay (no polarity)	
Terminal 5	Relay 2	Dry contact relay (no polarity)	
Terminal 6	Relay 2	Dry contact relay (no polarity)	
Terminal 7	A-	RS-485 communication	For BAS option
Terminal 8	B+	RS-485 communication	
Terminal 9	COM	RS-485 ground	
S1	Sensor 1	Inlet pressure	Temperature availability depends on cable type
S2	Sensor 2	Reserved	
S3	Sensor 3	Outlet pressure	Temperature availability depends on cable type

Operation

The control collects data from up to three pressure sensors and monitors relief valve discharges. Information displayed on the control screen can be transmitted through RS-485 Modbus to a building automation system (BAS) or by Wi-Fi to the Nexa platform. For connected equipment the system automatically generates alerts when maintenance or service is required. A 3-pin, 24 Vdc, 1 A power output port supports the optional attachment of separate valves that receive open/close signals, such as a motorized ball valve for strainer auto-flushing when warranted by pressure readings.

The control features a color touchscreen graphical user interface that can be configured manually through menus or with the Setup Wizard. A security feature allows configuration to be locked with a six-digit passcode. The control supports BAS Modbus (RS-485) alerts and data polling, as well as alerts and data streaming by Wi-Fi to Nexa. (Nexa can be used by desktop or mobile web browser or by mobile app.) Two relay output closures provide medium- and high-level alerts for custom configurations, including integration with a Cellular Gateway, BAS alarm circuit, or external LED stalk.

Specification

The Sensor Control Monitor shall capture data from up to three pressure sensors attached to smart strainers and ACVs, and shall monitor discharges from backflow preventer relief valves and the discharge line of boiler/water heater relief valves. Information displayed on the control screen shall be transmitted either through RS-485 Modbus to a building automation system (BAS) or by Wi-Fi to the Nexa platform. (Nexa can be used by desktop or mobile web browser or by mobile app.) For connected equipment the system shall automatically generate alerts when maintenance or service is required. The unit shall be manufactured for mounting on a wall or DIN rail.

The control shall feature a color touchscreen graphical user interface and shall be designed for configuration manually through menus or with the Setup Wizard. A security feature shall allow configuration to be locked with a six-digit passcode. The control shall support BAS Modbus (RS-485) alerts and data polling, as well as Nexa Wi-Fi alerts and data streaming. Two relay output closures shall provide medium- and high-level alerts for custom configurations, such as integration with a Cellular Gateway, BAS alarm circuit, or external LED stalk. A 3-pin, 24 Vdc, 1 A power output port shall support separate valves (optional) in pressure monitoring configurations.

The kit shall include the Sensor Control Monitor, 24 Vdc power adapter, and a mounting hardware packet. The packet shall contain four mounting feet and four screws. The kit shall be purchased separately from any valve assembly. The kit shall be Watts Sensor Control Monitor Connection Kit. Connection kits for Smart Strainer pressure monitoring shall also include sensor cables and shall be distributed by Mueller Steam Specialty.

Sensor Control Monitor

The mountable Sensor Control Monitor houses the electronic circuit assembly, interfaces with valve-mounted flood sensors and pressure sensors, connects to a BAS input terminal, and supports Wi-Fi networks for integration with a cloud management console. Ships with power adapter and mounting hardware; packaged weight 2 lb (0.9 kg). For more information, refer to IS-SCM-ConnectionKit at Watts.com.

Weight: 1.2 lb (0.5 kg)

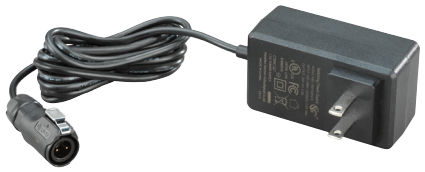
Mounting Hardware

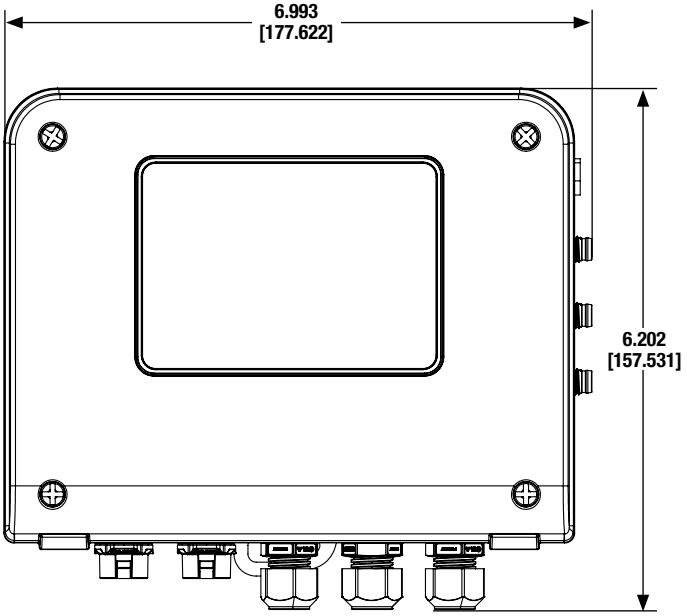
4 x Mounting feet

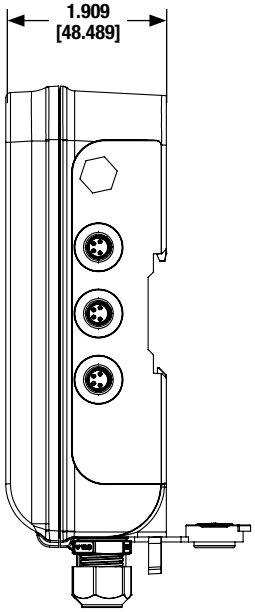
4 x Screw

Power Adapter

Output DC voltage	24 Vdc
Output current range	1.5 A
Input voltage range	100–240 Vac
Input frequency range	50/60 Hz
Input AC current	0.8 A max







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