### LEVEL SENSORS



Magnetic Level Sensor-Used for level sensing of liquids like water, oil, acids. Single level and multiple level (up to 10 levels) is available. Control unit is available for automatic functioning of Pumps or Feeder. These are offered in SS, PU, acrylic type material for different applications.

Capacitance Level Sensor-Suitable for sensing level of non-condutive liquids and free flowing solids. Level is sensed when SS probe of sensor touches surrounding material in a hopper or tank. Single sensor with 2 set point is also available.

Molding Sand Level Controller- Suitable for molding sand. In forging industry, the sand used for making molds is re-used and losses its bonding property. Some additives are used to regain its property and then used for molding. Our controller is used to detect level of this sand in the hopper.

Vibrating Fork Type- Used to detect level of free flowing material such as Cement, Sand, Lime, Milk, Powder, Salt, Grains. Available in threaded type or flanged type.

# INDUCTIVE/ CAPACITIVE PROXIMITY SWITCHES



Inductive Proximity Switches- These are used for sensing ferrous material. They are available in 6, 8, 12, 18, 30, 36 mm diameter with DC / AC Type. Ranges available for the inductive are 1, 2, 4, 5, 8, 10, 15, 20 mm respectively in flush and Non Flush type.

Capacitive Proximity Switches- These are used to sense non-metallic material such as plastic, paper etc. Available in 18, 30 diameter with DC/ AC Type. Ranges available are 6,15 mm respectively in Non Flush type. It has range adjustable pot facility.

Analog Proximity Sensors- For Ferrous metal objects, these sensors (M18 & M30) provides 0-10 VDC analog output, proportional to the sensing distance. Range for M18 is 2-7 mm and for M30 is 2-10 mm. Reed Switches- Also known as Cylinder Position Sensor used with Pneumatic Cylinders for positioning purpose. Available in 2-Wire, 3 Wire-PNP/NPN output with LED indications & 2 mtr cable.

### M8/M12/M18 Connector Cables







Electronic Switches (I) Pvt. Ltd. offers various types of connector cables to be used for Connector type proximity and infrared sensors.

 $M12/M18 \, Female \, or \, Male \, Connector \, Cable- \, Available \, in \, 4 \, pin \, / \, 5 \, pin \, straight \, and \, L-type \, with \, 2, \, 3, \, 5, \, 10 \, meter \, cable \, lengths.$ 

M8 Female or Male Connector Cable- In 3 pin/4 pin straight with 2,3,5,10 meter cable lengths M12/M18 Female Connector Cable with LED indications- Available in 4 pin with Power and output LED indications.

Male+ Female Connector Cable- Available in one side male and other side female connector with 2, 3, 5, 10 meter.

Female/ Male screw type connector-Avaibale in straight and L-type. Customer can join cable using screw at their end.

# PROCESS INDICATORS & SIGNAL CONVERTORS







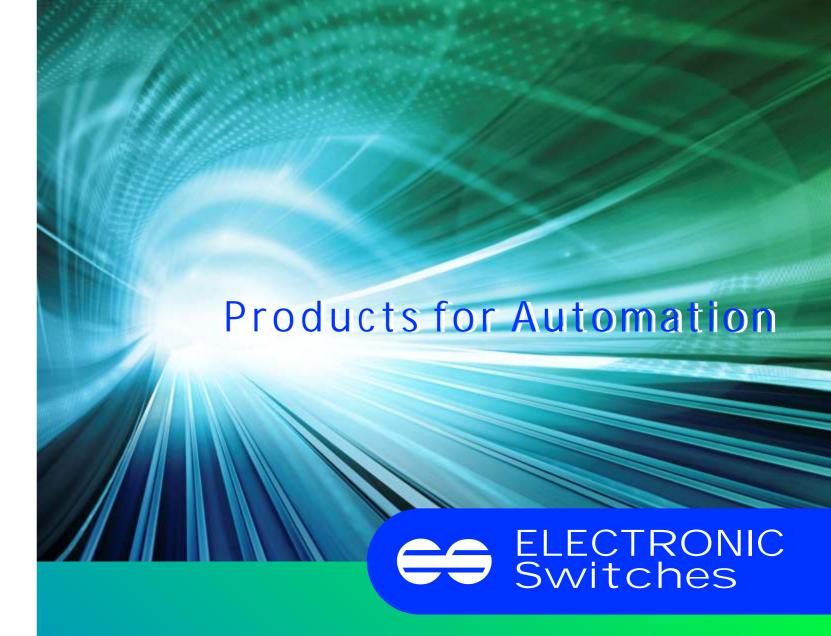
Temperature Indicator & Controller- Available in 3 digit- 96x96, 2 inch, 4 inch, 6 inch display height. Input is through PT 100 or J / K Thermocouple with relay output

 $Thermo-hygro\ Meter\ \&\ Controller-\ Dual\ Temperature+\ Humidity\ Indicator\ display\ available\\ in\ 96x96\ and\ 4\ inch\ digit\ size.\ Controller\ with\ relay\ output\ available.$ 

Universal Indicator & Controller- Models available in 48x96 , 2 inch, 4 inch display height , in 4 & 5 digits. Unit accepts universal input from 0-10 V DC or 4-20 mA. Models available with

4-20mA retransmission output. Used to display parameters such as, temperature, pressure, flow, viscosity, pH, displacement, speed, etc; proportional to the input signal.

Signal Convertors/Isolators-Voltage (0-10 VDC) to Current (4-20m) conversion or vice-versa. Available in single input and dual output models with 230VAC or 24VDC auxiliary supply.



INFRA RED SENSORS
SAFETY LIGHT CURTAINS
ANTI CRANE COLLISION
DIGITAL COUNTERS & TIMERS
BIG DISPLAY COUNTERS
DIGITAL TIMERS

PROCESS INDICATORS
SIGNAL CONVERTERS
RPM/ SPEED MONITOR
INDUCTIVE/ CAPACITIVE
LEVEL SENSORS
CONNECTOR CABLES

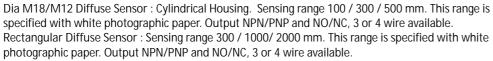
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Web: www.electronicswitches.in

### **DIFFUSE SCAN SENSORS**





4 Wire type - 100 / 300mm also available in 4 wire type PNP / NPN and NO or NC  $\,$ 

AC Type - 2 Wire AC Diffuse sensor available in 230V / 110V AC power supply with NO or NC output Connector Type - Diffuse sensor available in 4 pin connector type for DC supply.

Visible / Narrow Beam -Available with visible / Narrow beam where to sense small object Extended Type - Sensor part available in 6 / 8 / 12mm housing and amplifier is in M 18 housing , It is used in area where space constraints problem

Laser Diffuse - laser diffuse sensor is used to sense very small object with range 300mm.

# THROUGH BEAM / RETROREFLECTIVE SENSORS



THROUGH BEAM SENSOR

Set Consists : Transmitter and Receiver , Housing : M 18 / 12 as well as rectangular ABS plastic housing, Sensing range 1 / 3 / 10 / 20 / 30mtr

Connector Type - Available in 4 pin connector type also

Visible / Narrow Beam -Available with visible / Narrow beam where to sense small object

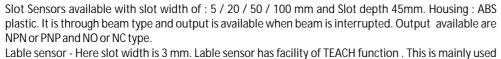
Extended Type - Sensor part available in 6 / 8 / 12mm housing and amplifier is in M 18 housing , It is used in area where space constraints problem

Laser Through Beame- laser diffuse sensor is used to sense very small object with 3 mtr range RETROREFLECTIVE SCAN SENSOR

Set consists: Sensor and Reflector, Housing M18 / M 30 and Rectangular Type with Sensing Range 300mm / 3 mtr / 5 mtr / 8 mtr. , It is also available in connector type with 4 pin connector

### **SLOT SENSORS & CONTROLLER**





for sensing Labels on the butter paper on automatic packing machines at high speeds.

Window Sensor - Specialised window to sense small objects. This sensor operates on multiple beam technique. It has an array of multiple emitter and receiver which forms continuous screen.

SENSOR CONTROLLER

Controllers available with single relay output / Two relay output, Timer type (On delay / OFF delay), Monostable, Bistable, also combination of input 2 sensors ,4 sensors with relay output, logic AND / OR / Hopper level etc. Also available with customised requirement.

### OTHER SENSORS



Laser Pointer - A red laser point will be provided by the sensor to point the object. This is available in 18 mm dia cylindrical housing and is suitable for continuous working.

Laser Line generator- Approximately 2 meters long, visible red line will be generated by the sensor from approximate height of 01 meter. Suitable for continuous working. Available in 18 mm dia housing. Flame sensor- is useful for sensing Yellow flame at Oil Fired Burners. If there is no flame the supply of oil to the burner is stopped immediately to avoid overflow. Sensor is available in 18 mm diameter. Mark Sensor- is for sensing black mark on white background or white mark on black background. Zero Speed switch- The Zero speed switch activates output when any moving or rotating object stops

functioning. Output is available when linear or rotary speed drops to zero. Using this further depanding

systems are tripped to stop any damages. These are mainly used for conveyer belts, rotary systems,

blowers in the ovens etc; These are Blind type as well as Digital Speed settable type.

# SAFETY LIGHT CURTAINS



Safety Light Curtains are CE approved and are manufactured as IEC61496 International Safety Standards which available in following three main categories:

1. Hand Protection 2. Finger Protection 3. Body protection / Part of Body.

Parallel beam and Cross beam type models from ht. 90mm to 2000 mm.

Inbuilt Controller facility where supply of the sensor is 24V DC and can directly connected to PLC. Controllers are available with supply voltage 230V AC, in Wall mounting, Panel & DIN Rail mounting. Self-checking facility provided for internal checking of the circuit for better operation.

Multiple LED indications provided for operator to better understand the working.

Applications: Power Presses, Molding Machines, Robots, Welding presses, Bending machines and SPMs for operator's safety while working. For object height detection, Bin sensor for assembly line. Specifications: Output: PNP or NPN, Pitch offered: 11, 20, 30, 40, 50, 90 mm. Adjustable Range: Up to 40 mtrs, Sensor voltage 24 Volts DC, Connections through plug-in Connectors.

### ANTI CRANE COLLISION SWITCH



Electronic Switches (India) Pvt. Ltd. offers Anti Crane Collision System for two over head cranes on the same rail. With these units, the two cranes on the same rail will never collide with each other & thus the damage caused due to collision can be saved. When the two cranes come within the range, the moving crane will be stopped immediately. For two set points, one can be adjusted to get an alarm at required distance and another can be set to stop the crane at required distance.

Laser Alignment Tool is offered in ACC type models for perfect alignment of Sensor unit and reflector. Using this exact location of reflector on the other crane can be found for perfect working of system.

Models are offered depending upon the range and input supply. Following are the models:

1. ACC 03: 3 meter range 2.ACC10: 10 meter 3. ACC15: 15 meter range 4. ACC 102: 10 meter and Two relay output 5. ACU 03: Universal Input Voltage (24-220 Volts AC or DC)

### DIGITAL COUNTER/TIMERS/CONTROLLERS



Production & Preset Counter - Used for object counting available in 48x96 size, 6 and 8 digits. Offers relay output when set value is reached. Accepts input from proximity/IR sensor or Limit Switch. Preset Length & Line speed Indicator - Used to count length of cloth, film, paper. Displays length directly in meters/Feet. Line speed indicator is used to display linear peed in meters/Minutes.

RPM Indicator- Displays RPM of rotating shaft/object. Also available with retransmission Analog output (0-5,0-10VDC) and Digital (TTL) output. Available in dimensions 48x96, 63x38x82 mm. Thumbwheel preset Counter & Down Timer- Used to preset the value using thumbwheel switches for

counting and for timing (hrs/mins/sec) with relay output facility. Along with  $\frac{1}{2}$  inch display size. Time totalizer/Hour Meter- Used to display readings in Hours, Minutes. Timing pulse internally generated. Input from Senor or potential free contact with memory backup facility.

Dual Display Flow rate Indicator-Used to display flow rate flow rate, A/D input from flow sensor

### **BIG/JUMBO DISPLAYS**



Production & Preset Counter - Available in 4 and 6 digits with 1inch, 2 inch, 4 inch, 6 inch & 12 inch digit height. Sensor to be connected directly. Key pendent for reset and preset value settings is available. Input speed selection facility available. Display is Seven Segment display and LED type.

RPM Indicator/ Speed Switch- Displays RPM of any rotating shaft or objects. Available in 1inch, 2inch, 4 inch, 6inch in 4 digit. Input available are PNP/ NPN/ Micro/ Limit Switch.

Modbus Display-Input available are Rs485 MODBUS RTU, Input from PLC, Computer or any device with modbus output. Input data will be in integer or float form.

Digital Clock-This is a HANG ON type wall mounting clock, very useful for factories, schools, offices, public places. Displays time in digital format in hrs and minutes. Both side display can be offered. Customized Display- Offers displays with multiple input (Digital and Analog) and output as per customer's requirement. Display can be offered in different sizes.