



INDUSTRIAL PRODUCTS OVERVIEW



ABOUT SENSATA TECHNOLOGIES

Sensata Technologies is one of the world's leading suppliers of sensing, electrical protection, control and power management solutions with operations and business centers in thirteen countries. Sensata's products improve safety, efficiency and comfort for millions of people every day in automotive, appliance, aircraft, industrial, military, heavy vehicle, heating, air-conditioning and ventilation, data, telecommunications, recreational vehicle and marine applications.

For more information please visit Sensata's website at www.sensata.com

OUR INDUSTRIAL PRODUCT SOLUTIONS

Get the best solution to improve your application's efficiency with Sensata's pressure, position, motion, temperature and control product portfolio.

The synergy of leading brands and years of proven expertise in extremely demanding automotive and 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

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PRESSURE SENSORS & SWITCHES

Broad portfolio of pressure products based on a variety of proven technologies. From pressure sensors that offer ranges from 1 inch H₂O to 50,000 psi or vacuum up to 3500 bar, 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

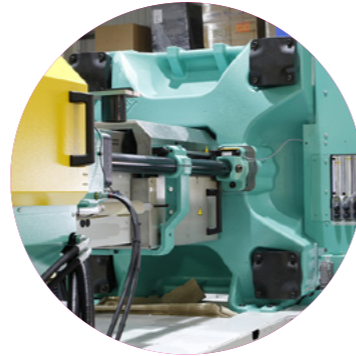


Sensata
Technologies

KLIXON
®

KAVLICO
Pressure Sensors

For more information on these and other products visit sensata.com, klixon.com & kavlico.com



APPLICATIONS

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



SWITCHES

SH switches for HVAC

PS80
Automatic reset pressure switch designed to meet the unique challenges of R744/CO₂-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.

SIA switches for industrial applications

25PS
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.

SS specialty switches

29PS
Manual reset, single pole, single throw, snap acting pressure switch with a broad assortment of port fittings and electrical connections.

MP mid pressure

P1A
Highly modular sensor design with multiple standard and customized configurations for pressure ranges from vacuum up to 16 bar or 0-5 up to 0-200 psi gage and absolute.

116CP NEW
Housed in a small and innovative plastic package ideal for boilers, pumps, and other light industrial application measuring 0-16 bar gage (0-220 psig).

2CP5
Durable, compact and cost-effective design for long-term stability in highly demanding applications with pressure ranges from 0-15 up to 0-750 psi.

2HMP
Cost-effective sensor with hermetic and case-isolated construction, threaded fitting or braze tube pressure connection for rugged applications measuring 0-100 up to 0-750 psi.

LP low pressure

P992
Rugged packaged differential pressure sensors with backward compatible mounting configurations covering 1 up to ±5"H₂O.

P1J/K
Panel board mounted pressure sensor with analog (P1K) or digital (P1J) output and internal temperature compensation covering 1 up to ±5"H₂O.

FIND THE RIGHT PRESSURE PRODUCT

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



TEMPERATURE SENSING SOLUTIONS

Rugged industrial thermostat switches and temperature sensors, with a wide range of form factors and connection options to supply a solution for every industrial application. Sensata is the global leader in high temperature exhaust gas sensing with solutions approaching 900°C.

OUR BRANDS

KLIXON

AIRPAX

SENSOR NITE

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

APPLICATIONS

- HVAC
- Electrical generators
- Mobile refrigeration
- Industrial exhaust gas
- Industrial water heaters
- Welding equipment
- Marine engines
- Power distribution units
- Commercial food equipment



HIGH ACCURACY & ROBUSTNESS



KLIXON



A portfolio of snap acting bimetal switches for a wide range of industrial and HVAC applications.

AIRPAX



Specialty switches and NTC based probes, custom engineered to tailor fit the most difficult applications.

SENSOR NITE



Global market leader in automotive and industrial exhaust gas sensing. Platinum RTD based sensing accuracy up to 850°C.

FP

featured products

1NT
All purpose thermal switch

5011
Hermetic sealed thermal switches

5024
NTC based sensing solution, automotive grade to 350°C

5003
Low profile thermal switches

5100
Probe type thermal switches

DARTS
Platinum RTD based sensing solutions to 850°C

SOLUTIONS ENGINEERED TO PERFORM

Sensata prides itself on designing and manufacturing solutions for the most demanding, mission critical applications.

SPEED & POSITION SENSORS

Comprehensive speed and position sensing product 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

BEI SENSORS

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



APPLICATIONS

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



ENCODERS

INC incremental

- DH05**
58mm through-shaft optical encoder featuring high resolution and IP65 protection.
- H25**
The flagship of the product line; a 2.5" shafted heavy duty encoder with EMI shielding & 40lb ABEC 7 bearings.
- HS35**
3.5" hollow shaft heavy duty encoder that accommodates shafts up to 1" in diameter and includes dual bearings and shaft seals for NEMA 4, 13 and IP65 ratings.

ABS absolute

- LP series NEW**
90 mm encoders with a low profile design; built to withstand extreme temperatures, shock and vibration, and wet and dirty environments.
- MHM5**
58mm shafted encoder with multiple output options including CANopen, Device Net, EtherCAT, PowerLink, Interfuse, Modbus, Parallel, Profibus, Profinet and SSI.
- 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.

SE 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.
- 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: DXM5**
58mm shafted stainless steel (316) rotary encoder rated to IP69K for use in corrosive and washdown environments.

SENSORS

HE hall effect

- 9960 series**
Blind shaft 37mm non-contacting sensor features 7 termination options and 24 active electrical angles. Up to IP69K rating.
- HCW4**
Blind shaft 50mm non-contacting modular position sensor with incremental output. Bore size from 6 to 10mm. Also available in absolut mono and multi-turn versions.
- 9360 series**
Shafted 41mm rotary non-contacting sensor with 360° rotation and dual outputs. Programmable versions available.

PM potentiometers

- 9850/9860 series**
Low profile rotary potentiometer with simple installation, long service life and repeatable accuracy. Dual-output 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.

IDW inclinometers & draw wire solutions

- 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.
- LT25 series**
Provides digital position and speed information in a durable, easy-to-install package. Measuring range from 0 to 125°.
- CD series**
Available in a variety of incremental, absolute and potentiometric output options. Measuring range from 700 to 50,000 mm.

SPECIALIZED SENSOR SUPPORT

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

SOLID STATE RELAYS

Market leader with the widest range of off-the-shelf solid state relays and contactors, as well as custom-designed solid state switching solutions. Our commitment to high quality standards and innovation allow us to deliver the most reliable products for industrial market applications.

OUR BRANDS
crydom

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



APPLICATIONS

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

EXCELLENCE IN SOLID STATE TECHNOLOGY

DIN din rail mount

- 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 NEW**
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.
- SOLICON DRC series**
IEC style solid state contactor.
Motor ratings of up to 5HP @ 600 VAC. Built-in overvoltage protection.

PCB pcb mount

- AS0 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.

PM panel mount

- EL series**
Mini-puck solid state relay.
Ratings of up to 30 Amps @ 280 VAC or 10 Amps @ 100 VDC. DC control voltage.
- 53 series**
3-phase solid state contactor.
Ratings of 25 and 50 Amps per phase @ 48-530 VAC. Optional IP20 "touch-safe" cover.
- Series 1**
Crydom's signature family of solid state relays.
Ratings from 10 to 125 Amps @ 24-280 VAC or 48-530 VAC. Optional normally closed output.

PI plug-in mount

- 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.

EXTENSIVE LINE OF ACCESSORIES

Besides offering many other SSR series beyond those shown above, Crydom also offers a wide range of accessories such as safety covers, ID markers, heat sinks, thermal pads, hardware kits, sockets, and more.



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

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

APPLICATIONS

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



BLDC brushless DC motors



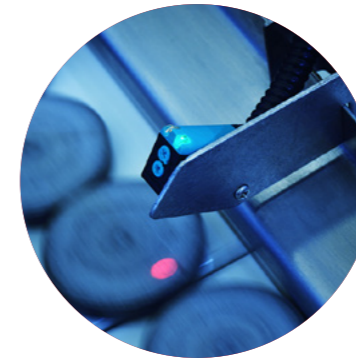
Frameless BLDC motors
Can be fully integrated within customer assemblies, resulting in the highest measure ratio of torque to volume performance. Available in standard cylindrical and pancake or "torquer" designs.



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.



RVCA rotary voice coil actuators



Rotary VCAs
Ideal for high acceleration applications that require angular movement. Arc-segment and cylindrical designs available.

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.

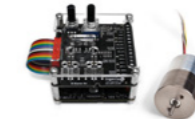


Cylindrical semi-housed VCAs
Improves upon the frameless VCA design by adding a shaft and self-aligning bushings. Precision shaft with multiple options available.



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

DK VCA developer's kit

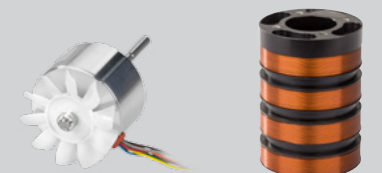


Developer's kit
Self-contained kit including a VCA with built-in feedback sensor and a programmable controller with software and cables. Available with 6 VCA models and 2 servo drive options.

ADVANCED MAGNETICS FOR MOTION CONTROL

CUSTOM DESIGN CAPABILITIES

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 SENSING TECHNOLOGIES

Sensata designs and manufactures advanced operator controls and integrated systems with embedded diagnostics meeting strict product safety standards in material handling and aerial access applications that simplify operation, increase reliability, and improve efficiency.

OUR BRANDS



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

APPLICATIONS

- Lift trucks
- Aerial work platforms
- Telehandlers
- Cranes
- Hoists
- Mast climbers



RELIABLE CONTROLS & INTEGRATED SYSTEMS



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.

JS joysticks

AJ3
Small, heavy-duty design ideal for industrial applications.

AJ4
Robust design ideal for extreme, heavy-duty applications.

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



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

MG multifunction grips

S2
Standard design with 1 rocker switch and/or 1 trigger switch.

SK
Flexible design with up to 11 definable switch functions.

Ball grip
Small and large ball variants.



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.

AR analog rockers

AR3
3 standard actuator shape variants. Ideal solution for proportional control in a grip/handle design.

AR5
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.



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