Sitron

SOLUTIONS FOR INDUSTRIAL AUTOMATION

FLOW
LEVEL
PRESSURE
VIBRATION
TEMPERATURE

Decades of experience in process measurement:
Flow, Level, Pressure, Vibration and Temperature

With decades of experience in the field of industrial process measurement and control, Sitron provides an unmatched level of service for both pre and post sales, ensuring that our products are properly specified and applied within each customer´s unique application requirements.

Sitron is a privately held company with manufacturing and sales headquarters located in São Paulo, Brazil and with an international sales office in New York. We are a pioneer in the manufacture of process controls in Brazil with our roots going back to the late 1960´s. Sitron has earned a reputation for being extremely flexible in adapting and modifying our product line to meet the individual application requirements of each of our customers. By offering cost effective solutions, rapid turn-times and full customer support regardless of the size of the company (or of the order), we have proven that we view all of our customers as integral partners in our success.

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Why choose Sitron?

- Personalized service
- Product quality and reliability across our line
- Years of experience in the field of instrumentation
- Short delivery times or “Rushed” deliveries upon request
- Specialized technical team for timely support (pre and post sales)
- Customized product configurations made in accordance with the needs of each customer´s unique process requirements

V-Tork
Point level switch

Temperature

Vibration

Pressure

Flow

Sitron

Radar

Capacitive

Conductive

Ultrasonic

Optic

Contents

Flow Switch....4

Flow Switch w/ Temperature Sensor....5

Flow Transmitter....6

VTK Tuning Fork Level Switch....7

Conductive Level Switch / Relays....8

Optic Level Sensor....10

Capacitive Level Switch....11

Ultrasonic....13

Remote Ultrasonic....14

Radar....15

Capacitive Level Sensor....16

Pressure Transmitter....18

Pressure w/ Display....19

Hydrostatic Level Transmitter....20

Temperature....21

Temperature w/ Display....22

Vibration Sensor....23

Indicators & Controllers....24

Galvanic Isolator....25

Warranty....26

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Flow Switch

CF12AC / CF12DC / F12 + CF12RM

The CF line of thermal dispersion flow switches are designed to detect the flow of liquids and gases (air) in tubes or ducts and may also be used for liquid level detection.

CF12 - AC / DC

Output: SPDT Relay

Housing: G1 Aluminum

N1 Nylon

CF12 - AC / DC

Output: 2x SPDT Relays

Housing: G2 Aluminum

CF12 - EX Proof

Output: 2x SPDT Relays

Housing: GX Aluminum

F12 + CF12RM - Relay

Panel Mounting

Output: Relay (NA+NF)

Remote Set Point Adjustment

Technology:

The movement of a liquid or a gas as it flows over the tip of the switch disperses some of thermal energy that is generated by the switch. The unit also generates a fixed temperature to have as a reference point. Microprocessed electronics compares these two temperatures and determines if there is or is not flow within the pipe or duct.

Applications:

- *Pump Protection*
- *Flow Alarm High and Low*
- *HVAC Monitoring*
- *Detection of Leaks*
- *Lubrication Monitoring*
- *Cooling Water Monitoring*
- *Monitoring On / Off valves*
- *Oil Flow Detection*
- *Air Flow Monitoring*

General Specifications:

Supply:

AC - 85...240Vac (50/60Hz)

DC - 24Vdc +/- 10%

Output:

SPDT Relay

Body Material:

316 SS

Housing:

Aluminum or Nylon

Operating Temp.:

-10...80°C

Accuracy:

+/- 10%

Protection:

IP65 / IP67

NEMA 4X (G1 / G2)

Approvals for EX Proof GX Housing:

UL, cUL, IECEX and ATEX (EX d)

Flow Switch / + Temperature Sensor

CF12AC / CFT12DC

The CF12 series was designed to detect the flow of liquids and gases (air) in pipes or ducts and may also be used for liquid level detection. The CFT12 model offers the same function as the CF12, but it can also measure the temperature of the medium (providing a 4...20mA output) while detecting whether or not there is flow within the pipe or duct.

CF12 - AC

Output: SPDT Relay
G3 Housing: Aluminum
A3 Housing: 316 SS

Flow + Temperature

CFT12 - DC

Output:
SPDT Relay (Flow detection)
4...20mA (Temp. sensor)
Meas. Range: -10...80°C
G3 Housing: Aluminum
A3 Housing: 316 SS

Technology:

The movement of a liquid or a gas as it flows over the tip of the switch disperses some of thermal energy that is generated by the switch. The unit also generates a fixed temperature to have as a reference point to compare the heat lost to the flow. Microprocessed electronics compares these two temperatures and determines if there is or is not flow within the pipe or duct. The process temperature can be measured or monitored by Pt100 inserted into the tip of the sensor that detects the flow. The function of resistance in the temperature variation is expressed with a mA current output signal.

Application:

- *Temperature Measurement*
- *Heating and Cooling Control*
- *Pump Protection*
- *Flow Alarm High and Low*
- *Control On / Off valves*
- *Monitor Airflow*

General Specifications:

Supply:
AC - 85...240Vac (50/60Hz)
DC - 24Vdc +/-10%
Output:
Relay (SPDT) CF12 / CFT12
4..20mA to Temp. (CFT12)
Body Material:
316 SS
Operating Temp.:
-10...80°C
Accuracy:
+/-10% (Flow)
0.5% (Temperature)
Protection:
IP66

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Flow Transmitter

CF420 / F420 / CF420RM

The CF420 line of flow transmitters are used to monitor the approximate rate of liquid flows by providing a 4...20mA analog output that reflects the velocity rate of the flow. While this model is not a substitute for a true flow meter, it can be an ideal solution when the application does not call for the accuracy of a more expensive flow meter technology.

CF420 - DC

Output: 4...20mA + PNP

Adjust: Zero & Span

Set- Point (PNP)

Technology:

Thermal Dispersion transmitters generate heat from the tip of the sensor and then detect and measure the heat loss as the medium passes over it. The amount of heat loss is measured to determine the velocity of the flow.

Applications:

- *Pump protection*
- *Alarm and Flow Control High / Low*
- *Supply / Drainage Monitoring*
- *Monitoring and Lubrication Control*
- *Control On / Off valves*
- *Oil Flow Monitoring*

CF420

Output: 4...20mA + Relay N.O.

Adjust: Zero & Span

Set- Point (Relay)

General Specifications:

Supply:

AC - 85...240Vac (50/60Hz)

DC - 24Vdc

Body Material:

316 S.S

Housing:

Aluminum or Nylon

Operating Temp.:

-10...80°C

Accuracy:

Error 10% F.S.

Protection:

IP65

CF420RM - Relay

Panel Mounting

Output: 4...20mA

Relay (NO+NC)

Adjust: Zero & Span

Set- Point (Relay)

F420 - Sensor

Works in array with the CF420RM

Tuning Fork Point Level Detection

VTKR / VTK-DC / MVTK-DC / MVTK-AC

Sitron VTK series of vibrating tuning forks are an ideal solution for many point level detection applications because they are un-affected by either the dielectric or the conductivity of the medium. Users around the world have come to depend on this technology as one that is easy to apply and very reliable.

VTKR / VTK-DC

Output: SPDT Relay
Delay: 1 to 20 Sec.
Housing: G1 Aluminum
N1 Nylon

VTKR (G2 Housing)

Output: Relay (NO + NC)
Delay: 1 to 20 Sec.
Housing: G2 Aluminum

VTKR / EX Proof

Output: Relay (NO+NC)
Delay: 1 to 20 Sec.
Housing: GX Aluminum
EX Proof Certification:
UL, cUL, IECEX / ATEX(EX d)

MVTK-DC

Output: PNP 24Vdc

MVTK-AC

Output: Load switching in series with supply (2-wire)

Technology:

When the tuning fork is submerged in the medium the frequency at which it vibrates is altered. This change is detected by the unit's electronics and is converted into a switch output.

Applications:

- *Alarm Level High / Low Alarm Level*
- *Pump Protection*
- *Leak Detection*
- *Overflow alarm*
- *Lubricant Level Monitoring*
- *Cooling Water Monitoring*
- *Oil level detection*

General Specifications:

Supply:
AC - 85...264Vac (50/60Hz)
DC - 18...36Vdc
Output:
PNP (2 / 3 wires) / SPDT Relay
Body Material:
316 SS
Housing:
Aluminum or Nylon
Operating Temp.:
MVTK -10...100°C
VTK -10...80°C
Protection:
IP65 / IP67
NEMA 4X (G1 / G2)

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Conductive Point Level Switch

CN1~2DC / CN1~2AC

The CN line of Conductive Level Switches have up to two active rods and one for reference for level control of all conductive media and are available in both AC and DC power supplies. The electronics and relay are integrated into the housing so that there is no need to use a remote controller. This line can be configured with fixed or removable 316SS (PTFE coated or bare) rods or a 316SS electrode encased in a polyacethal enclosure hung from PVC cables (for longer insertion lengths).

CN - DC

Output: SPDT Relay

Adjust: Sensibility and Delay

Housing: Nylon N1

CN - AC / DC

Output: SPDT Relay

Adjust:

Sensibility and Delay

Housing: G1 Aluminum

Technology:

Conductive switches operate through the electrical resistance variation between the reference electrode and the level of the detection electrode. When the electrode comes into contact with the conductive medium there is a resistance change which activates an output ON / OFF.

The electrodes are supplied with alternating current which prevents the electrolysis and the corrosion and decomposition of the electrodes.

Applications:

- *Level and Low Alarm*
- *Pump Protection*
- *Detection of Leaks*
- *Alarm "Overflow"*
- *Control Automatic On / Off valves*

General Specifications:

Supply:

AC - 85...230Vac / 125Vdc

DC - 24Vdc

Rod Material (electrode):

Fixed or Removable (316 SS)

PVC Cable & 316 SS Electrode

Level Control:

2 Points (Min. and Max. Level)

Body Material:

316 SS

Housing:

Aluminum or Nylon

Temperature:

-10...80°C

Protection:

IP65

Conductive Level Switch

EL-1~6

The EL line of conductive level switches offer up to six points of active control (active rod/s + 01 reference) for all types of conductive media. This line can be configured with fixed or removable 316SS (PTFE coated or bare) rods or a 316SS electrode encased in a polyacethal enclosure hung from PVC cables (for longer insertion lengths). All units require a separate panel relay for process control. Sitron offers models with various options such as multiple relays, delay and sensitivity adjustment.

EL-1~6

Probe: Fixed rod / Removible
Pendular electrode

Housing: N1 Nylon
G1 Aluminum

General Specifications:

Supply:
AC: 85...230Vac / 125Vdc
DC: 24Vdc

Rod Material (electrode):
316 SS

Level Control:
Up to 6 Points

Body Material:
316 SS

Housing:
Aluminum or Nylon

Operating Temperature:
Relay: -10...60°C
Probe: -10...150°C

Protection:
IP40 (Relay)
IP65 (Probe)

CN16

2 Point Level Detection
Output: 2x SPDT Relay
Adjust: Sensibility

BS16

Level Control
Output: SPDT Relay
Adjust: Sensibility
and Delay

CN7

3 Point Level Detection
Output: 3x SPDT Relay
Adjust: None

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Opto Electronic Level Switch

SOP412 / SOP432 / SOPR

The SOP400 Series opto eletronic level switches are used for level detection in liquids, independent of physical characteristics such as density, dielectric constant or the conductivity of the medium. The SOP400 series provides an accurate, repeatable point level switch which can be mounted in any position, especially where space is limited. This unit is often the ideal solution for point level detection of all types of industrial and food grade oil products.

SOP412

Supply:
5...12Vdc

SOP432

Supply:
9...32 Vdc

Output:
PNP (NO) &
NPN (NO/NC)
Max. 100mA

SOPR - AC / DC

Supply:
AC - 85...264 Vac (50/60Hz)
or DC - 9...36 Vdc
Output:
SPDT 250Vac / 5A Relay
Housing:
G3 Aluminum or
N1 Nylon

LV400 - AC / DC

Remote Relay
Supply:
AC - 110 or 220Vac (50/60Hz)
DC - 24Vdc
Output:
SPDT 250Vac / 5A Relay
Indication:
LED

Technology:

The sensor contains an infrared LED transmitter and a light receiver. The light from the LED is directed into a prism at the tip of the sensor. When there is no liquid present, light from the LED is reflected back within the prism to the photo-transistor receiver. When the liquid covers the tip, the light is refracted into the liquid so that little or no infrared light reaches the receiver. This light difference is evaluated by the control circuit which triggers the output. An LED indicates when the probe has activated and detection has occured.

Applications:

- *Liquids Detection and Industrial Oils*
- *Detection in Sanitary Process*
- *Food and Beverage*
- *Automotive*

General Specification:

Electrical Connection:
M16 Cable Gland w/ Cable or
M12 connector
Sensor Tip: Borossilicate Glass
Indication: LED
Body Material:
316 S.S (or PVC =/> 3/4")
Process Connection:
From M12 or
1/4" BSP / NPT
Tip Length: 35mm (Standard)
Operating Temp.:
-10...100°C (Sensor)
-10...50°C (Relay)
Protection:
IP67 (Sensor) / IP40 (Relay)

Capacitive Level Switch

SC750 / SC200 / SC200 + RL202

Capacitive level switches are designed to detect and control the level of liquid media, solids, powders, pastes and corrosive liquids among others. This technology is immune to build up along the rod, false alarms, temperature variations and condensation. Capacitive level switches work well for liquids or solids with a low or high dielectric and are also ideally applied in corrosive mediums as they can be configured entirely in plastic.

SC750 - DC

Ouput: SPDT Relay
Adjust: Sensibility
Delay: 1 to 20 Sec.
Housing: N1 Nylon

SC750U - AC / DC

Ouput: DPST (NO + NC) Relay
Adjust: Sensibility
Delay: 1 to 20 Sec.
Housing: G2 Aluminum

SC200 - Compact

Output: PNP 24V
Adjust: Sensibility
Delay: 1 to 20 Sec.

RL-202

Output: DPST (NO + NC) Relay
Delay: 1 to 20 Sec.
Protection: IP40

Technology:

The tip of the probe generates a capacitive field. As the medium approaches the sensor the capacitance changes. When the product comes into contact with the sensor, the electronic circuit captures the changing capacitance (defined by the sensitivity adjustment) resulting in an ON / OFF output. These sensors do not require a reference.

Applications:

- *Level High Alarm*
- *Level Low Alarm*
- *Overflow alarm*
- *Control On / Off valves*
- *Oil level detection*
- *Powder / Grain detection*

General Specifications:

Supply:
AC: 85...230Vac (50/60Hz)
DC: 24Vdc
Sensor (Tip) :
PTFE
Output:
PNP 24V (SC200)
(SPDT) or (DPDT) Relay
Body Material:
316 SS or PVC
Housing:
Aluminum / Nylon
Operating Temp.:
-10...80°C
Protection:
IP65

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Capacitive Level Switch

SC400 + LV400 / SC850

The SC400 + LV400 and the SC850 are designed to detect the level of a wide variety of solids or liquids. Built with high mechanical resistance, both units are well suited for high pressure and high temperature applications and can be applied in various products such as oils, chemicals, cement, sand, coal, grains, etc. For level detection of aggressive or corrosive products, the insertion length and connection can be coated with PTFE.

SC400

Adjust: Sensibility

Housing: G1, Aluminum
N1, Nylon

LV400 - AC / DC

Remote Relay

Output: SPDT Relay

Adjust: Sensibility
(Optional)

Technology:

The principle of capacitance variation requires two metal plates; Rod + Refference (metalic tank or secondary 316SS rod/sheath) form a capacitor. As the product or medium moves between the sensor rod and the reference (tank or 2nd rod/sheath) the dielectric of the medium increases or decreases resulting in a linear capacitance change. The electronic circuit detects these changes and actuates a corresponding relay output with precision, repeatability and stability.

Applications:

- *High / Low / Overflow Alarm*
- *On/Off Valve or Pump Control*
- *Detection of Oil*
- *Detection of Water in Oil*

The SC850 was designed to detect and control the level of all types of oils (1x SPDT relay) and also provide a separate alarm relay to detect the presence of water. Each relay has its own LED indication including a second LED for alarm status. This unique probe can be widely applied in petroleum storage tanks and is available with an explosion proof housing.

SC850 - AC / DC

Adjust: Sensibility & Wet/Dry

Housing: G2, Aluminum
GX, Ex Proof
N2, Nylon

EX Proof Certification:
UL, cUL, IECEX / ATEX(EX d)

Output: 1x SPDT
1x SPDT Alarm

General Specifications:

Supply:
AC - 110 or 220Vac (50/60Hz)
DC - 24Vdc

Sensor (Tip):
316 S.S

Output:
(SPDT) Relay

Body Material:
316 S.S

Housing:
Aluminum / Nylon

Operating Temp.:
-10...220°C (Probe)
-10...60°C (Relay)

Protection:
IP40 (Relay)
IP65 (N1 Housing)
IP66 (G1/G2/GX Housings)

Ultrasonic

SLU04 / SLU08 / SLU15

The SLU Ultrasonic transmitters include 3 different models for measuring ranges of 4, 8 and 15 meters. All models features patented sonic matching technology, which helps strengthen the emission power and enhance the signal intensity. By using an advanced microprocessor and unique EchoDiscovery echo processing technology, the SLU series of ultrasonic level instruments can be used under various complex conditions. The false echo storage function assures that the instrument can detect the right echo even with the presence of multiple false echoes. The built-in temperature sensor inside the transducer offers complete temperature compensation for even more accurate measurement results.

SLU04

Range: 0.25 to 4 Meters

Body: PU or Sealed PTFE

SLU08

Range: 0.4 to 8 Meters

Body: PU or Sealed PTFE

SLU15

Range: 0.5 to 15 Meters

Technology:

Due to the advanced microprocessor and "Echo Discovery" technology, the SLU series can be used in various complex conditions. The storage function of false echoes ensures that the instrument can detect the correct echo even in the presence of multiple false echoes.

The integrated temperature sensor in the transducer enables temperature compensation to a more accurate result of measurement. The SLU series has a minimum deadband of 250mm.

(The deadband range depends on the model).

General Specifications:

Measurement of Liquids

Supply:

16...36 Vdc (2 wire)

24Vdc (4 wires) / 220Vac (4 wires)

Ouput:

4...20mA (2 wire)

HART Protocol

View:

LCD 4/5 digits Display

Operating Temp.:

-40...+70°C

Accuracy:

0.1...0.5% F.S.

Process Connection:

11/2" BSP (SLU04) /

2" BSP (SLU08)

Flange or Rotation Support (SLU15)

Housing: Aluminum / Plastic

Protection: IP66 / IP67

Sitron

Remote Ultrasonic

TCP/IP e Modbus - Remote Monitoring

SOE - Ultrasonic (Master)

Supply: 24Vdc
Max Range: 12 meters
Output: Cloud Sense Master
Ethernet TCP/IP
2x SPST Relay (130mA)
Programation: Online Portal / LAN
Electrical Connection: RJ-45

ST50 - ethernet Module TCP/IP

Supply: 24Vdc
Conect cloud sensors
Input: 1X 4...20mA,
10X Sensors (Modbus RS485)
Output: Cloud Sense Master
Modbus TCP/IP
2x SPST Relay (130mA)
Programation: Online Portal / LAN
Electrical Connection: RJ-45

Cloud Sense Technology:

Allows the user to store information and cloud measurement data. This information can be easily viewed via the internet from anywhere and anytime.

SOE and ST50 models are responsible for transmitting the information via Ethernet TCP / IP for online data portal. It is also possible to monitor up to 10 sensors (ultrasonic slaves) via Modbus protocol transmission standard RS485.

The Online Data Portal shows everything there is to know about the measurement of the process:
- *View real-time measurements or past conditions*
- *Monitor Alarms*
- *Set-up measurement parameters*

SMU - Ultrasonic (Slave)

Supply: 24Vdc
Max Range: 12 Meters
Output: Modbus RTU (RS485)
Programation: Cloud Sense Master
compatible software
that provides adjustment of parameters

SMD - Modbus Display

Supply: 24Vdc
Conect up to 10 sensors
Input: Modbus RTU (RS485)
SOE Master, SMU slave
Ouput: 0-5 Vdc, 4...20mA
SPDT Relay
Programation: Units
Master mode for parameter changes
Display measures: Volume, Level, Pressure and Distance

Radar 26GHz

SPR55 / SPR56 / SPR57 / SPR58 / SPR59 / SPR61

The SPR Radar Series features 26 GHz high frequency pulse radar, which has a narrower beam angle than other types of radar instruments. The shorter wavelength at higher frequencies produce a sharper focus on the targeted level and thus, precise readings. The SPR series, with an advanced microprocessor and unique Echo Discovery processing technology are offered in 6 different models. Each model is designed to attend to either liquids or solids, shorter or larger measuring ranges, ambient or high temperatures or pressure ranges, hazardous or general areas, dusty or vaporous environments or even applications requiring IP68 class protection.

SPR55

Liquids (and corrosive liquids)
Range: 10 Meters
Process Temp.: -40...+130°C
Output: 4...20mA / HART

SPR56

Amb./High Temps
Range: 30 Meters
Process Temp.: -60...+400°C
Output: 4...20mA / HART

SPR58

High Temps / Condensation / Dust
Range: 70 Meters
Process Temp.: -60...+400°C
Output: 4...20mA / HART

SPR61

Water Treatment
Range: 30 or 70 Meters
Process Temp.:
-40...+100°C
Output: 4...20mA / HART
Modbus RTU
RS485

Applications:

- *Wells / Open Areas*
- *Storage and Retention Tanks*
- *Chemicals, solvents or paint Monitoring*
- *Processing of industrial effluents*
- *Volume Measurement in "Day-Tanks"*
- *Monitor Level in Rivers and Wells*
- *Level measurement of Grains / Solids*

Technology:

Due to the advanced microprocessor and "Echo Discovery" technology the SPR series can be used in various complex conditions. The storage function of false echoes ensures that the instrument can detect the correct echo even in the presence of multiple false echoes.

Benefits:

The radar provides a non-contact alternative for level measurement which is virtually immune to changes in temperature, process pressure, gas composition or steam contained in the tank or vessel.

The measurement accuracy is unaffected by changes in the density, conductivity, dielectric constant or the movement of air on the measured product.

The pulse derived from radar Echoes are discrete and separated in time. This means that Pulse Radar are better equipped to handle multiple and false echoes that are common in mixed processes and silos for solid materials.

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Capacitive Continuous Level

SC404

Sitron's SC404 line of capacitive continuous level probes feature electronics that are integrated into the housings. They are primarily used to measure and control the level in various industrial processes. They can be applied in conductive or non-conductive mediums such as water, oil, solids, pastes, chemicals and other mediums as well. In addition, probes can be used to detect the interfaces between liquid (water / oil).

SC404

Output: 4...20mA (2 wire)
Adjust: Zero & Span + Gain
Housing: N1 Nylon

SC404

Output: 4...20mA (2 wire)
Adjust: Zero & Span + Gain
Housing: G1 Aluminum

SC404

With Integrated Galvanic Isolator
Output: 4...20mA (2 wire)
Adjust: Zero & Span + Gain
Housing: G2 Aluminum

Technology:

The principle of capacitance variation requires two metal plates; Rod + Refference (metalic tank or secondary 316SS rod) form a capacitor. As the product or medium moves between the sensor rod and the reference (tank or 2nd rod) the dielectric of the medium increases or decreases resulting in a linear capacitance change. The electronic circuit monitors and detects these changes thus activating an output in mA or ON / OFF with precision, repeatability and stability.

Applications:

- *Boiler level Monitor*
- *Monitor level of oil tanks*
- *Cosmetic Packaging Machines*
- *Sanitary Process Level Measurement*
- *Food and Beverage Applications*
- *Pulp and Paper Industry*

General Specifications:

Supply:
DC: 24Vdc
Rod (sensor) :
316 SS w/ coating PTFE
Output:
4...20mA (2 wires)
Body Material:
316 SS
Housing:
Aluminum / Nylon
Operating Temp.:
-10...80°C
Protection:
IP65

Capacitive Continuous Level

SC120 / CN200 / CN202 / CN205

Sitron's capacitive continuous level probes are used to measure and control the level in various industrial processes. They can be applied in conductive or non-conductive mediums such as water, oil, solids, pastes, chemicals and other mediums. In addition, they can be used to detect the interfaces between liquid (water / oil). The SC120 line works in conjunction with the CN200 /CN202 / CN205 controllers and provides effective control with greater gain for continuous level measurement in small tanks or large depths.

SC120

Adjust: Gain

Housing: G1 Aluminum

CN200

Output: 4...20mA
2 x (SPDT) Relay

Adjust: Zero & Span
Set-Point

Indication: Bargraph

CN202

Output: 4...20mA

Adjust: Zero & Span

Indication: Bargraph

CN205

Output: 5x SPDT

Adjust: Zero & Span

Indication: Bargraph

TECHNOLOGY:

THE PRINCIPLE OF CAPACITANCE VARIATION REQUIRES TWO METAL PLATES; ROD + REFFERENCE (METALIC TANK OR SECONDARY 316SS ROD) FORM A CAPACITOR. AS THE PRODUCT OR MEDIUM MOVES BETWEEN THE SENSOR ROD AND THE REFERENCE (TANK OR 2ND ROD) THE DIELECTRIC OF THE MEDIUM INCREASES OR DECREASES RESULTING IN A LINEAR CAPACITANCE CHANGE. THE ELECTRONIC CIRCUIT MONITORS AND DETECTS THESE CHANGES THUS ACTIVATING AN OUTPUT IN MA OR ON / OFF WITH PRECISION, REPEATABILITY AND STABILITY.

APPLICATIONS:

- *OIL TANK LEVEL MONITORING*
- *SANITARY PROCESS LEVEL MEASUREMENT*
- *FOOD AND BEVERAGE APPLICATIONS*
- *PULP AND PAPER INDUSTRY*
- *PAINT AND CHEMICAL INDUSTRY*

General Specification:

Supply:
AC - 85...264Vac (50/60Hz)
DC - 24Vdc

Rod Material (Sensor) :
316 SS / PTFE coating

Output:
4...20mA / (SPDT) Relay

Body Material:

Probe: 316 SS

Transducer: ABS

Housing: Aluminum

Operating Temp.:

Probe: -10...120°C

Transducer: -10...60°C

Protection:
IP40 (Transducer)
IP65 (Probe)

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Pressure Transmitter

SP96 / SP98 / SP81 / SP21 / SP68 / SP96FA / SP98FA

The SP Series of pressure transmitters are designed for pressure measurement for liquids and gases across a wide range of industrial processes. Each model provides excellent stability, repeatability and accuracy, with both temperature and atmospheric compensation. Output options include 4-20mA, 1-5volts, 1-10volts and HART communication protocol. Depending on the model, this line is available with either 316SS piezoresitive silicone filled cells, piezoresitive ceramic or capacitive ceramic thick filmed pressure cells.

SP21 / SP96 / SP98 / SP81

SP21: -1....1000Bar / 316SS
SP96: -1...200 Bar / 316SS
SP98: -1...40 Bar / Cap. Cer.
SP81: 0...600 Bar / P. Cer.
Protocol: HART (Optional)

Technology:

These sensors use the principle of a change in resistance or capacitance applied to a diaphragm cell, made in either 316 stainless steel or a capacitive ceramic thick filmed cell. The process pressure creates an external force that induces the displacement of electrical charges that accumulate on the surface the cell. A small response signal is generated and converted to a mA output or Voltage ouput with great precision and stability.

SP68

Range: -1...1000 Bar
Protection: IP68
Sensor: 316SS Piezoresistive

SP96FA / SP98FA

Range: -1...200 Bar
Adjust: Zero & Span
Sensor:
316SS Piezoresistive
Capacitive Ceramic

General Specifications:

Supply:
24Vdc
Output:
4...20mA (2 wires)
HART Protocol
Operating Temp.:
-10...70°C
Accuracy:
0.1...0.5% F.S.
Sensor:
Series: SP96 / SP10 / SP21 / SP68
316 SS Piezoresistive Silicone Filled
Series: SP81
Piezoresistive Ceramic
Series: SP98 / SP98FA
Capacitive Ceramic
Protection:
IP65 (SP21 / SP96 / SP98 / SP81)
IP67 (SP21)
IP68 (SP68)

Pressure Transmitter with LCD Display

STD96 / STD98 / STD80

The STD line of digital smart pressure transmitters are designed for pressure measurement in liquids and gases in a wide range of industrial processes. This line features a highly visible backlit LCD digital rotating display, HART communications protocol and a 10 to 1 turndown rate.

STD96 / STD98 / STD80

Range: -0.5...200 Bar

Body Material: 316 S.S

A9 Housing: 316 SS

STD96 / STD98 / STD80

Range: -0.5...200 Bar

Body Material: 316 S.S

G3 Housing: Aluminum

A3 Housing: 316 SS

General Specifications:

Supply:

24Vdc

Output:

4...20mA (2 wires)

HART Protocol

View:

LCD Display 4/5 digits

Operating Temp.:

-10...70°C

Accuracy:

0.1...0.5% F.S.

Sensor:

STD96 - 316 SS Piezoresistive

STD98 - Capacitive Ceramic (Thick Film)

STD80 - Piezoresistive Ceramic

Protection:

IP66 / IP67

Technology:

A 10:1 turndown rate eliminates the need to keep several instruments of various ranges in stock. With the turndown, it is possible to re-calibrate the instrument to a range of 10: 1.

Example:

A 40 bar transmitter may be re-calibrated to 4 bar.

Display:

5 digit multifunction backlit LCD display, allows the user to view the measured variable in PV (process value), and current percentage in addition to having a permanent bar graph with real-time readings.

Easy Configuration:

On site, the parameters and a new measuring range can be adjusted via three (3) push-bottons, or remotely via HART communications protocol.

Sitron

Hydrostatic

LH840 / LH860 / LH840S / LH840C / LH850 / LH842 / LH842C / STD842 / CHP65

The LH Series of Hydrostatic pressure & level transmitters are designed for pressure measurement of liquids across a wide range of industrial processes. Each model provides excellent stability, repeatability and accuracy, with both temperature and atmospheric compensation.

LH840 / LH860

Range: 0...60 Bar
Body Material: 316 SS
LH840 sensor: 316 SS
LH860 sensor: Piezo Ceramic
Protocol: HART (Optional)

LH840S

Capsule with a diameter of 18.5mm
Range: 0...60 Bar
Body Material: 316 SS
Sensor: 316SS Piezoresistive

LH840C - Robust Model

Range: 0...40 Bar
Body Material: 316 SS
Protocol: HART (Optional)
Sensor: Capacitive Ceramic

LH850

Low cost Model
Range: 0...60 Bar
Body Material: 316 S.S
Protocolo: HART (Optional)
316 S.S sensor

General Specifications:

Supply:
24Vdc
Output:
4...20mA (2 wires)
HART protocol (optional)
Electrical Connection:
Polyethelene (2 wires)
Operating Temp.:
-10...+70°C
Accuracy:
0.1...0.5% F.S.
Sensor:
LH840 / LH850 / LH842
316 SS piezoresistive
LH840C / LH842C
Capacitive ceramic sensor
Protection: IP65 / IP68

LH842 / LH842C / STD842

Rigid rod or Cable
Zero & Span Adjust
Range: 0...60 Bar

CHP65

Box
Protection:
Power surger
Class Protection: IP66

Temperature

ST90A / ST90 / ST20 / PT10

The ST line of temperature transmitters (and PT10 temperature sensor), provide continuous temperature measurement with a 2 wire analog output and are designed for temperature measurement and control in various industrial and manufacturing applications.

ST90A

Range: -100...200 °C
Adjust: Zero & Span
Protocol: HART (Optional)
Output: 4...20mA

ST20

High Temperature Measurement
Range: -50...600°C

ST90

Range: -100...200 °C
Protocol: HART (Optional)

PT10

Range: -100...200 °C
Adjust: N/A
Output: Pt100

Technology:

Based on the principle of ohmic resistance a Pt100 or RTD resistor (in the form of a high purity platinum wire encapsulated in a ceramic bulb and mineral insulation) is mounted within the tip of the probe. The temperature transmitter transforms the value of Pt-100 resistance thermometer in current values (mA) or voltage (V) which is directly proportional to the temperature.

Applications:

- *Temperature Measurement*
- *Heating and Cooling Control*
- *Cooling Control*
- *Laboratories*

General Specifications:

Supply:
24Vdc
Output:
4...20mA (2 wires)
HART Protocol
Operating Temp.:
-10...80°C
Accuracy:
0.1...0.5% F.S.
Body Material:
316 / 304 SS
Sensor:
Pt100
Protection:
IP65 / IP67

Sitron

Temperature with Display

STD-T

The STD-T temperature transmitter is ideal for temperature measurement and control in industrial processes when a local display is required. The STD-T offers a dependable solution for temperature measurement with precision, stability and a linear ouput signal.

STD-T

Range: -100...200 °C
Body Material: 316 SS
A9 Housing: 316 SS

STD-T

Range: -100...200 °C
Body Material: 316 SS
A3 Housing: 316 SS
G3 Housing: Aluminum

General Specification:

Supply:
24Vdc
Output:
4...20mA (2 wires)
HART Protocol
View:
LCD Display 4/5 digits
Operating Temp.:
-10...70°C
Accuracy:
0.1% F.S.
Sensor:
Pt100
Protection:
IP66 / IP67

Technology:

Based on the principle of ohmic resistance a Pt100 or RTD resistor (in the form of a high purity platinum wire encapsulated in a ceramic bulb and mineral insulation) is mounted within the tip of the probe. The temperature transmitters transform the value of Pt-100 resistance thermometer in current values (mA) or voltage (V) which is directly proportional to temperature.

Easy Configuration:

Both settings or a new measuring range can be easily adjusted via communication protocol HART®.

LCD Display:

5 digits multifunction LCD display, allows the user to view the measured variable or PV (process value), in addition to having a permanent bar graph with real-time readout.

Vibration Sensors

SV42 / MV42

The SV42 and MV42 models are compact and robust vibration sensors used to monitor and detect misalignment or imbalance within industrial machinery such as fans, centrifuges, compressors, generators and motors, thus preventing wear and component failures before they become crital and negatively affect plant operations.

SV42

Base: Magnetic
Thread (NPT / BSP)
Screw 1/4" BSW and Nut

Technology:

An accelerometer measures the mechanical displacement in the ranges of 10, 25 and 50mm/s RMS (root mean squared) and converts it to a mA signal proportional to the speed and distance of the vibration.

Applications:

- *Motor Misalignment and or imbalance*
- *Industrial Machinery*
- *Hydraulic Systems and Tires*

MV42 - mini

Base: Screw 1/4" BSW and Nut
Dimension: Width Hex. 1 1/4"
Height 42mm

Base: Magnetic
Dimension: Width Hex. 1 1/4"
Height 54mm

General Specifications:

Supply:
DC - 10...30Vdc
Output:
4...20mA (2 wires)
Measuring Range:
10, 25, 50 mm/S RMS
Body Material:
316 SS
Electrical Connection:
M12 Connector or
Crimped Cable
Operating Temp.:
-10...100°C
Accuracy:
0.5%
Protection:
IP67 / IP68

Sitron

Indicators

TR202 / S304 / S506

The TR202 microprocessed controller converts the incoming 4...20mA (2 wire) signal from the transmitter and provides 2 independent relay ouputs + one alarm relay + a re-transmittable 4...20mA (2-wire) signal.

TR202

Input: 4...20mA (Active and Passive)
Output: 2x SPDT Relays + 1x Fail Safe Relay
Adjustment: Set Point
Display: 3 Digit LED

The S304 microprocessed digital indicator has a universal analog input for reading various types of temperature or pressure sensors. The S304 also provides 2 SPST or a pulse output.

S304

Input: Thermocouples, RTDs , 0 to 5V, 1 to 5V, 0 to 10V , 0 to 20mA or 4 to 20mA
Functions: 24Vdc power for transmitters (50mA), Linear transmission PV (0/4 to 20mA @ 10bits)
Ouput: 2 SPST-NO relays (250Vac/3A) or pulse (0/24Vdc-25mA)

The S506 microprocessed indicator has a universal analog input configured by software for reading various types of temperature or pressure sensors. Features such as programmable input linearization allows the user to adjust and linearize the ouput signal based on inputing specific measurement points from the process.

S506

Input: 0 to 60mV, 0 to 5V, 1 to 5V, 0 to 10V, 0 to 20mA, 4 to 20mA, PT100, N, T, E, K, J, R, S, B (4 to 20mA)
Output: 2 SPST-NO relays (250Vac/3A) or pulse (0/24Vdc-25mA)
Functions: 24Vdc power for transmitters (50mA), Linear transmission PV (0/4 to 20mA @ 10bits), Function key dedicated, linear signals, Square root extraction
Optionals: MODBUS-RTU, Dual digital input, Auxiliary source 10/24Vdc, 3 & 4 Alarms, Linear Retransmission isolated of PV (0/4 to 20mA @ 12bits)

Indicator

SD10 - Local Display for Pressure and Temperature Transmitters

Ideal for local monitoring of the process output with 2-wire technology and easy programming and configuration via 2 push buttons.

SD10

Supply: Loop powered
Input: 4...20mA (2 wires)
Display Range: 4 digits (-1999 to 9999)
Ouput: PNP (2 programmable alarms)
Ambience Temp.: -20...80°C
Electrical Connection: DIN43650
Protection: IP65

Isolator

ISO420

ISO 420 security barrier is used for intrinsic safety with galvanically separated current transmission (4... 20mA)

ISO420

Input: 4...20mA
Output: 4...20mA
Voltage Isolation: 3K VDC
Accuracy: 0.1% F.S.
Insulation Resistance: 100M ohms, 500Vdc
(between input and output)
Fixation: DIN rail 35mm or screws
Protection: IP40

Sitron

Warranty

Warranty: Sitron warrants its product against manufacturing defects in material and workmanship, when installed in applications approved by Sitron, for a period of one year from the date of original shipment, unless otherwise stated in writing by Sitron.
Sitron is not responsible for damage to Sitron's Products or other equipment or products because of improper installation or misapplication of the Products by Buyer. Installation or startup of Sitron's equipment must be performed under the guidelines set forth in Sitron's instruction manuals, wiring diagrams, etc., or performed under the direct supervision of Sitron's field technicians or Sitron's authorized Sales Representatives, in order to be covered by Sitron's warranty.
Sitron shall be under no liability in respect to any defect from fair wear and tear, willful damage, negligence, abnormal working conditions, failure to follow Sitron's instructions (whether written or verbal), misuse, modification or alteration or attempted repair of the Goods without Sitron's approval. Sitron shall not be liable under the above warranty (or any other warranty, condition or guarantee) if the total price for the Products or the payment of Services rendered has not been paid by the due date for payment.
The Buyer must make all tools, resources or personnel available to help Sitron to diagnose the defect without any back charge. In absence of Buyer's cooperation in this regard, there shall be no liability under the above Warranty.

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