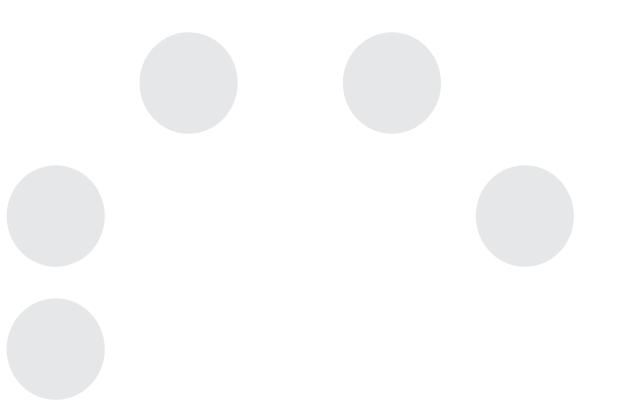


### INDUSTRIAL PRODUCT OVERVIEW



### **ABOUT SENSATA TECHNOLOGIES**

Sensata Technologies is a leading industrial technology company that develops sensors, sensor-based solutions, including controllers and software, and other mission-critical products to create valuable business insights for customers and end users. For more than 100 years, Sensata has provided a wide range of customized, sensor-rich solutions that address complex engineering requirements to help customers solve difficult challenges in the automotive, heavy vehicle & off-road, industrial and aerospace industries.

For more information, please visit Sensata's website at

www.sensata.com

### **OUR INDUSTRIAL PRODUCT SOLUTIONS**

The synergy of leading brands and years of proven expertise in extremely demanding industrial markets allow us to provide you with the **highest level of quality, service, technical expertise and worldwide support** to improve safety, efficiency and comfort in your automation, food and beverage, building equipment, heating, air conditioning, energy and infrastructure, material handling and medical applications.

### **PRODUCT LINES**

PRESSURE SENSORS AND SWITCHES	4
POSITION SENSORS AND ENCODERS	6
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WIRELESS SYSTEMS AND SENSORS	22





## PRESSURE SENSORS & SWITCHES

Broad portfolio of pressure products based on a variety of proven technologies. From pressure sensors that offer ranges from 1 inch H<sub>2</sub>O to 10,000psi or vacuum up to 700bar, to our highly reliable pressure switches with a wide range from 0 – 2000 psi or 0 – 140 bar; our pressure solutions provide the configurability and performance needed for demanding industrial applications.

### **OUR BRANDS**















- Air conditioning
- Refrigeration
- Pumps
- Heating (boilers)
- Air compressors
- Ventilation (VAV)
- Medical (gas equipment)
- Material handling
- Plastic machinery
- Machine tools
- Beverage dispensing



### **SWITCHES**



### switches for HVAC



### **PS80**

Automatic reset pressure switch designed to meet the unique challenges of R744/CO<sub>2</sub>-based air conditioning and refrigeration equipment.



### **20PS**

Compact, hermetic and environmentally sealed switch utilizing a snap-acting stainless steel diaphragm that reverses its curvature when pressurized to a customer specified actuation pressure.



### switches for industrial applications



Pressure switch family of products based on Sensata's Klixon® snap acting disc designed for direct control of electric motors and other demanding load applications requiring high current switching.



### specialty switches



### 29PS

Manual reset, single pole, single throw, snap acting pressure switch with a broad assortment of port fittings and electrical connections.

### **SENSORS**



### high pressure

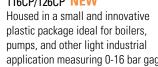


### PTE7100/PTE7300 NEW



Using Sensata's industry leading silicon MEMS strain gauge technology (MSG), this hermetic high pressure sensor is ideal for industrial applications including HVAC, boilers, pumps, injection molding, off-road vehicles and other hydraulic and pneumatic applications.



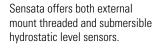






Hydrostatic level sensors provide stable, reliable and repeatable measurements in situations when other level sensing technologies are impractical or not accurate enough. These sensors use piezoresistive technology and a microprocessor based amplifier removing the need for adjustments.







### mid pressure



### P1A





### 116CP/126CP NEW

application measuring 0-16 bar gage (0-220 psig).



### 2CP5

Durable, compact and cost-effective design for long-term stability in highly demanding applications. 0-750 psi.



Cost-effective sensor with hermetic and case-isolated construction.



Ideal for general industrial applications where long-term reliability and accuracy is a must.



### low pressure



### P992

Rugged packaged differential pressure sensors with backward compatible mounting configurations covering 1 up to ±5"H<sub>2</sub>0.



### P1J/K

Panel board mounted pressure sensor with analog (P1K) or digital (P1J) output and internal temperature compensation covering 1 up to ±5"H<sub>2</sub>O.



### P993 PCB Mount Package

This series of pressure sensors incorporates a silicon capacitive sensing element in a compact package.



Sensata pressure sensors offer a broad range of mating connectors, overmolded electrical connections as well as pressure sensors with digital switching and monitoring capabilities.



## POSITION SENSORS & ENCODERS

Our comprehensive Encoders and Position Sensors line includes incremental and absolute encoders, hall effect sensors, rotary and linear potentiometers as well as inclinometers and draw wire solutions. Reliable and rugged products that are designed for use in standard industrial to heavy duty and hazardous area applications.

### **OUR BRANDS**

BEISENSORS







- Motor feedback
- Lift trucks
- Cranes
- Metal processing
- Aerial work platforms
- Oil & gas rig equipment
- Elevators & escalators
- Wind turbines
- Access control



### **ENCODERS**



### incrementa



### **DH05**

58mm through-shaft optical encoder featuring high resolution and IP65 protection.



### DHM5

58mm shafted optical encoder, High resolution IP67 option and operation Up to 100° C.



### LP Series **NEW**

90 mm encoders with a low profile design; built to withstand extreme temperatures, shock and vibration, and wet and dirty environments.



### absolute



### MHM5

58mm shafted encoder with multiple output options including SSI, CANopen, Profinet, Profibus, EtherNet/IP, EtherCAT, PowerLink, DeviceNet, Modbus and Parralel.



### CHM5

58mm High Performance single turn absolute up to 15 bits. Options for IP67 and 100° C operation + Bus Outputs.



### PHU9

90mm compact through-shaft rotary encoder available with a variety of interface capabilities (CANopen, Profibus, and more), ATEX Zone 2 rating for hazardous environments, and stainless steel housing option.



### special environment



### Explosion proof: LP series

90 mm incremental and absolute encoders with a low profile hollow shaft design; designed for direct operation in hazardous areas.



### **NEW FEATURES**

Functional safety: DS05
Designed for use in the highest
industrial safety related
applications up to SIL3/PLe,
Cat. 4 with analog or digital
electronic outputs.



### IP69K rated: TXM5

58mm shafted stainless steel (316) rotary encoder rated to IP69K for use in corrosive and washdown environments.

### **SENSORS**



### hall effect



### 9960 series

Blind shaft 51mm non-contacting sensor features 7 termination options and 24 active electrical angles. Up to IP69K rating.



### HCW4

Encapsulated, 50mm noncontacting position sensor; incremental output. ST and MT absolute available. Magnet holder option fits shafts up to 14mm.



### 9360 series

Shafted 42mm rotary noncontacting sensor with 360° rotation and dual outputs. Programmable versions available.



### potentiometers



### 9850/9860 series

Low profile rotary potentiometer with simple installation, long repeatable and high linearity. and repeatable accuracy. Dualoutput option.



### 6300 series

Linear potentiometer for hydraulic or pneumatic cylinder position sensing. Available in lengths from 50 mm to 1,000 mm.



### 9600 series

Spring return linear position sensor provides excellent life at 1 million full cycles. Available in three sizes.



### inclinometers &



### T-Series Inclinometer

Sturdy and compact design with an aluminium alloy housing that uses the latest MEMS technology for precise angle measurement. Analog or CANopen output.



### CD series

Available in a variety of incremental, absolute and potentiometric output options. Measuring range from 700 to 50,000 mm.

### SPECIALIZED SENSOR SUPPORT

Sensata | BEI Sensors also offers encoder accessories to complete your motion control installation including mechanical hardware, cable assemblies, mating connectors, power supplies and more.

### RELAYS

Sensata's Crydom brand is a market leader with the widest range of off-the-shelf solid state relays and contactors, as well as custom-designed solid state switching solutions. Cynergy3 relays contain cutting edge technology, using copper, rhodium and tungsten to create accurate, durable and reliable Reed switches.

Compact high voltage relays from Sensata's Gigavac brand, using either a vacuum or gas dielectric, are suitable for applications up to 70kVdc.

### **OUR BRANDS**

crydom

**GIGAVAC** 











- Professional cooking ovens
- Laboratory ovens
- Warehouse lighting
- Professional coffee makers
- Plastic machinery
- · Deep fat fryers
- Vending machines
- Power distribution panels
- Packaging equipment
- Elevators & lifts

### SOLID STATE **RELAYS**





### EL series

Mini-puck solid state relay. Ratings of up to 30 Amps @ 280 VAC or 10 Amps @ 100 VDC.



### NOVA22 PM67 series NEW

67.5mm 3-phase solid state relay Ratings from 35 up to 75 Amps per phase @ 600 VAC Optional Over Temperature protection.



### Series 1

Crydom's signature family of solid state relays. Ratings from 10 to 125 Amps @ 24-280 VAC or 48-530 VAC.



### NOVA22 PM22 series

Half-puck solid state relay Ratings of 25, 50 and 95 Amps @ 660 VAC.





### ASO series

Mini-SIP solid state relay. Ratings up to 2 Amps @ 12-280 VAC. DC control voltage.



### CX series

SIP solid state relay. Ratings of 5 Amps @ 12-280 VAC or 48-660 VAC. AC or DC control voltage.



### MP series

SIP solid state relay. Ratings up to 4 Amps @ 280 VAC or 3 Amps @ 60 VDC. DC control voltage.





### SeriesOne DR

Compact solid state relay. Ratings of 3, 6 and 12 Amps @ 280 VAC, 600 VAC or 100 VDC.

Class I, Div 2 rated, for use in hazardous locations.



### NOVA22 DR22 series

22.5mm solid state relay. Ratings of 20, 30 and 35 Amps @ 48-600 VAC or 1-200 VDC. Available in contactor or relay configuration.



### NOVA22 DR67 NEW

relay Ratings from 25 up to 75 Amps @ 600 VAC.



67.5mm 3-phase solid state





### CN series

Thin SSR for high density applications.

Ratings of 2 Amps @ 280 VAC or 3.5 Amps @ 48 VDC. Pluggable into standard relay sockets.



### LifePlus ED

Industry standard plug-in package.

Ratings of 3 & 5 Amps @ 24-280 VAC or 1-80 VDC. DIN Rail or PCB mount sockets available.

### HIGH VOLTAGE **RELAYS**





### GIGAVAC High Voltage Relays

Compact high voltage relays from GIGAVAC, using either a vacuum or gas dielectric, are suitable for applications up to 70kVdc.



### Cynergy3 High Voltage Reed Relavs

Industry experts in the design and manufacture of reed relays offering high performance, quality and value to customers, suitable for applications up to 15kVdc. UL approved models.



### Cynergy3 Radio Frequency Reed Relays



These relays contain cutting edge technology, using Rhodium contacts to provide low stable contact resistance in applications up to 20A. 2-32 mHz.



Besides offering many other SSR series beyond those shown above, Sensata | Crydom also offers a wide range of accessories.







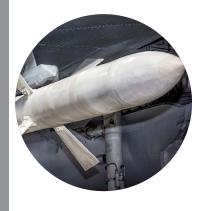
### MOTORS & ACTUATORS

Precision linear and rotary voice coil actuators (VCAs) and brushless DC motors (BLDCs) for producing, sensing and controlling motion in the medical, industrial, aerospace and defense markets. Proprietary magnetic design technologies are used to produce custom products where performance, precision, and reliability are critical.

### OUR BRANDS BEI KIMCO

- Ventilators
- Oxygen concentrators
- Unmanned aerial vehicles (UAV)
- Fast steering mirrors
- Mass spectrometers
- Chromatography
- Military /aero gimbals
- Downhole drilling
- Centrifuges











### brushless DC motors



### Frameless BLDC motors

Can be fully integrated within customer assemblies, resulting in the highest ratio of torque to volume performance. Available in standard cylindrical and pancake or "torquer" designs.

### Housed BLDC motors



The most reliable and cost effective BLDC motor solutions for some of the most demanding applications. Shipped ready for integration with minimal assembly time.

### High pressure high temperature BLDC motors



Designed to withstand the extreme environments where operating temperatures reach up to 220°C and pressures of 30,000 PSI.

Ideal for downhole drilling applications.

### LVCA

### linear voice coil actuators



### Cylindrical frameless VCAs

The most cost effective and versatile models of linear VCAs with the longest operational life. Available in both moving coil and moving magnet designs.



### Cylindrical semi-housed VCAs

Improves upon the frameless VCA design by adding a shaft and self-aligning bushings. Precision shaft with multiple options available.



### Cylindrical housed VCAs

Fully encapsulated and among the easiest VCA's to integrate into a customer's system. Available with magnet springs and/or latches and different shaft options.





### rotary voice coil actuators



### Rotary VCAs

Ideal for high acceleration applications that require angular movement.

Arc-segment and cylindrical designs available.





### VCA devolener's kit



### Developer's kit

Self-contained kit including a VCA with built-in feedback sensor and a programmable controller with software and cables.

Available with 6 VCA models and 2 servo drive options.

### **CUSTOM DESIGN CAPABILITIES**

Sensata | BEI Kimco also offers custom brushless DC motor and voice coil actuator designs and is dedicated to providing the best solution for our partner's motion control application.





### OPERATOR CONTROLS

Sensata designs and manufactures advanced operator controls and integrated systems with embedded diagnostics meeting strict product safety standards in Material Handling and Mobile Elevating Work Platforms that simplify operation, increase reliability, and improve efficiency.











- Lift Trucks
- Mobile Elevating Work Platforms
- Telehandlers
- Cranes
- Hoists
- Mast Climbers



### RELIABLE OPERATOR CONTROLS & INTEGRATED SYSTEMS



### control systems

Control systems for specific Rough terrain and Slab scissor lifts. Systems consist of PCU and ECU used as building block elements able to connect a variety of digital and analog machine interfaces.



### K100 Series

Control system for rough terrain scissor lift.



K500 Series

Control system for slab scissor lift.

JS

### joysticks

Combining hall effect technology with high mechanical strength, flexibility and a unique sensing design for high performance. Made to accommodate both standard and custom-designed multifunction grips.



### AJ3 Series

Small, heavy-duty design ideal for industrial applications.



### **AJ4 Series**

Robust design ideal for extreme, heavy-duty applications.



### **AJN Series**

Robust & flexible design, ideal for extreme, heavy-duty applications.



### **SAL Series**

Robust single axis design ideal for replacement of hydraulic control levers.



### multifunction grips

Ergonomic shape and operation make them ideal for mounting on hydraulic levers, electronic joysticks, pilot hydraulic joysticks, hydrostatic levers and more.



### Ball grip

Small and large ball variants.



### S2 Series

Standard design with 1 rocker switch and/or 1 trigger switch.



### S3/S4/S4E/S6/S7 Series

Basic joystick grip with different flexible designs and customization.



### **SK Series**

Flexible design with up to 11 definable switch functions.



### rockers

Designed for easy implementation on armrest or panel mounted fingertip control assemblies and enabling proportional control with an ergonomic design. They are short circuit protected and fully customizable.



### **AR3 Series**

3 standard actuator shape variants. Ideal solution for proportional control in a grip/handle design.



### SR3 Series

SR3 Switch rocker with 3 standard actuator shape variants. Ideal solution for proportional control in a grip/handle design.

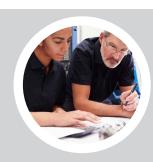


### AR5 Series

Fingertip design. Ideal solution for panel assemblies and armrest applications.

### **CUSTOMIZING YOUR MACHINES**

Sensata provides complete integrated control systems for industry leading OEM's of material handling and aerial access equipment. Based on our standard product and technology building blocks, we can develop integrated control systems, armrest solutions and switch assemblies to fit your specific machine and application requirements.



### THERMAL SOLUTIONS



Our comprehensive range of thermal solutions can meet many electrical protection needs. Our portfolio is easily configurable and includes rugged industrial thermostat switches and temperature sensors, with a wide range of form factors and connection options. Sensata is a global leader in high temperature exhaust gas sensing with solutions approaching 850°C.



### **OUR BRANDS**











- White good appliances
- Automotive DC motors (window lifts, wipers, seat adjusters)
- Domestic Heating (boilers, panel heaters)
- Garden Tools
- Refrigeration/HVAC (compressor controls)
- Electrical generators
- Industrial exhaust gas
- Power distribution units
- Commercial food equipment
- Industrial Process Control

### OVERLOAD AND OVERHEATING PROTECTION / THERMOSTATS TEMPERATURE MANAGEMENT



### thermostats and motor protectors



### 2MM Series

Motor protector to meet almost any requirement of protection in a wide range of small motors, small transformers, solenoids etc.



### 15AM Series

The 15AM motor protector is designed to provide locked rotor and overload protection in a wide variety of motors for industrial and domestic appliances.



### 3MP/3MPSH / 7MP Series

Off winding protectors for universal motors, small dimensions, flexible, terminal and self-hold configurations.



### **HM Series**

HM series are single phase hermetic motor protectors suitable for HVAC compressor controls.



### 20413/20600 Series

Fixed temperature thermostats designed for applications where space, capacity and ease of assembly are important production factors.



### YS11/YS7 Series

Off winding motor protector for small motors and batteries.



### 6AP/5AP Series

The 6AP/5AP operates as a sensitive power cut-out which is widely used in window-lifts, adjuster motors, wipers, door-locks and various other applications.



### **SMB Series**

SMB series is a high current DC motor protector which delivers the benefit of locked rotor and overload protection in a robust integrated package.



### Phenolic Series

Equipped with a bimetallic snap acting disc, on which the contacts are mounted, and through which the current flows.



### 6700 Series

RoHS compliant, positive snap action, single pole / single throw, sub-miniature bimetallic thermostat.



### 4TM Series

Plug-on thermal motor protector for compressors. Protects compressors for refrigerators, freezers, dehumidifiers, water coolers, vending machines.



### **8EA Series**

Solid State PTC Motor starter. A low-cost alternative to electro-mechanical relays, performs the PTC (positive temperature coefficient) solid-state starter function.



### **TH10 Series**

The TH10 temperature cut-out was developed to respond to the need of increasing power of heating and personal care appliances.



### MA10 Series

The MA10 is a temperature-sensitive safety cut-out for applications like electric room heaters, hair dryers and curlers.



### 1NT/3NT Thermostats

Small and easy to mount, reliable, high temperature thermostats, widely used in many industrial applications as a regulating switch and over temperature control.



### 5003 Series

The 5003 series is a positive snap action, single pole / single throw, bimetallic thermostat which provides accurate and reliable sensing.



### 5011 Series

Positive snap action, SPST hermetically sealed unit designed to meet demanding shock and vibration requirements.



### 5100 Series

Single pole, single throw, snap-action, hermetically sealed temperature control for applications requiring high vibrational resistance in an isolated case



### temperature sensors



### 5024 EGR Temperature Sensors

10K Ohm NTC SS Probe Sensor with Integrated Connector. Compact and economical, suitable for the harshest environmental conditions.



### 3000 Series

The 3000 series offers the advantage of today's best temperature sensing technology in standard, low-cost probe assemblies that ensure the technology performs accurately and reliably in demanding applications.



### **DARTS Temperature Sensors**

The DARTS series is a line of thin film platinum RTD based temperature sensors ideal for demanding air conditioning, refrigeration and industrial applications.



### Cynergy3 ITT(U) Series A range of wired programmable industrial temperature probes using

Industrial temperature probes using K- or J-type thermocouples, or PT100 RTD sensor elements, for measuring the widest temperature ranges.

### **DISCOVER MORE...**

Sensata offers rugged industrial thermostats and temperature sensors with a wide range of form factors and connection options to supply a solution for many industrial applications. A multitude of package designs for harsh and challenging environments span a range of -70°to 850°C.

### POWER CONTROLS

These products, including magnetic-hydraulic circuit breakers, ground fault circuit interrupters, power switches and fuses, accurately provide protection against fault conditions and provide for the distribution and control of electrical power. Innovative design, proven performance, and quality manufacturing has made the Airpax™ brand the recognized leader in the markets we serve.

### **OUR BRANDS**









- Rail
- Telecom/Datacom
- · Military and Defense
- Construction machinery
- Medical Equipment
- Marine
- Power Supply units
- Forestry machinery
- Diesel Generators
- · Commercial coffee grinders

## OVER CURRENT PROTECTION AND SHORT CIRCUIT PROTECTION



### Hydro-magnetic circuit breakers and thermostats



### IAR/IUR/CER/CUR Series

This series is a snap-acting hydraulic-magnetic circuit breaker / protector that combines power switching and accurate, reliable circuit protection in one aesthetically pleasing, "1U" or "1RU" sized package.



### T/R/PP/PR/CR/CPP/CPR Series

The Airpax Snapak series is a snap-acting hydraulic magnetic circuit protector, it combines functions of 3 separate components: power switch, fuse and fuse holder.



### AP/UP, AP/MIL Series

The Airpax AP series are fully sealed, magnetic circuit protectors that combine power switching and accurate, reliable circuit protection with inverse time delays and trip free features.



### IAG/IUG/IEG/CEG/LEG Series

This magnetic circuit protectors provide low-cost power switching, reliable circuit protection and accurate circuit control for equipment.





Low-Depth, Hydraulic-Magnetic Circuit Breaker, developed to meet the evolving demand for low-profile datacenter rack power distribution units.



### IAL/CEL/LEL Series

AL/IUL/IEL/LEL magnetic circuit protectors provide low-cost power switching, reliable circuit protection and accurate circuit control for equipment.



### **IPA/CPA** Series

The Airpax IPA/CPA hydraulic magnetic circuit protectors provide low cost power switching, reliable circuit protection and accurate circuit control for equipment in international marketplace.

### **IELR Series**



IULHR and IELHR series Rail-Mount Magnetic circuit protectors offer the advantages of quick and easy mounting or removal which results in efficient and economical wiring, while conserving space.



### **ICLR Series**

The Airpax ICLR is a new DIN Rail mounting Hydraulic Magnetic breaker specifically designed for Railways applications, Telecom & Datacom.

### **DISCOVER MORE...**

Protect valuable equipment and personnel with our high-quality solutions.

Our broad portfolio includes highly configurable, customizable breaker families that offer stable trip performance, reliable operation and high power density in an array of shapes and sizes to facilitate mechanical integration.

### CONTACTORS AND FUSES

GIGAVAC's EPIC® sealing technologies provide the ultimate in power switching contactors and relays. From high power DC contactors that can withstand environmental extremes, to competitive PCB mount contactors, with technologies ranging from epoxy and ceramic sealed switches to hermetically sealed manual disconnect switches, we offer competitive sealed solutions to fill your power switching needs.

And our high voltage fuses enable high levels of protection for your advanced battery systems.

### **OUR BRANDS**

### GIGAVAC

For more information on these and other products visit gigavac.com

- Electric Vehicles
- Renewable Energy
- · Material Handling
- Military Vehicles
- Battery packs
- Charging stations
- Power Distribution Units (PDU)







### THE WORLD'S LEADING CONTACTOR MANUFACTURER





### fuses and switches



### **Fuses and Switches**

Pyro & Electromagnetic

- Passive and Active Versions
- Up to 1500V
- Fast Acting, No Thermal Aging
- fuse-contactor pairing and testing services



### Battery Disconnect Switches

Hermetic Manual Disconnect

- 12V to 1000V
- Up to 600A Continuous Duty



### contactors



### **GV** Series

**Commercial Contactors** 

- 12V to 1000V
- Up to 600A
- · Ideal for High Volume Applications



### **GX/MX Series**

**Specialized Contactors** 

- 12V to 800V
- Up to 1000A Continuous Duty
- Options for Integrated Sensing and Military Applications



### GIGAVAC MiniTACTORS™

**Compact Sealed Contactors** 

- 12V to 1500V
- Up to 80A Continuous Duty
- UL Recognized Versions



### HX Series

**High Voltage Contactors** 

- UL Recognized up to 1500V
- Tested up to 3000V
- Up to 1000A Continuous Duty





### solutions



### Custom Solutions Application Specific Designs

- Purpose Engineered Products
- Simple Modifications to Full Value Added Packages



### PCB Solutions

Cost Effective Installation

- Power Distribution Solutions
- 12V to 1000V
- Up to 600A Continuous Duty

### **CERTIFICATIONS**

GIGAVAC sealed power contactors and battery disconnect products are CE approved, conforming to all relevant European requirements. They are built in our ISO900, IATF16949 and ISO14001 certified California factory. Many of our contactors are UL Certified in addition to being compliant with other worldwide certifications.

## FLOW AND LEVEL SENSING SOLUTIONS

Level Sensors and Flow Switches are used in a wide variety of industries and applications. Usually the aim is to avoid overfill that would cause potentially hazardous situations, so accuracy and reliability are of paramount importance. Our Level Sensors are designed, tested and manufactured to the highest standards and trusted by our customers to measure and mitigate risk in applications as diverse as blood dialysis treatment, storage and transport of volatile fuel and food-safe vending machines.

### **OUR BRANDS**



For more information on these and other products visit cynergy3.com

- Alternative Energy
- Chemical Process
- Industrial
- Food & Beverage
- Medical
- Military & Aerospace
- Transportation
- Utilities & Smart Grid
- Oil & Gas





# FLOW SENSORS / LEVEL SENSORS / SIGNAL CONDITIONING & I/O MODULES



### level sensors



### Float Switches

- Optical Level Sensors Isolating Signal Converters
- Vertical and horizontal, internal and external mounting
- Available in PPS, Polypropylene, Nylon and PVDF body material
- WRAS and NSF approved variants. UL recognised, File No E171218
- Maximum working temperature up to 120°C
- User configurable N/O or N/C



### **Optical Level Sensors**

- Low cost general purpose liquid level sensors
- · High reliability optical sensing
- Internal and external mounting options
- · High and low output versions



- ATEX certified for use in Zones 1 and 2
- Flange or screwed mount for installation from outside the tank
- IP68 Stainless Steel terminal enclosure
- Multi-level switching options



### Cable End Sensors

- Cable mounted, N/O or N/C configurable
- Direct switching, 10 or 20A resistive
- · WRAS approved variants
- Use in depths up to 100 metres



### Hydrostatic Level Sensors

- Pressure ranges from 0.5mWG to 100mWG 50mBar to 10 Bar
- Temperature range: -20 to +60°C
- Level accuracy: <0.1% FS BFSL
- Dual independent 4-20mA outputs
- Stainless steel, piezo-resistive pressure sensor

### FS

### flow sensors



### Flow Sensors

- Offered in a variety of sizes to fit a wide range of industry standard pipes
- A choice of inline or paddle switch options
- Ultrasonic flowmeters that are unaffected by contaminants and automatically compensated for variations in temperature and viscosity
- WRAS and NSF approvals offered



### signal conditioning & I/O Modules



### **Isolating Signal Converters**

- Can convert almost any process signal into isolated 4-20mA or voltage outputs
- Inputs include AC/DC voltage and current, thermocouples, RTDs, potentiometer and frequency inputs



### I/O Modules with Communication Gateway

- Multiple inputs and transfer of the data to the E-100 Communications Gateway
- The E-100 can be supplied with RS232/485 or Ethernet communications and values from up to 1024 inputs can be read as Modbus RTU or TCP/IP registers
- Inputs include virtually any process signal



### Trip Amplifiers

- Typically used to provide alarm relays or simple On/ off control functionality
- Features include universal inputs, re-transmission of the input signal as a 4-20mA or voltage output and two 115/230Vac rated changeover relays

### **DISCOVER MORE...**

Sensata's Cynergy3 brand has both flowmeters and flow switches amongst its range of measuring instruments.

## WIRELESS SENSORS AND SYSTEMS

Cynergy3 produce a wide range of highly configurable wireless sensors for the measurement of pressure, temperature, digital status and any existing 4-20ma transmitters.

Our sensors allow for the transmission of the sensor's output without the need for expensive or arduous cable runs, and take the same accuracy, reliability and durability of our established range of wired sensors. These wireless sensors have a range of applications from simple cable replacement systems to complete IIoT solutions.

### **OUR BRANDS**



For more information on these and other products visit cynergy3.com







- Railways
- Motor Condition Monitoring
- Solar & Renewable Energy
- Vibration Analysis
- Remote Asset Monitoring

### SOLUTIONS FOR YOU



### industrial wireless pressure sensors

### Wireless Industrial Pressure Sensor

- Up to 750m line-of-site range
- Five year battery life at 10 second transmission update rate
- Simple DIL switch pairing with the single or five channel receiver
- Pressure ranges from -1 to +400 bar gauge (-15 to +5800 psi gauge)
- Low pressure ranges from 0-15 psi
- Piezo-resistive stainless steel sensor element (low Pressure)
- Rugged ceramic sensor element (high Pressure)



Wireless Pressure Sensor



Wireless Temperature Transducers



**IOT Gateway** 



### industrial wireless temperature transducers

### Industrial Wireless Temperature Transducer (BSP mount)

- K or J Type Thermocouples or PT100 RTD Sensor
- Up to 750m line-of-site range (depending on receiver)
- Five year battery life at 10 second transmission update rate
- 6mm stainless steel sheath



### gateways and receivers

### **IOT Gateway**

- Receives data from all IWT transmitters
- Includes 2G/3G/4G IoT Cellular Modem
- Other inputs include 4-20mA and digital inputs, I2C & SPI sensors
- Battery or 12/24Vdc powered

### Wireless to Ethernet

- 2.4GHz Wireless to Comms Gateway
- Allows remote sensors to be incorporated into an Ethernet or RS232/485 network

### Wireless to USB

- Easy monitoring of wireless networks using any PC
- Free of charge monitoring & logging software

### Industrial Wireless Receivers

- Single channel or five-channel receivers
- Pairs with any IWT wireless transmitter
- User-selectable 1-5V or 4-20mA receiver output
- Clean contact output for process, low battery or loss of signal alarm function



### industrial wireless transmitters

### **Industrial Wireless Transmitters**

- Up to 750m line-of-site range (depending on receiver)
- Five year battery life at 10 second transmission update rate
- Simple DIL switch pairing with the single or five channel receivers

### Simple DIL switch pairing with single or five channel receivers

- IWDigT Switch input
- IWmAT mA input
- IWVT Voltage input
- IWCTT AC Current Transformer
- IWTRhT Temperature & Relative Humidity
- IWTxT mA input with Transmitter Supply
- IWLoadT Load Cell/Strain Gauge
- IWTiltT Inclinometer

### **DISCOVER MORE...**

Cynergy3's ranges of pressure and temperature sensors include wireless devices for the transmission of the sensor's output without the need for expensive or arduous cable runs.

Cynergy3 can also offer full IIoT solutions from Sensors to Cloud based WebSCADA packages.

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