

SMART FLUID MEDIA MANAGEMENT

Background

As automation is adopted in more facilities, physical work is being replaced by machines and their automatic controls and the need for valve actuators has grown.

In some industries such as food and beverage, valves need to be opened or closed rapidly in the event of emergency circumstances. With some processes requiring high pressures and large line sizes, the amount of power required to open or close a valve can be significant. In these circumstances, the valve actuator needs to be packaged together with key sensors like position sensing equipment, torque sensing, motor protection, and other

smart control options, in order to provide increased working safety and environmental protection.

Solution






Sensata provides a wide range of sensors and switches that monitor the valve system control, providing fluid level indication, temperature regulation, along with overheat protection. Our sensors provide enhanced reliability, minimize down time, and improve robustness in most harsh environments. Position sensors, like the compact 9960 with redundant output or the modular ACW4/TCW4 with CANopen or IO-link option available, deliver continuous position status with enhanced reliability and accuracy. Pressure sensors measure the pressure of the diaphragm to help regulate the flow within the pipeline, and can also measure differential pressure by comparing different values across the the system.

Position sensors indicate any open, closed or intermediary position of the valve, in order to avoid any leaks that could cause dangerous accidents.



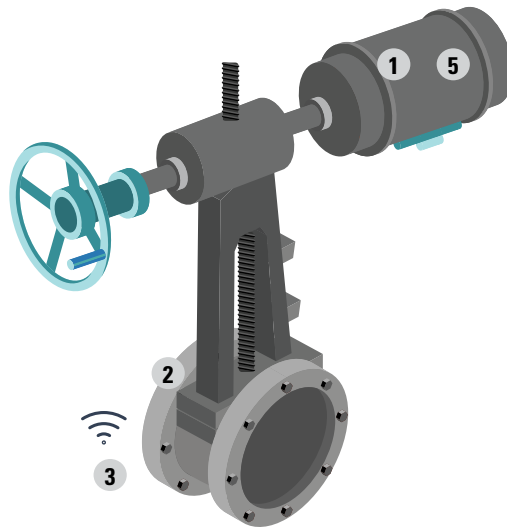


RECOMMENDED PRODUCTS

Reference on Diagram	Product	Features	Function
1	 ACW4/TCW4 Hall Effect Rotary Position Sensor	<ul style="list-style-type: none"> Two-part design, offering maximum flexibility during installation Easy commissioning and configuration with IO-Link, excellent resistance to shock and vibration 	Indicates the open, intermediate or closed position of the valve
2	 7100 Hermetic Analog Pressure Sensor	<ul style="list-style-type: none"> Ideal for machines in the mid and high pressure ranges Wide range of ports, connectors, and analog electrical outputs for ease of integration in various industrial applications 	Hydraulic and pneumatic system control
3	 Wireless Pressure Transmitters	<ul style="list-style-type: none"> Pressure ranges from 0-50 mbar up to 0-400 bar; up to 750m clear line-of-sight The sensors have a battery life of over 5 years with a 10s transmission rate 	Wireless system control
4	 Industrial Receivers	<ul style="list-style-type: none"> These receivers feature 4-20mA or 1-5Vdc outputs as well as an alarm relay Single channel or multiple channel units, which receive readings from up to 5 wireless transmitters 	Can indicate a high or low alarm condition or act as an alarm if the signal from a wireless transmitter is lost.
5	 9960 Hall Effect Rotary Position Sensor	<ul style="list-style-type: none"> Small package and easy integration; versatile due to the 360 degree turn capability Packaged in a highly sealed (IP69K) housing and utilizing non-contacting Hall effect technology 	Angle detection of the valves (Magnet integrated)



FLUID MANAGEMENT APPLICATIONS



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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA

Americas

Sensata Technologies Inc.
529 Pleasant Street,
Attleboro, MA 02703 USA
pressure sensors & switches
+1 (800) 350 2727
sensors@sensata.com
switches@sensata.com
Position Sensors and Encoders
+1 (800) 350 2727
sales.beisensors@sensata.com
Cynergy3 Components
+44 (0) 1202 897969
sales@cynergy3.com

Europe, Middle East & Africa

Sensata Technologies Holland b.v.
Jan Tinbergenstraat 80
7559 SP Hengelo
The Netherlands
Pressure Sensors & switches
+359 (2) 809 1826
pressure-info.eu@sensata.com
Position Sensors and Encoders
+33 (3) 88 20 8080
position-info.eu@sensata.com

CONTACT US

Cynergy3 Components
+44 (0) 1202 897969
sales@cynergy3.com

Asia Pacific

Sensata Technologies china co., ltd.
30th Floor, InterContinental Center,
100 Yu Tong Rd, Jing An District, 200070
Shanghai, China
+86 (21) 2306 1500
sales.isasia@list.sensata.com
Japan
+81 (45) 277 7117
sales.isasia@list.sensata.com
Korea
+82 (31) 601 2004
sales.isasia@list.sensata.com
India
+91 (80) 67920890
sales.isasia@list.sensata.com
Rest of Asia
+886 (2) 27602006 ext 2808
sales.isasia@list.sensata.com
Cynergy3 Components
+44 (0) 1202 897969
sales@cynergy3.com