



Quality is not a coincidence

PROCESS CONTROL SENSORS

Since 1984 ...



Level

Flow

Pressure

Temperature

Control

Humidity

Liquid Concentration

Analysis

Calibration



ATEX



14001:2015



45001:2018



10002:2018



27001:2013



22301:2019



50001:2018



3834-2



LONCA A.Ş. is one of the leading companies of Turkey in measurement-control devices since 1984. Lonca has been providing wide range of products under brand “Ensim Sensors” while also importing other type of models to meet requirements of automation sector.

LONCA A.Ş. always driven with the spirit of innovation and a passion for a contribution to make industry easier everyday. While our production capacity is growing , LONCA A.Ş. adds different quality certifications such as: ATEX , ISO 9001 , ISO 14001 ETC. under it's title every year.

Ensim Sensors product portfolio offers wide range of optionsin measurement instruments including Level , Flow , Pressure , Temperature sensors , Calibration Bath and Control Equipment.

PRODUCT :

We manufacture following products

LEVEL

CapacitiveType Level Switch
 Capacitive Type Level Transmitter
 OEM CapacitiveType Level Sensor
 Float Type Level Switch
 Float Type Level Transmitter
 Side Mounting Type Level Switch
 By-Pass Magnetic Level Gauge
 Reflex Type Level Gauge
 Rotary Paddle Level Switch
 Vibrating Rod Type Level Switch
 Float Type Mini Level Switch – Metal Version
 Float Type Mini Level Switch – Plastic Version
 Conductivity Type Level Switch
 Water , Oil , Acid Warning Dedector
 Radar Type Level Transmitter
 Membrane Type Level Switch
 Tilt Switch
 Cable Level Switch
 Float Valve
 Sight Level Indicator

FLOW

Flow Switch
 Flow Indicator
 Flow Measurement with Orifice
 E / M Flowmeter

PRESSURE

Pressure Switch
 Differential Pressure Switch
 Cooling Apparatus

TEMPERATURE

Temperature Transmitter
 Temperature Sensor
 Thermowell

CONCENTRATION

In-line Liquid Conc.
 Measurement

CONTROL

GSM / GPRS / Wi-fi / RF Control
 ModBus I/O Module
 USB-RS 485 Converter
 GSM-GPRS Modem
 Tank Filling System

CALIBRATION

Dry-Well Calibrator
 Calibration Bath

ANALYSIS

PH Measurement
 ORP Measurement

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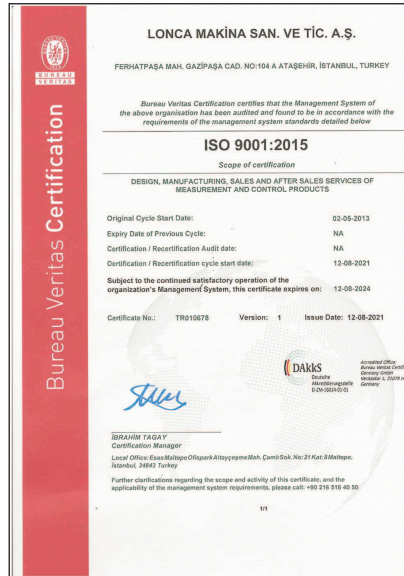
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Brand Name

ISO 9001 : 2015

ISO 14001: 2015



ISO 45001 : 2018

ISO 27001: 2013

ISO 10002 : 2018



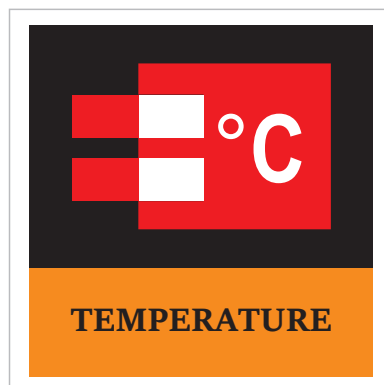
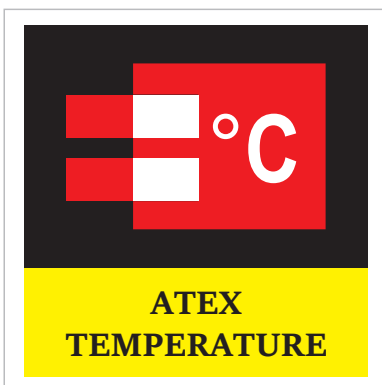
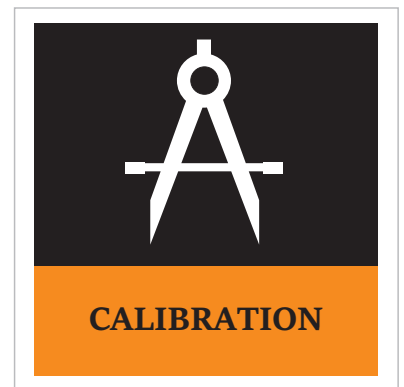
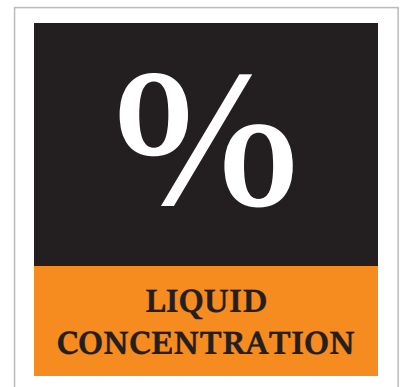
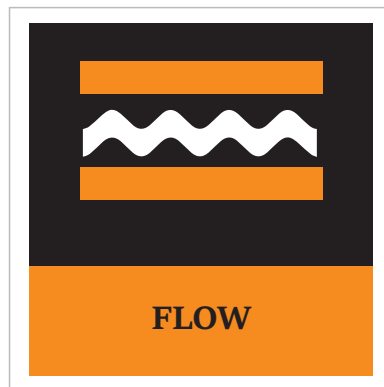
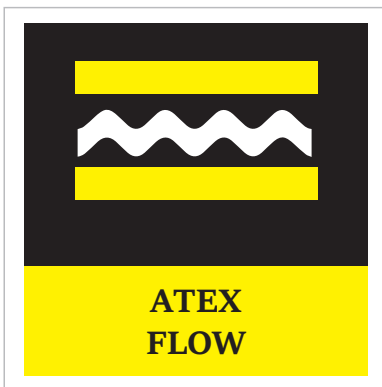
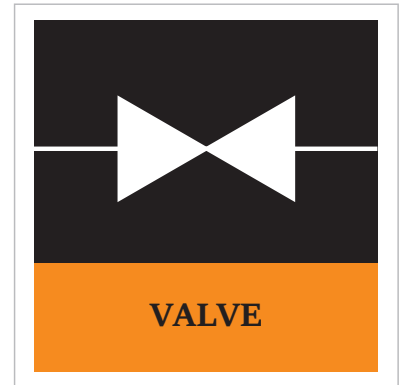
ISO 50001 : 2018

ISO 22301: 2019

EN ISO3834-2



You can review our sustainability report on our website by scanning the qr code.



ECAP CAPACITIVE TYPE LEVEL TRANSMITTER



Advantages :

For Conductive liquids ECAP 100 series
For Low conductive liquids ECAP 200 series
For Solids particulate materials ECAP 300 series
For Adhesive and acid/basic liquids ECAP 400 series

There are no moving parts. High pressure and temperature resistant design.
Modular structure with easy assembly. Not affected by foam, liquid splashes.
Not affected by vibration, has robust mechanical structure.
Zero span adjustment is easy. Measurement along whole sensor.
Operability with reverse assembly.

Technical Specifications:

ECAP

DX-ECAP

Supply	9-36 VDC	
Signal Output	4-20 mA two wire Std. 0-20 mA - 4-20 mA, 0-10 V three wire Opt.	
Accuracy	$\pm \% 0,5$, $\pm \% 0,8$, $\pm \% 1$	
Linearity	$\% 0,5$	
Capacity Range	1 pF...3n F	
Min. Di-Electric Constant	1,6 ϵ_r	
Connection Metarial	304 St.St. , Opt. 316 St.St.	
Isolation Material	PFA Std. Opt. PEEK, PTFE , Rubber, FKM	
Housing Material	PBT Std., Ops. Aluminium, St.St.	Aluminum Injection - AISi2Fe (Std)
Working Pressure	(-)1 bar...(+) 100 bar (Depending on the model)	(-) 1bar...(+) 25 bar (Depending on the model)
Protection Class(EN60529)	PBT-IP 66 , Aluminium , St.St. IP 65	IP 66
Working Temperature	(-) 40 °C / (+) 150 °C (Depending on the model) , 200 °C with cooling apparatus (-) 196 °C For Cryogenic Tank, (-) 50 °C ... (+) 80 °C For NBR For FKM (-) 30 °C ... (+) 200 °C , 400 °C with ceramic isolation	
Ambient Temperature	(-) 20 °C / (+) 60 °C	
Display	With LED-Power and Contact LED	
Isolation	Max. 500 V	
Power Consumption	Max. 50 mW	
Electrical Connection	Terminals	
Max.Tensile Force	Max. 40 Nm	

ECAP level transmitter is a capacitive level sensor for level measurement of conductive liquid, low conductive liquid, granulated materials with solid particles, adhesive and acid/basic liquids. When a material comes between electrode rod and tank wall, a capacitance change occurs and when this change exceed adjustment threshold, contact output is delivered. Full-empty calibration can be performed easily and safely. Different designs and different solution related to industrial levelmeasurement are offered especially for machinery manufacturers.

Application Areas :

Liquid tanks, food machines, cooling liquid tanks, shipping, glycol tanks, brine, waste water tanks. Oil tanks, CO2 liquid tanks, high temperature tanks, non-conductive liquids. Grain stores, cement, sand feed, flour, milk powder, organic and plastic granule. Sticky hot and high viscosity liquid, acid and chemical liquids.

ECAS CAPACITIVE TYPE LEVEL SWITCH



Advantages :

For Conductive liquids ECAS 100 series
For Low conductive liquids ECAS 200 series
For Solids particulate materials ECAS 300 series
For Adhesive and acid/basic liquids ECAS 400 series

There are no moving parts. High pressure and temperature resistant design.
Modular structure with easy assembly. Not affected by foam, liquid splashes.
Not affected by vibration, has robust mechanical structure.
Zero span adjustment is easy. Measurement along whole sensor.
Operability with reverse assembly.

Technical Specifications:

ECAS

DX-ECAS

Supply	24 VDC	
Signal Output	1 NONC x5 A / 250 VAC Relay	
Min. Di-Electric Constant	1,6 ϵ_r	
Connection Material	304 St.St. Opt. 316 St.St.	
Isolation Material	PTFE, PFA Opt. Peek, Ceramic	
Housing Material	PBT (Std.) Opt. Aluminum Injection, St.St.	Aluminum Injection AlSi12Fe (Std) Black
Working Pressure	(-)1 bar...(+) 100 bar (Depending on the model)	(-) 1bar...(+) 25 bar (Depending on the model)
Protection Class(EN60529)	PBT-IP 66 , Aluminium , St.St. IP 65	IP 66
Working Temperature	(-) 40 °C / (+) 150 °C (Depending on the model) , 200 °C with cooling apparatus 230 °C with Peek isolation, 400 °C with ceramic isolation	
Ambient Temperature	(-)20 °C...(+) 60°C	
Display	With LED-Power and Contact LED	
Isolation	Max. 500 V	
Power Consumption	Max. 1 W	
Electrical Connection	Terminals	
Max.Tensile Force	Max. 40 Nm	

ECAS level switch is a capacitive level sensor for level measurement of conductive liquid, nonconductive liquid, granulated materials with solid particles, adhesive and acid/basic liquids. When a material comes between electrode rod and tank wall, a capacitance change occurs and when this change exceed adjustment threshold, contact output is delivered. Designed for difficult process conditions. Refrigerated models can be manufactured for high temperature and pressure conditions. Calibrations of triggering point and relay operation range can be performed by the user under workplace conditions. It can be connected horizontally or vertically.

Application Areas :

Liquid tanks, food machines, cooling liquid tanks, shipping, glycol tanks, brine, waste water tanks. Oil tanks, CO2 liquid tanks, high temperature tanks, non-conductive liquids. Grain stores, cement, sand feed, flour, milk powder, organic and plastic granule. Sticky hot and high viscosity liquid, acid and chemical liquids.

ECAPm / ECAPr / ECAPe

OEM CAPACITIVE TYPE LEVEL SENSOR



Technical Specifications:

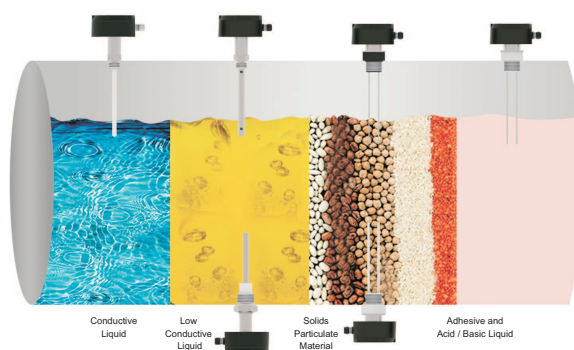
Measurable Material	Conductive liquids, refrigerants Non-conductive liquids Solids particulate materials Adhesive and acid/basic liquids
Supply	10...30 VDC Max.35 VDC 3-330 Ohm, 3-180 Ohm, 13-1300 Ohm...
Output	(Check that it is compatible with the supply voltage of the relay operation.)
Capacity Range	1 pF...3 nF
Min. Di-Electric Constant	1,6 ϵ_r
Accuracy	$\pm \% 0.5 \dots \pm \% 5$ (Depending on the model)
Linearity	$\pm \% 0,5$
Probe Length	Min 50 mm, Max. 2000 mm
Connection Material	304 Stainless Steel, Opt. 316 Stainless Steel Aluminium, PVDF, PTFE PFA Opt. PTFE, Delrin, Peek, Ceramic
Isolation Material	Aluminium, Plastic
Isolation Material	(-) 30 °C / (+) 150 °C (Depending on the model)
Working Temperature	200 °C with cooling apparatus 230 °C with Peek isolation
Working Pressure	Max. 150 bar (Depending on the model)
Ambient Temperature	(-)20 °C...(+) 60 °C, (-) 20 °C / (+) 80 °C
Power Consumption	Max. 1 W, Max. 50 mW
Electrical Connection	Terminals, Socket according to ISO 4400, Cable
Connection	1/2 "BSP std. Thread Male (According to the order)
Max.Tensile Force	Max. 10 Nm, 20 Nm, 40 Nm
Protection Class (EN60529)	IP 65, IP 67

Advantages :

It can be able to calibrated by customer
There are no moving parts.
Not affected by vibration, has robust mechanical structure.
Measurement along whole sensor.
High pressure and temperature resistant design.
Easy assembly and sensitivity adjustment.
Not affected by foam, liquid splash and probe coating..

Application Areas :

Liquid tanks, food machines, cooling liquid tanks, shipping, glycol tanks, brine, waste water tanks. Oil tanks, CO2 liquid tanks, high temperature tanks, non-conductive liquids.
Grain stores, cement, sand feed, flour, milk powder, organic and plastic granule.
Sticky hot and high viscosity liquid, acid and chemical liquids.



ECASm / ECASe / ECAM

OEM CAPACITIVE TYPE LEVEL SENSOR

EAC



CE

Technical Specifications:

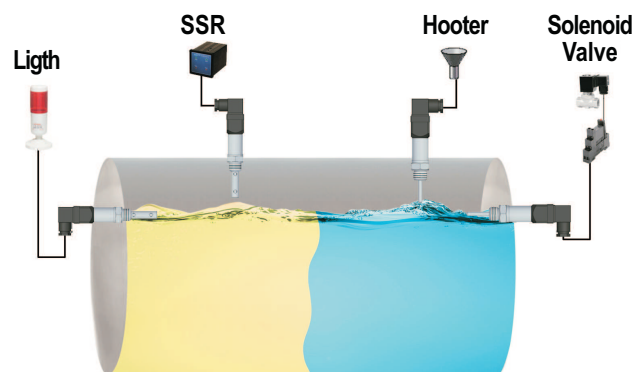
Measurable Material	Conductive liquids, refrigerants Non-conductive liquids Solids particulate materials Adhesive and acid/basic liquids
Supply	10...30 VDC Max.35 VDC
Output	1 NONC x 5 A / 250 VAC Relay (Delay 2 sec .) NPN or PNP Open Collector Transistor NO or NC (Please specify when ordering) (Check that it is compatible with the supply voltage of the relay operation.)
Capacity Range	1 pF...3 nF
Min. Di-Electric Constant	1,6 ϵ_r
Accuracy	$\pm \% 0.5 \dots \pm \% 5$ (Depending on the model)
Linearity	$\% 0,5$
Probe Length	Min 50 mm, Max. 2000 mm
Connection Material	304 Stainless Steel, Opt. 316 Stainless Steel Aluminium, PVDF, PTFE PFA Opt. PTFE, Delrin, Peek, Ceramic
Isolation Material	Aluminium, Plastic
Isolation Material	(-) 30 °C / (+) 150 °C (Depending on the model)
Working Temperature	200 °C with cooling apparatus 230 °C with Peek isolation
Working Pressure	Max. 150 bar (Depending on the model)
Ambient Temperature	(-)20 °C...(+) 60 °C, (-) 20 °C / (+) 80 °C
Power Consumption	Max. 1 W, Max. 50 mW
Electrical Connection	Terminals, Socket according to ISO 4400, Cable
Connection	1/2 "BSP std. Thread Male (According to the order)
Max.Tensile Force	Max. 10 Nm, 20 Nm, 40 Nm
Protection Class (EN60529)	IP 65, IP 67

Advantages :

It can be able to calibrated by customer
There are no moving parts.
Not affected by vibration, has robust mechanical structure.
Measurement along whole sensor.
High pressure and temperature resistant design.
Easy assembly and sensitivity adjustment.
Not affected by foam, liquid splash and probe coating..

Application Areas :

Liquid tanks, food machines, cooling liquid tanks, shipping, glycol tanks, brine, waste water tanks. Oil tanks, CO2 liquid tanks, high temperature tanks, non-conductive liquids.
Grain stores, cement, sand feed, flour, milk powder, organic and plastic granule.
Sticky hot and high viscosity liquid, acid and chemical liquids.



ELS FLOAT TYPE LEVEL SWITCH



Technical Specifications:

ELS

DX-ELS

Float Material	316 St.St. , PU
Wetted Parts Material	304 St.St. (Std.) Opt. 316 St.St.
Pipe Material	304 St.St. (Std.) Opt. 316 St.St.
Float Type	S4A or S40A (Std.) Selectable from Table.
Working Temperature	Max. 85 °C , 125 °C
Mechanical Connection	2 " BSP (Std.) Opt. Selectable
Electrical Connection	Terminals , With Cable, With Socket
Number of Float	1 (Std.) More available
Stem Length	Max. 2500 mm (Thread Including)
Number of Contact	2 x SPST - NO (Std.) Opt. It can be added
Contact Current	1,5 A (Std.)
Max. Contact Power	50 W / VA
Max. Supply Voltage	200 VDC / 250 VAC (Std.) Opt. Selectable
Protection Class(EN60529)	IP 65

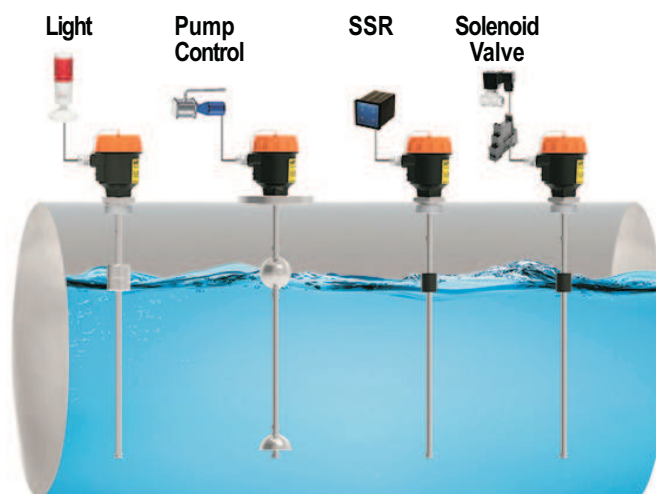
Advantages:

A variety of materials according to the flow
Different choices of ignition
Quick delivery
Different types of technics

ELS Level sensors are used for tank level control.
Different protection connection, material kinds are available.

Working Principle :

When magnetic field of magnet within the buoy moving along tube according to liquid level comes up to the reed sensor, it opens or closes the electric circuit. Such changes of reed sensors and alarm or level information can be assessed through a relay circuit or control device. It is preferred by the users because relay output is provided within the housing.



Application Areas :

Tank level measurement and control, boiler kontrol, store room control , yacht water level control, sewage level control.
Hydraulic oil tank level measurement and control.

ELS-tx FLOAT TYPE LEVEL TRANSMITTER



Technical Specifications: ELS-tx DX-ELS-tx

Float Material	316 St.St. , PU
Wetted Parts Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Pipe Material	304 Stainless Steel (Std.) Opt. 316 Stainless Steel
Float Type	S4A or S40A (Std.) Selectable from table
Working Temperature	Max. 125 °C
Mechanical Connection	2 " BSP (Std.) Opt. Selectable
Electrical Connection	Terminals , With Cable, With Socket
Number of Float	1 (Std.) More available
Stem Length	Max. 6000 mm (Thread Including)
Supply	12...36 VDC
Output	4-20 mA (Std.) Two wire Ops. 4-20 mA , 0-20 mA , 0-10 V , Ohm , Three wire
Frequency of Detection	15 mm / 10 mm / 5 mm
Protection Class (EN60529)	IP 65 IP 66

Advantages:

A variety of materials according to the flow
Different choices of ignition
Quick delivery
Different types of technics

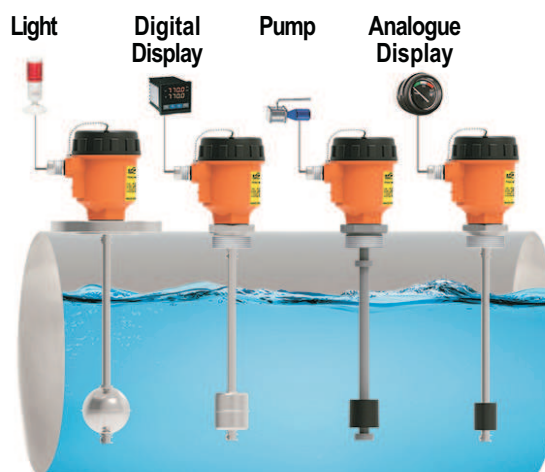
ELS-tx Level sensors are used for tank level control.

Working Principle :

When magnetic field of magnet within the buoy moving along tube according to liquid level comes up to the reed sensor, it opens or closes the electric circuit. Continuous type serial aligned resistance and reed relays are engaged and disengaged. Such changes of reed sensors and alarm or level information can be assessed through a relay circuit or control device. Precision of reed sensor increases according to lowness of its placement range. It is preferred by the users due to the advantages of providing analogue output within the housing. Furthermore, it is possible to follow and to control the process in the field through indicator.

Application Areas :

Tank level measurement and control, boiler kontrol, store room control , yacht water level control, sewage level control.
Hydraulic oil tank level measurement and control.



ELB LEVEL SWITCH - SIDE MOUNTING



Technical Specifications:

ELB

DX-ELB

Mounting Type	Horizontal, Vertical
Flange Material	316 Stainless Steel
Float Material	316 Stainless Steel
Output	250 V AC 12 10 A , 220 V DC 12 0.6 A 0.2 bar ... 1 bar
Min. Density	0.70 g/cm ³ ; 0.75 g/cm ³ ; 0.80 g/cm ³
Housing Material	Aluminum Injection , 304 Stainless Steel
Flange Dimension	92 mm x 92 mm , DN 65 , DN 80 , DN 100
Max. Pressure	16 bar , 25 bar, 100 bar
Max. Temperature	150 °C , 250 °C
Ambient Temperature	(-) 20 °C / (+) 80 °C
Weight	1.8 kg....2.5 kg
Float Test Pressure	25 bar , 40 bar, 160 bar
Protection Class (EN60529)	IP 65

IP 66

Advantages :

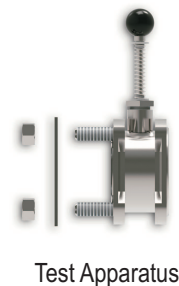
Max. 100 bar working pressure
Max. 250 °C working temperature
The apparatus diversity

ELB level switches are used for measuring and checking level of tank. It is preferred in food, ship machine, boiler and storage tank applications with its advantages such as resistance to high temperature, long life contact structure, which is operable in each, vertical or horizontal connection.

Working Principle:

Microswitch changes direction with the movement, occurring after magnet in float arm, moving by changing liquid level, affects magnet inside body, magnetically obtained contact information is assessed by transferring into applications such as pump, solenoid valve etc.

Accessories:



Application Areas :

Food, ship, machine, boiler and storage tanks, hydraulic oil tanks, waste water tanks.

ELG MAGNETIC BY-PASS LEVEL INDICATORS



EAC

CE

EN ISO3834-2



Technical Specifications:

Magnetic Display	It is composed of sequential array of magnet sensitive flaps in the aluminium profile.
Max. Working Pressure	16 bar, 25 bar, 40 bar, 100 bar
Max. Working Temperature	180 °C, Ops. 350 °C
Top / Bottom / Side Flange	DN 32 / PN 16, 304 St.St. Opt. 316 Stainless Steel Ø 140 / PN 40 , 304 St.St. Opt. 316 Stainless Steel Ø 195 / PN 100 , 304 St.St. Opt. 316 Stainless Steel
Body	Ø 60.3 x 1,5 / 2 / 3 / 3,5 mm, 304 St.St. Opt. 316 Stainless Steel Ø 63 x 3 mm, PVC Ø 63 x 2 mm, Titanium
Seal Material	Klingrid Opt. PTFE , Graphite
Side Pipe Material	304 St.St. Opt. 316 St.St. / PVC
Connection Flange	DN 20 / PN 16, Carbon Steel Opt. 304 / 3016 St.St. / PVC / Titanium
Drain Screw Material	1/2 " BSP 304 / 316 St.St.
Bolt / Nut / Washer Optional	M 12 x 45 mm / M 16 x 70 mm 304 Stainless Steel Magnetic Contact Analog Output , Scale , Drain Valve Liquid Level Relay , Local Digital Display Heating Jacket, Special Design

Advantages :

For visual monitoring and control
The analog signal can be output
Different connection options
Different material options
Local digital display

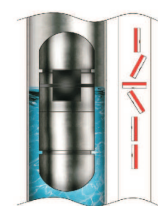
Working Principle:

Liquid levels are the same in the main body of tank and level indicator in accordance with the principle of computational fluid. Float, which is available in the body and provides its rotation. Liquid level can be monitored easily from outside by means of two faces of flaps with different colors. Each indicator is delivered to customer after they are undergone from pressure, impermeability and final control tests after the production.

ELG magnetic by-pass level indicators are assembled into external or upper surfaces of tank, boiler and storage tanks. It enables to see level easily and with high accuracy. It is more economic than other measurement systems with mechanical method and it provides advantages for user with various assembly forms together with easy of assembly and maintenance.

Application Areas :

Wastewater systems, Filling emptying tank, Chemical tanks, Oil tanks, Oil boilers, Fuel oil / Gasoline / LPG tanks, Steam boilers, Hot water boilers, Natural gas pressure reduction systems, High pressure tanks and tanks.



EMT MAGNETOSTRICTIVE LEVEL TRANSMITTER



Technical Specifications:

Material to Measure	Liquid
Power Supply	24 VDC $\pm 10\%$
Output	0...10V, 4...20mA, 0...20mA, 10...0V, 20...4mA, 20...0mA
Resolution	16 bit DAC Output $\pm 0,02\%$ Full Measurement (Min. 100 μm)
Repeatability	$\pm 0,005\%$ Full Scale
Measuring Length (L)	100...5000mm
Velocity	< 10m/s
Sampling	2 kHz (Value can change by stem lenght.)
Max. Consumption	50mA -90mA (Value can change by stem lenght.)
Max. Output Noise	< 5 mVpp
Max. Output Value	10.5 V
Update Time	0,5 ms...1000 m / 0,8 ms...2000 m
Permissible Applied Voltage	Available (up to -30 VDC)
Over Voltage Protection	Available (up to 40 VDC)
Connection (R)	M18 x 1,5 mm Std.
Housing Material	Aluminium
Connection Material	304 Stainless steel Std.
Pipe Material	304 Stainless steel Std.
Electrical connection	Cable, M12-5Pin Socket
Protection Class (EN 60529)	IP 66
Test	EMC , Low Voltage
Mak. Tencile Force	Max. 40 Nm
Working Temperature	Max. 125 °C Opt. 150 °C
Working Pressure	Max. 30 bar
Ambient Temperature	(-)20°C / (+) 60°C

Advantages :

High accuracy / precision (16 bit)
Long-working use
Short response time
Output signal options
Easy setup
IP66 Protection class

Application Areas :

Fuel Industry : Gasoline, diesel and liquid natural gas applications

Chemical Liquid Facilities : Pharmaceutical industries,
biological engineering
and similar chemical liquid mixing tanks

Water Management Facilities : Dam, Waste water sanitation
facilities for real time monitoring

Food and Beverage Facilities : High sensitivity level monitoring
for tanks contains liquid

EMT Magnetostriuctive Level Transmitter is a float type level sensor to be used measuring the level of liquids; designed especially for the difficult processes. Mounts vertically and can locate the very middle point of two opposite magnetic force fields by emitting signals. Therefore, no calibration or adjustment will be needed after the first set, even with the power cuts. Furthermore, it's sensing element is in the body which prevents the wearing effects of the usage, sustains long term durability by avoiding the physical contact.

ELH REFLEX GLASS TYPE LEVEL INDICATOR

CE



Technical Specifications:

Body Material	Carbon Steel, Stainless Steel
Glass Material	Borosilicate Glass
Cushion Gasket Material	Klinger-sil14430, Graphite
Bolt Material	Carbon Steel (6.8 x 8.8), Stainless Steel
Connection	Flanged According to EN1092-1
Pressure Class	PN 16, PN 40
Axis Dimension	300 mm...2500 mm
Max. Temperature	200 °C Opt. 300 °C
Test Pressure	x 1,5

Advantages :

Economical
Easy to read
Can be used in high pressure steam

Reflex glasses are used for observing level in pressure tanks and high temperature liquids.

Working Principle :

Light refraction is different between liquids and gases. Liquids show dark color due to absorption of light, however air and vapor show bright color due to reflecting light. Reflex glasses do not get affected from thermal shocks and static temperature differences.

It is not applicable (appropriate) for liquids that can harm the glass. (e.g. high temperature alkaline solutions and hydrofluoric acid)

Application Areas :

Steam tanks, loading-dumping tanks, chemical industry, petroleum product tanks, hygienic load tanks, fuel depots.

Spare Parts:

Valves
Glass
O-Rings
Glass seals

ELF ROTARY LEVEL SWITCH



Level switch with ELF motor is used for level control in silos and tanks where materials with solid particles are stored. Full and empty signals can be received by performing level control in many demanding applications with different probe and pedal varieties in a safe manner. It can be connected horizontally and vertically.

Advantages :

- Fast Delivery Time
- Reverse Rotation Safety
- Sensitivity Adjustable
- Excellent Mechanical

Technical Specifications :

ELF

DX-ELF

Working Temperature	(-) 20 °C.....(+) 90 °C Opt. Max.150 °C With High Temperature Type (Plastic Housing) Max. 200 °C With High Temperature Type (Aluminium Housing) Max. 600 °C Very High Temperature Type	(-) 20 °C.....(+) 90 °C (-) 20 °C.....(+) 60 °C Opt. Max.150 °C With High Temperature Type Max.200 °C With High Temperature Type
Ambient Humidity	0-98 % Rh (Non Condensate)	
Ambient Temperature	(-) 20 °C ... (+) 60 °C	
Working Pressure	(-) 0,6 bar... (+) 0,6 bar	
Material	Aluminium (Std) Opt. 304 / 316 St. St., PTFE Antistatic Plastic (Std) Opt. Aluminium Enjection - AISi12Fe (Std) Body : Black Cover : Orange	Aluminium (Std) Opt. 304 / 316 St. St. Aluminium Enjection - AISi12Fe (Std) Black
Connection Housing		
Paddle And Rode	304 St. St. (Std) Opt. 316 St. St.	
Extension Pipe	304 St. St. (Std) Opt. 316 St. St.	
Grounding Apparatus	304 St. St.	
Seal for Cover	Elastomer Thermoplastic 120 °C (Std) Ops. FPM (Viton) 150 °C	
Bearing	Double ball bearing (With Dust-protected) (120 °C) Ops. 280 °C	
Dust Protected Felting	NBR (Std) Opt. FPM (Viton) 150 °C, PTFE 200 °C	
Connection	1" BSP (Std) , Opt. 1 1/4" BSP , 1 1/2" BSP Male Thread	
Power Consumption	Max. 4 W	Max. 4 W (220 VAC) , Maks. 3 W (24 VDC)
Revolutions Per Minute	5 Rpm (Std) (Clockwise - When Looking Paddle Side) Opt. 1,5-1,8 Rpm	
Power Supply	24 VDC , ± 10 24/110/220 VAC 50/60 Hz ± % 10	24 VDC ± % 10 , 24/48/110/220 VAC 50/60 Hz ± % 10
Cable and stopper input	PG 13.5 (Std) Opt. M 20 x 1,5 mm ²	M 20 x 1,5 mm ² (Std)
Relay switching capacity	2 A / 250 VAC 2 x NO/NC (SPDT) 5E4 Opt. 10 A / 250 VAC - 4A/30VDC	10A/250 VAC - 4A/30VDC 2x NO/NC (SPDT) 5E4
LED	Power LED: Green , Alarm LED: Red	
Max. Grain Structure	50 mm	
Min. Density	0,04 g/cm ³ (According to paddle type)	
Torque Rating	4 Stages, adjustable	
Load on probe	Max. 500 N (Extension Pipe)	
Protection Class (EN60529)	IP 65	IP 66

Application Areas :

Plastic Industry ; PVC, PVDF, PP granular etc..

Food Industry ; Grain Dust, Ground Corn, Sugar-Granulated, Cacao, Malt-Graoung Dry, Sunflower Corn, Whead, Peanuts-Shelled, Clays- Kaoline, Talcum Powder, Ground-Paprika, Coffee-Roasted vb..

Build Industry ; Rocks-Limestone Crushed, Lime, Cement Powder, Rubber Ground, Lime Hydrate Dust, Calsium Dust, Iron Chips, Silica Sand, Moulding Sand, Styrofaam etc..

Wood Industry ; Wooden Fiberst, Saw Dust etc.. **Other Chemistry Industry** ; Coal Lump, Ash-Coal Dry etc..

ELM FLOAT TYPE LEVEL SWITCH

EAC

CE



Technical Specifications :

Float Material	304 St.St. , 316 Stainless Steel , PP
Wetted Parts Material	304 Stainless Steel , 316 Stainless Steel
Pipe Material	304 Stainless Steel , 316 Stainless Steel
Float Type	S1Y , S3Y , S2A , S4A , S5A , S40A , P81
Working Temperature	Max. 125 °C
	1/8 " BSP , 3/8 " BSP , 1/2 "BSP, 3/4 " BSP
Mechanical Connection	M 10 x 1 mm ²
	5 bar , 10 bar , 30 bar
Max. Pressure	0.70 g/cm ³ , 0.75 g/cm ³ , 0.85 g/cm ³
Min. Density	Cable , Socket
Electrical Connection	1 Std.
Number of Float	1 x SPST-NO , 1 x SPDT-NO / NC
Number of Contact	0.7 A , 1 A , 1,5 A
Contact Current	10 W / VA , 50 W / VA
Max. Contact Power	200 VDC / 140 VAC
Max. Supply Voltage	180 VDC / 130 VAC
	200 VDC / 250 VAC
Optional	Liquid Level Relay SK-P2

Advantages :

Economic.
Practical and easy installation.
Fast delivery.
Stainless steel material.

ELM level switches are used for checkin level of tank. It is preferred by machine manufacturers, especially in terms of its ease ofg use and economy.

The ELM level switched can be mounted in litte places because of their mini design. The switches are made by stainless steel material and so can be used in various liquids.

Working Principle:

When magnetic field of magnet in the float is aligned with reed sensor in the tube , it opens or closes the electric circuit.

When float moves away , sensor reverts back (upon demand , drawn contact may be made). Level information can be assessed with a relay circuit.

LEVEL CONTROL DEVICE

SK-P2
72mm x 72 mm



Power Supply	220 VAC, 2.8 VA
Output	2 pcs. 5 A / 250 VAC Relay (Start/Stop)
Working Temperature	(-) 20 °C...(+) 70 °C
Dimensions	72 x 72 mm
Input	Contact information come from ELM
Isolation	Input and output are isolated

Application Areas :

Machines, tanks, boilers, gas and liquid mediums, level measuring, temperature measuring...

ELP FLOAT TYPE LEVEL SWITCH



Technical Specifications :

Float Material	PP , NBR , PVDF , Delrin
Wetted Parts Material	PP , PVDF , Delrin
Pipe Material	PP , PVDF , Delrin
Working Temperature	(-) 20 °C / (+) 80 °C , (-)40 °C / (+) 80 °C , (-) 30 °C / (+) 120 °C
Max. Pressure	Atm. , 2 bar , 4 bar , 10 bar
Min. Density	0.70 g/cm ³ , 0.75 g/cm ³ , 0.75 g/cm ³
Electrical Connection	Cable , Socket
Number of Float	1 Std.
Number of Contact	1 x SPST-NO , 1 x SPDT-NO / NC
Contact Current	0,7 A , 1 A , 1.5 A
Max. Contact Power	10 W / VA , 50 W / VA
Max. Supply Voltage	180 VDC / 130 VAC , 200 VDC / 140 VAC , 500 VDC / 350 VAC

Advantages :

Economic.
Practical and easy installation.
Fast delivery.
PP material.

Working Principle:

When magnetic field of magnet in the float is aligned with reed sensor in the tube , it opens or closes the electric circuit.

When float moves away , sensor reverts back (upon demand , drawn contact may be made). Level information can be assessed with a relay circuit.

ELP level switches are used for checking level of tank.It is preferred by machine manufacturers , especially in terms of its easy of use and economy.

The ELP level switched can be mounted in litte places because of their mini design. The switches are made by stainless steel material and so can be used in various liquids.

Application Areas :

Machines, tanks, boilers, gas and liquid mediums, level measuring, temperature measuring...



E-GSM Alarm Device - Double Entry

Battery or and supply
2 pcs. Lithium batteries,
12V adaptor (Included)
Excluding phone card.

ELC LEVEL SWITCH - Conductivity Type

CE



Technical Specifications :

ELC

Electrode Material	304 Stainless Steel , Opt. 316 Stainless Steel
Isolation of Electrode	Special Tubing , PTFE , PBT , PVDF, Delrin
Connection Material	304 St.St , 316 St.St , PTFE , PBT, Delrin
Housing	304 St.St, 316 St.St, PTFE , PBT, Delrin
Max. Working Temp.	60 °C , 80 °C , 100 °C ,120 °C , 200 °C , 225 °C
Max. Working Pressure	6 bar , 10 bar, 25 bar , 30 bar , 40 bar
Number of Electrode	1 , 2 , 3 , 4 , 5
Voltage Probe	Max. 6 VAC
Mechanical Connection	1 " BSP , 2 " BSP
Electrical Connection	PG 7 , PG 13.5 , Terminals , Socket

Advantages :

- Economical
- Easy to install
- No moving parts

Working Principle:

When liquid level comes to the level of isolated electrode, current passage starts or stops between electrode and liquid. Strengthened this AC current may be assessed with a relay circuit.

ELC level switches are used for checking liquid level of tanks and boilers. As it does not have any movable part, it can be used in the critical ambient and in the liquids with solid particle, low density and high viscosity.

Application Areas :

It is an economic and safe solution for air pressure tank applications, water level control of steam boilers and conductive tanks.

Technical Specifications :

DX-ELC

Working Temp (Tp)	Max. 238 °C
Ambient Humidity	0-98 % Rh (Non-condensing)
Working Press.	Max. 32 barg
Ambient Temp. (Ta)	(-) 20 °C ... (+) 60 °C
Material	Connection
	Housing
	Electrod
	Pipe
	Isolation
Connection	2 " BSP (Std.) Opt. Selectable from Table
Number of electrodes	1 (Std.) Up to 4 selectable
Stem Length	500 mm / 1000 mm / 1500 mm (Thread Included)
Electrical Connection	Terminals
Cable and Plug Entry	M 20 x 1,5 mm ² (Std.)
Protection Class (EN60529)	IP 66

Advantages :

- Economical
- Easy to install
- No moving parts

Working Principle: :

When liquid level comes to the level of isolated electrode, current passage starts or stops between electrode and liquid. Strengthened this AC current may be assessed with a relay circuit.

DX-ELC level switches are used for checking liquid level of tanks and boilers. As it does not have any movable part, it can be used in the critical ambient and in the liquids with solid particle, low density and high viscosity.

ISS LEVEL SENSOR - Conductivity Type



Technical Specifications :

Mounting Position	Vertical (into boiler or with by-pass tube)
Process Connections	G 1"
Working Pressure	Max. 32 bar , Max. 238 °C
Housing	PC, Aluminum Casting (Electrostatic Painted)
Connection Material	316 Stainless Steel
Electrode Isolation	316 Stainless Steel
Pipe Part	PTFE
Electrode Material	316 Stainless Steel
Material	PTFE
Pipe Material	304 Stainless Steel
Electrode Length	500 mm , 1000 mm , 1500 mm
Electrode Diameter	4 mm
Cable	5x0.75 mm ² With Silicon Insulated
Cable Entry	3 pcs. PG 11 Chromed Brass
Supply	220-240 VAC (Std.) or 24 VDC (Opt.) , 2 VA
Electrode Voltage	Max. 6 V
Sensitivity	1 uS/cm min. or 30 uS/cm min. selectable
Output Contact Current	4 x 8 A / 250 VAC
Relay Delay	3 sec.
Ambient Temperature	70 °C
Protection Class (EN60529)	IP 65

Advantages :

Compact structure.
Multi-function can be controlled.
Wetted parts is 316 stainless steel.
Low conductivity liquids can be worked.

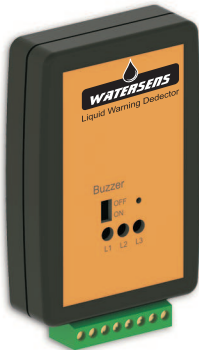
Application Areas :

It is an economic and safe solution for air pressure tank applications, water level control of steam boilers and conductive tanks.
Degasifier , Steam boilers, Condensate tanks ,
Conductive liquid tanks...

ISS Level Sensor is designed for controlling of conductive measurement principle. It has four different measurement probe and an electronic unit and so without any other control unit it allows to control by itself.

The sensor has two different conductive level measurement and four different control function, which are selectable by user. It can be used in min.1 μ S/cm and over conductive liquids.

WATERSENS / OILSENS LIQUID WARNING DEDECTOR



Technical specifications :

Display	3 each Alarm LED
Siren	1 each Siren + On / Off Button
Sensor	Bipolar Cable, 1 m. Std. Three sensors can connect devices
Supply	9 V Square Alkaline Battery or 24 VDC
Output	2 A / 125 VAC NO / NC
Battery life	2 years for storage
Housing	ABS Plastic, Black Colour (Opt.Grey) (Inbox; 1 each watersens and probe 1 each Battery, 1 each Double-sided tape 2 each Wall mounting bracket)
Weight (With package)	190 g.
Dimenson	70 mm x 100 mm x 22 mm

Technical specifications :

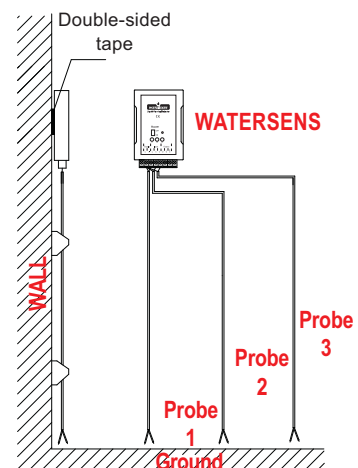
Supply	18-29 VDC
Cable	3 x 0.22 mm ² or 5 x 0.22 mm ² , 2 m.Std.
Output	PNP-NO / NC Max. 100 mA NPN-NO / NC Max. 100 mA RELAY-NO / NC Max. 300 mA In order to be indicated.
Connection	3/4 " NPT Double Sided
Body Material	PP Opt. Stainless Steel
Working Temperature	Max. 85 °C
Working Pressure	Max. 20 bar
Mounting	Connected Vertically or Horizontally
Protection Class (EN60529)	IP 68
Min. Conductivity	100 microSiemens / cm

Watersens is used in order to detect the flood in advance and to take precaution at homes and offices. It can be powered by 9V. battery. It can be ensured to stop any water leakage by commanding relay output to a solenoid valve. It can avail people around it to take precautions by attracting their attention through siren.

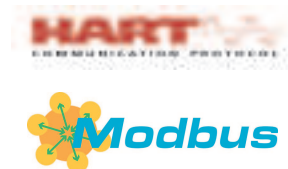
WATERSENS P / N / R is used in order to determine the water level and to take precaution in the facilities. It ensures the people in the ambient to take precaution by attracting their attention through siren in order to determine high water or low water level. Its electronic card is in the upper box and it is insulated with resin. It is not affected by water. Electrode material has been selected as stainless steel and its electronic design has been performed specially in order that there is no electrolysis in the lead terminals. It is appropriate to submerge a weight onto the tooth on the submersion probe.

Application Areas :

Operation rooms, computer rooms, warehouses, generator rooms, compressor rooms, air conditioner rooms, baths, kitchens and all locations having possibility of flood, fire alarm systems, wells, for high water detection , ship tanks, water level control, water leakage.



ELW RADAR TYPE LEVEL TRANSMITTER



Technical specifications :

ELW 101

ELW 102

Material to Measure	Liquid, Solid Particulate Materials, Aggressive Liquids		
Range	0... 20 m	0... 10 m / 20 m / 30 m / 70 m	
Accuracy	<± 2 mm	<± 3 mm	<± 5 mm
Settings Menu Language	English		
Sensitivity	± 3 mm		
Repeatability	± 1,5 mm		
Resolution	1 mm		
Frequency	26 GHz / 80 GHz		
Dielectric Constant (ε)	Min. 1,4 (Selectable five different way.)		
Response Time	< 2 sec		
Sampling Frequency	54 GHz		
Indicator and Adjustment	LCD Display		
Cable Input	M20x1,5mm		
Electric Connection	Terminal		
Process Connection	G 1½" (Std.) , G 3"		
Antenna Type	Rod Type	Horn Type	
Antenna Material	PTFE, 316L Stainless Steel		
Housing Material	Aluminum Injection AISi2Fe Black (RAL9005) (Std)		
Connection Material	304 /316 Stainless Steel		
Working Temperature	(-) 40 °C... 85 °C	(-) 40 °C... (+) 150 °C	Opt. 250 °C
Ambient Temperature	(-) 20 °C... 60 °C		
Relative Humidity	< % 95		
Working Pressure	(-) 0,8 bar... (+) 3 bar	(-) 1 bar... (+) 40 bar	
Beam Angle	20 °	18 ° / 12 ° / 8° / 6°	
Supply Voltage	15...36 VDC 2 Wire Version		
Power Absorption	< 0,5 W		
Output Signal	4-20 mA 2 Wire + HART (Resolution 1,6 mikro A)		
Error Signal	20.5 mA; 22 mA ; 3,9 mA (Adjustable)		
Integration Time	0... 20 s., Programmable		
Weight	~ 2 ... 4 kg		
Protection Class	IP 66 (EN60529)		

Advantages :

- Compact structure
- Easy to setup
- Durable mechanical construction
- High temperature models available

Application Areas :

Almost for all liquids and solid particules. Especially with abrasive/aggressive liquid level measurement applications. Such as ; Chemical, and pharmaceutical industries, food and plastic industries, power plants, oil and cement factories. Water, acid and oil tanks, Cement and klin silos. Grain and livestock feed silos. Fire water tanks, rivers, waste material and waste water applications.

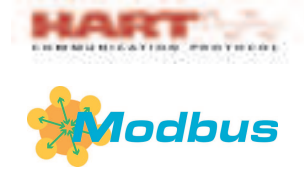
The Radar Level Meters of Ensim Sensors 26 GHz series are excellent devices for no contact level measurement. The microwave impulses, emitted by the radar's antenna, travel at speed of light and a part of their energy, reflected by the surface of the medium to be measured, is received by the same antenna. The period of time (flying time) between the emission and the arrival of the impulses, is proportional to the existing distance between the antenna and the surface of the medium to be measured.

The electromagnetic wave travels at a very high speed (nanosecond), so it is difficult to identify it. Ensim Sensors 26 GHz Radar Level Meters, thanks to their integrated management system, use a suitable demodulation technology that allows them to identify the period of time between the emission of the impulses and their corrected reception and, consequently, determine and measure the level. The Alphanumeric Display allows the user not just to enter the data for the level measurement, but even to display and isolate false echoes.

EGW GUIDED RADAR (TDR) LEVEL TRANSMITTER

EAC

CE



Technical specifications :

Material to Measure Range	Liquid, Solid Particulate Materials, Aggressive Liquids 32 m. Wire Rope Probe 6 m. Rod Probe 4 m. Coaxial Probe
Settings Menu Language	English
Sensitivity	± 3 mm
Repeatability	$\pm 1,5$ mm
Resolution	1 mm
Working Temperature	(-)1...(+)40bar , Opt. Max. 100bar
Çalışma Sıcaklığı	(-)40...(+)200°C , Opt. Max. 450°C
Ambient Temperature	(-)20...(+)60°C
Frequency	106 MHz - 1,8 GHz
Dielectric Constant ()	Min. 1,4 (Selectable five different way.)
Response Time	<2 sec
Sampling Frequency	16 Hz
Power Absorption	<0,5 W
Supply Voltage	15...36 VDC 2 Wire Version (Resolution 1.6 micron A)
Output Signal	4-20mA 2 Wire + HART
Error Signal	20,5 mA , 22mA , 3,9 mA (Adjustable)
Maks. Load Resistance	500 W
Damping Time	0...90 sn.
Housing Material	Aluminum Injection AlSi2Fe Black (RAL9005)
Connection and Probe Material	304 Stainless Steel (Std.) , Opt. 316 Stainless Steel
Insulation Material	PTFE (Std.) , Opt. PEEK , Ceramic
Indicator and Adjustment	LCD Display
Cable Entry	M20 x 1,5 mm
Electrical connection	Terminal
Protection Class	IP66 (EN60529)
Weight	EGW 205, (For L = 1000mm) ... kg

Advantages:

Compact structure
Easy to setup
Durable mechanical construction
High temperature models available

Working Principle:

High frequency microwave pulses are guided along a steel rope or rod. When they reach the product surface, the reflected waves are detected by the electronics. The flight time of the signal (between sending and detecting time) is directly proportional to the level.

Areas of Application :

Volatile liquids, foamy liquids, viscous liquids, boiling and foaming liquids, crude oil tanks.

The Guided Radar Level Transmitter is used for continuous level measurement of liquids and solids. There are models that can be used in difficult working conditions. It provides reliable and accurate measurement in case of dust and noise, without being affected by accumulation and condensation. Measurement is not affected by specific gravity of the medium, condensation, fluctuation and variation of the dielectric constant (in the setting range). It has easy and simple use. it can be configured with 4 buttons on LCD display.

ELT VIBRATING ROD TYPE LEVEL SWITCH

EAC

CE



Technical specifications :

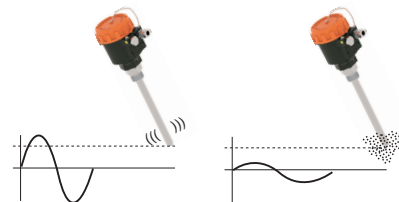
Fluid	Liquid, Solid, Powder
Wet Parts	316 Stainless Steel
Fork Material	316 Stainless Steel
Housing Material	Aluminum, Stainless Steel (For ELT103)
Max. Solid Particle Size	<10 mm
Max. Liquid Viscosity	<1000 mm ² / sec
Measurement Density	For Solid > 0,1 g / cm ³ For Liquid > 0.7 g / cm ³
Vibration Frequency	280 KHz (For ELT102,104, 202, 204) 300 ± 50KHz (For ELT101, 201)
Delay	0.5 sec (Vibration Stop)
Time	1-2 sec (Vibration Start) It can be adjusted between 1-60 seconds.
Exit (For ELT101, 201)	1 x 3A NO / NC Relay 30 VDC / 220 VAC
(For ELT103)	1 x 5A NO / NC Relay 30 VDC / 220 VAC
(For ELT102,104, 202, 204)	2 x 8A NO / NC Relay 24 VDC / 220 VAC
Supply	15-80 VDC, 15-260 VAC
Power consumption	2.5 W, 1 W (For ELT103)
Connection	1 " BSP (Std.) Male Thread Opt. Flanged
Working Pressure	Max. 20 bar (For ELT101, 201) Max. 40 bar (For ELT102,104, 202, 204) Max. 30 bar (For ELT103)
Working Temperature	(-) 20 °C ... (+) 150 °C (Std.) Opt. 200 °C
Ambient Temperature	(-) 20 °C ... (+) 80 °C
Ambient Humidity	% 95 RH
Protection Class (EN60529)	IP 66, IP 67 (For ELT103)

Advantages:

Suitable for side as well as top mounting
Minimum and maximum fail safe field selectable.
Process pressure max. 40 bar
Process temperature max 200 °C
Low power consumption.
No Calibration Required
Settable switching delay as a standard feature
Durable Construction
Immune to External Vibrations

Areas of Application :

It can be used in process that containers , silos , free flowing dusts, granules and various types of small particulate solids such as cereals, beans, edible oil process, sugar, animal feed, rice plants, detergents, dye powder, chalk, gypsum, fly-ash, cement, sand, plastic granules, spices, milk powder etc.



ELT series single vibrating material level switch is one of the tuning fork material level switches. It is not afraid of hanging materials, not afraid of impact, without clamping problems, and has higher sensitivity. Its cylindrical single measuring rod structure determines its wider adaptability to industrial field. Single rod vibrating level switch uses the "resonance" principle of tuning fork to generate vibration under the driving of piezoelectric elements. Only when all around the probe rod are surrounded by materials, the vibration amplitude will be sharply reduced, resulting in switch action.

ELZ LEVEL SWITCH WITH DIAPHRAGM

E-TILT TILT SENSOR



Technical specifications :

Installation	Vertical
Material	Fiber reinforced plastic. Opt. Aluminum Casting
Diaphragm	Neoprene, Viton, Stainless Steel (-) 20...(+) 80 ° C ELZ with NBR diaphragm 11
Working Temperature	(-) 20...(+) 150 ° C with Viton diaphragm ELZ 21 (-) 20...(+) 200 ° C Rust. Diaphragm with ELZ 31
Protection Class	IP 40 IP 53 (If the mounting position of the compensating filter is downwards) IP 65 (For ELZ31)
Max. Working Pressure	3 bar, NBR, for Viton Diaphragm 1 bar Stainless Diaphragm for
Weight With box	525 g. Plastic Body 990 g. Aluminum Body
Accuracy	200 g. 600 g. Adjustable
Electrical Connection	PG 13,5 Plastic, PG 11 Metal (ELZ31)
Contact Output	1 x SPDT 15 A / 250 VAC

Advantages :

Economical.
Easy installation and commissioning.
Fast delivery.

Level control with membrane is the most economical method in measurement of level of bulk material in the storage. It can be used in open and non-pressure tanks. ELZ can check full, empty and loaded situations of powdered, dusty, corny, granular, grained bulk materials in the grain elevator. It is appropriate for using in the particles in 0,3 and 2,5 t/m³ and up to max. 30 mm. Membrane should contact with checked material certainly.

Areas of Application :

Sugar, Hazelnut, Clay, Sunflower Seed, Coffee, Various Granules, Wheat, Bauxite, Ceramic, Legumes, Cereal, Fish Feed, Sand, Pebble, Isolation Materials, Corn, Rice ...

Technical specifications :

Tilt Angle (Vertically left or right)	Max. Contact Current / Voltage
15 ° ± 3 ° (Std.)	1,5 A / 120 VAC NC 0.6 A / 240 VAC
25 ° ± 10 °	Opt. 1,5 A / 120 VAC 0.6 A / 240 VAC
35 ° ± 10 °	Opt. 12,5 A / 120 VAC 7A / 240 VAC
45 ° ± 10 °	Opt. 1 A / 120 VAC 0.4 A / 240 VAC
Max. Switch capacity	100 - 200 VA
Pipe Material	304 Stainless Steel Opt. 316 Stainless Steel, PVC
Working Temperature	(-)40 °C / (+) 100 °C
Cable Length	2 m. (Std) Can be added on request.
Cable Material	PVC (Max. 60 °C) Opt. Silicon, Rubber
Protection Class (EN60529)	IP 67

Advantages :

Easy installation, Economical, Resistant to corrosion.

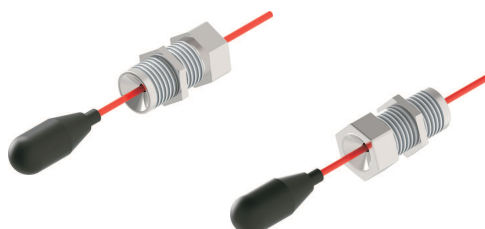
E-Tilt sensor is used vertically. It can be operated by battery and also it can be operated by providing the feeding. It can be ensured to stop the water leakage by commanding the relay outlet to a solenoid valve. Furthermore, it can benefit to take measure by attracting attention of the people in the ambient by sounding the siren. Its electronic design is specially designed in order that there is no electrolysis in the lead terminal by selecting stainless steel electrode material..

Areas of Application :

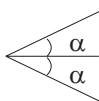
Conveyor lines, silos, ship loading telescopic arms..

ELA FLOAT LEVEL SWITCH

ELAr DIRTY WATER FLOAT



Technical specifications :

Fluid	Liquid
Appropriate Liquid Density	Min. 0,85 g/cm ³ , 0,60 g/cm ³1.4 g/cm ³ 0,80 g/cm ³1.2 g/cm ³
Differential Angle	10 ° , 25 ° , 40 ° , 65 ° , 90 ° 
Working Temperature	Max. 60 °C , 80 °C , 120 °C
Working Pressure	Max. 2 bar , 5 bar , 10 bar
Material of float	PU , 304 Stainless Steel , 316 St.St. , PP
Float Dimensions	Ø 23 , Ø 26 , Ø 65 , Ø 80 , Ø 86 , Ø 115 mm
Material of cable	3 x 0,3 mm ² , Silicon , 3 x 1 mm ² Silicon , 3 x 0,75 mm ² PVC
Contact Capacity	Max.0,1 A / 60 VAC , Max.10 A / 120 VAC Max.1,5 A / 240 VAC - 2 A / 120 VAC 5 A / 250 VAC , 6 A / 250 VAC
Contact	1 x NO / NC , 1 x NO , 1 x NC
Protection Class (EN60529)	IP 68
Process Type	Filling / Emptying , Minimum , Maximum

Advantages :

Easy to install
Reliable
Economical

Cabled level switches are used in order to ensure tank, depot, waste water plant level control in the industrial facilities and dwellings. It operates without any problem in the particulate ambient with its mechanical design and there is not any jam. Neoprene rubber cable is used for resistance against different liquids and in order that it does not crack in the hot-cold ambient.

For example, it can be used on this fluids :

Fish ponds, swimming pools, groundwater, waste water pools, treatment pools, plunger pump applications, hydrophors, residential water tanks, etc...

Areas of Application :

Water, waste water, diesel, fuel oil, glycerine, gas, nitric acid 10%, asetic acid 10%, formaldehyde 40%, lactic acid 10%, hydrochloric 10%, sulphuric acid 30% etc...

Technical specifications :

Working Pressure	Max. 2 bar
Working Temperature	(-)40 °C... (+) 70 °C
Contact Voltage	60 VAC
Contact Current	Max. 0,1 A
Contact Capacity	Max. 0,3 A
Contact Form	1 x NO / NC
Mechanical Connection	3/4 " BSP Thread Male (Std)
Nut and Connection Material	304 Stainless Steel (Std) Opt. 316 Stainless Steel, Delrin
Float Material	PU
Cable Material	Silicon Cable (Std.)
Weight	290 g. (With Cable 1 m.)
Min. Density	0,70 g/cm ³
Cable Length	1 m. (Std) Opt. M12 Socket
Protection Class (EN60529)	IP 65

Advantages :

Not include magnetic parts.
Stainless Steel Design
Without mercury contact
Independet in terms of connection

ELR dirty water switch uses for the control of extreme dirty fluids. It can be mounted to tank from within or outside without connection way requirement. It is perfect endurance with stainless steel record and nut. PU material float is connected to body with silicon cable. It gives alarm information with NO or NC contact when nonmercury contact in float pass the horizontal slope angle. It is suitable for use on rail.

Areas of Application :

Train carriage and dirty water store of boat, dirty water tanks, tank include particulate dirty fluid...

ELV FLOAT VALVE



Technical specifications :

Body Material	304 Stainless Steel	Opt.316 Stainless Steel
Piston Bracket Material	304 Stainless Steel	Opt.316 Stainless Steel
Piston Material	304 Stainless Steel	Opt.316 Stainless Steel
Bolt + Nut + Stamp + Pin Material	304 Stainless Steel	Opt.316 Stainless Steel
Seal Material	Viton	
Max.Working Temperature	200 °C	
Max.Working Pressure	2 bar...10 bar	

Advantages :

Special model can be produced upon demand.
Models with shorter valve arm can be produced.
Seal, which is resistant to oil, petrol or materials in the food sector.
Stainless steel

It is used checking liquid level in the tanks. Length of float can be adjusted with the arm, which is designed horizontally and vertically with the arm, with closed design. Valve is closed by increasing liquid level by using temperature resistance isolation material or on the contrary, valve is opened and starts to discharge with increase in the liquid level. When level decreases, valve is closed. Special connection and models can be made. Seal material can be selected in compliance with special liquids (oil, petrol, food fluids).

Areas of Application :

Tank, fire-fighting water tanks, for controlling the tanks which are in without electricity environment, condensate, tanks, food storage tanks, etc.

EYG TANK LEVEL GAUGE



Technical specifications :

Accuracy	± % 5
Operating Temperature	(-) 40 °C / (+) 85 °C
Material of Connection	PP
Connection	1 1/2 " BSP Male (Std)
Scale	PVC
Stem Length	Max. 750 mm
Material of Float	Polyurethane
Material of Display Cover	Transparent Polycarbonate Crystal
Material of Guide Road	304 Stainless Steel
Material of Shaft	304 Stainless Steel
Material of Ring	NBR

Advantages :

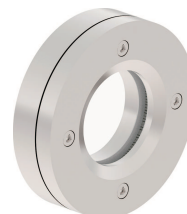
Economical
Practical and easy mounting
Quick delivery time
Complete Stainless Steel.

EYG Tank level indicator is manufactured for displaying the level in the tank. Easy and quick levels can be seen by users. Installation can be made in a simple way. EYG usually used in hydraulic and fuel level measurement. sıklıkla kullanılır.

Areas of Application :

Machinery, hydraulic oil tanks, small ware house etc.

ELD SIGHT FLOW INDICATORS



Technical specifications :

Body Material	Transparent Plastic, Steel, Aluminium, St.St.
Seal Material	NBR , PTFE , Viton
Max. Working Pressure	2 bar , 15 bar
Max. Working Temperature	60 °C , 80 °C , 150 °C
Display Material	Plastic , Glass

Technical specifications :

Transparent Monitoring Pipe	Acrylic Pipe or Borosilicate Glass
O-Ring	NBR, Opt. Viton
Working Temperature	Std. 60 °C (Acrylic) Ops. 180 °C (Glass)
Max. Working Pressure	2 bar , 6 bar
Connection Material and Shafts	304 Stainless Steel , 316 St.St. , U-PVC
Float Material (Opt.)	304 Stainless Steel

Advantages :

Liquid easily can be discharged by changing valves position
 Easy installation
 Indicator can be chosen via material types
 As optional, a contact can be mounted.
 Resist to high temperature.
 Resist to high pressure.
 Economical

It is an economic level monitoring indicator, which is designed for monitoring flow in the pipe lines for machine manufacturers, food factories. It can be installed horizontally or vertically.

Areas of Application :

Hydraulic tanks, pressure vessels, cooling tanks, hydraulic lines and oil vessels.

CAPACITIVE CONTACT

The magnetic contact works according to capacitive working principle and used to receive liquid flow information without any metal parts. Accuracy can be arranged via potentiometer setting and with a led, it gives visual information to users. It can be used as a flow switch. Beside it can be used to take min. and max. contact information.



Tank Surface	Max.10 mm. (ELD-A)
Suitable Mounting Type	Ø 8 - 12 mm (thicknes max. 1 mm.) (ELD-B)
Pipe	Ø1 2 - 26 mm (thicknes maks.1.5 mm.) (ELD-C)
Body Material	ABS Plastic (Heat resistant) 32 x 19 x10 mm
Protection Class (EN60529)	IP 66
Weight	70 g.
Cable Length	2 m.
Working Temperature	60 °C
Supply	12...24 VDC
Load	300 mA max.
Color	Black
Display	LED
Time to Answer	0,5 sec.
Output	NPN - NO

EFS FLOW SWITCH



Technical Specifications:

Material	Body+Thread+Nut	Stainless Type (EFS ..s)	Plastic Type (EFS ..p)
	T Body	AISI 304 St.St. (Opt. AISI 316 St.St.)	Polypropylene
	Bolt	AISI 304 St.St. (Opt. AISI 316 St.St.)	Polypropylene
	Palette	AISI 316 Stainless Steel	Polypropylene
	Relay Case	AISI 316 Stainless Steel	Polypropylene
	Magnet Case	Polypropylene	Polypropylene
	O-Ring	Polypropylene	Polypropylene
Fluid		Water (Oil, gas and aggressive media on request)	Water (Oil, gas and aggressive media on request)
Tolerance		± % 15 of full scale value	± % 15 of full scale value
Max. Working Pressure		25 bar	10 bar
Working Temperature		(-) 20 °C / (+)110 °C	(-) 20 °C / (+)70 °C
Ambient Temperature		(-) 20 °C / (+)70 °C	(-) 20 °C / (+)70 °C
Contact		Reed Switch SPST - NO	Reed Switch SPST - NO
Contact Current		1 A	1 A
Max. Contact Power		10 W / VA	10 W / VA
Max. Switching Voltage		200 VDC / 140 VAC	200 VDC / 140 VAC
Electrical Connection		ISO 4400 Socket	ISO 4400 Socket
		Opt.Cable Output, Socket with LED	Opt.Cable Output, Socket with LED
Protection Clas		IP 65, IP 67 (for sx, cx type)	IP 65, IP 67 (for px, bx type)

Advantages :

High precision
Easy to adjust and assemble
Relay circuit is contactless with fluid.
Low pressure decrease.
Economical

Working Principle:

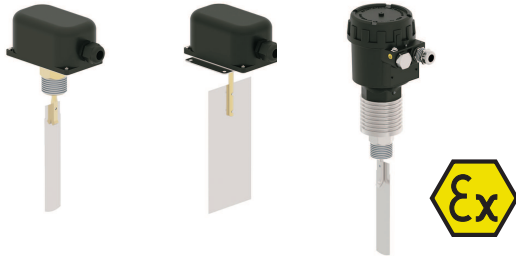
Palette, fastened from one point on the body, moves contact with fluid so that information about flow is obtained. When flow stops, it is provided that paddle comes to first position by pushing magnet with reverse pole in the paddle, attached on the body. By this means, longer life and resistance to higher pressure is provided in comparison with those of spring mechanisms. Reed relay with high precision and long life is used.

EFS is used in order to check safely whether there is flow or not by detecting movement of liquids inside the pipe. It provides information about flow with high reliability without spending energy in cooling water or lubricating oil circuits, in the devices such as flash heater, central heating boiler and heater. It should be assembled vertically. As factory setting, contact is closed when there is flow; contact is open when flow stops. Exact opposite situation can be adjusted by user by changing position of relay in the housing.

Application Areas :

Irrigation systems, low viscosity oil and acids, hot oil lines, heating and cooling systems, water installations

EFS FLOW SWITCH



Technical Specifications:

Fluid	Liquid , Air , Hot Oil
Working Temperature	(-)20 °C / (+) 90 °C , (-) 20 °C / (+) 85 °C (-)40 °C / (+) 300 °C
Working Pressure	Max. 10 bar , Max. 5 bar , Max. 20 bar
Paddle Material	316 Stainless Steel
Switch Bracket	Coated Steel , 304 Stainless Steel
Connection Material	Brass (MS 56) , Chrome Plated Steel , St.St.
Paddle Rod Material	Brass (MS 56) , Stainless Steel
Housing Material	PP , Aluminium , Stainless Steel
Bellow Material	Bronze , Stainless Steel
Seal Material	NBR , PTFE
Connection	1 " NPT Male Thread , Hole Flange
Pipe Diameter	from 1 " to 8 " - DN 25 to DN 200 (For Liquid) Channels greater than 300 cm ² (For Air)
Contact	15 A 250 VAC , NO/NC
Protection Class (EN60529)	IP 65

Technical Specifications:

Working Pressure	31 bar (450 PSI)		
Test Pressure	62 bar (900 PSI) %100		
Working Temperature	4.5 °C - 50 °C (40 °F - 120 °F)		
Contact	2 x 10 A 125 / 250 VAC 2.5 A 6 / 12 / 24 VDC		
Nominal Pipe Size			
inch	mm	inch	mm
2	DN 50		
2 1/2	DN 65	1,25 + 0,125 / - 0,62	33,0 ± 2,0
3	DN 80		
4	DN 100		
5	DN 125		
6	DN 150	2.00 ± 0,0125	50,8 ± 2,0
8	DN 200		

Advantages :

Suitable for hot and cold liquids
Air tight design
Can be used in hot oil
Economical

Advantages :

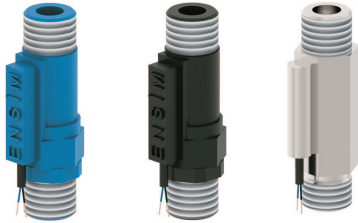
Double contact output.
Can be connected with U-Bolt.
Suitable for fire lines.

EFS Flow Switches are used for the monitoring of liquid flow in pipes. When the liquid flow stops or starts its paddle actuates a microswitch (NO/NC) , hereby electrical equipments are protected .The flow switch is suitable to use all kinds of non-corrosive liquid. Flow adjustable via screw mechanism.The products are factory setted.
Users can change the adjustment according to application needs.

Applications :

Irrigation systems, low viscosity oil and acids, hot oil lines, heating and cooling systems, water installations.

EFS FLOW SWITCH



Technical Specifications:

Fluid	Liquid
Working Temperature	0 / (+) 60 °C , (-)20 °C / (+)100 °C (-)30 °C / (+)125 °C
Working Pressure	Max. 10 bar , Max. 20 bar
Output	NO Single Contact (Reed Relay)
Connection	1/2 " BSP Male Thread
Cable	0.5 m. PVC
Spring and Rove Material	Stainless Steel
Body Material	PP , PVC , Stainless Steel
Body Colour	Blue , Gray
Accuracy	Adjustable
Contact	0.7 A 10 W 150 VDC / 120 VAC

Advantages :

Economical.
Relay circuit contactless with fluid.
Easy to install.

EFS is used in oraler to check safely whether there is flow or not by detecting movement for liquids inside the pipe. It provides information about flow with high reliability with out spending energy in cooling water, in the devices such as flash heater, central heater boiler and heater. It should be assembled vertically.

Applications :

Hot / cold water , steam, compressed air, fuel oil, pharmaceutical and food industry and other fluid lines, food machinery and process lines ...

EFD FLOW DISPLAY



Technical Specifications:

Body Material	304 Stainless Steel Opt. 316 Stainless Steel
Monitoring Material	Tempered Glass Double Glass
Seal Material	Klingrid (std) Opt. PTFE or Spiral wound
Pipe Diameter	DN 15....DN 50 Flange 1/2 " BSP... 2 " BSP Thread
Max. Working Temperature	200 °C Opt. 300°C
Max. Working Pressure	16 bar Opt. 40 bar

Advantages :

Complete stainless steel.
Suitable for food.
Easy to install.

EFD is used for monitoring flow in process lines. Must be careful to choose a model which is compatible with liquid characteristics in line. It is available for monitoring from both of side. As optional, flow switch can be assembled in the body.

To warrant its vigorously working should be used a filter in the line. Can be manufacturing according to customers need For different pressure range and different mounting types, etc.

EFS FLOW SWITCH



Technical Specifications:

Fluid	Water, Air
Connection Size	1/4" BSP, 1/2" BSP , 1" BSP (Std.)
Body Material	Brass (Nickel Plated) (Std.) Opt. Stainless Steel
Seal Material	EPDM (Std.) Opt. Viton
Spring Material	304 Stainless Steel
Thread Material	Brass (Std.) Opt. Stainless Steel
Contact Material	Plastic
Magnet Material	Alnico
Working Temperature	100 °C Opt. 120 °C (Stainless Steel)
Accuracy	± % 5 Full Scale
Contact	1 x NO 1A / 200 VAC
Max. Working Pressure	300 bar
Protection Class	IP 65

Advantages :

Can be used in hot and cold water / air.
Fully waterproof - air light design.
Economical.
High static pressure.

EFS 71 Flow Switch works with the power of the current in order to monitor the flow with high reliability. Mechanism works with the triggering of the reed switch inside by float while moving in the direction of flow. The reed switch is adjustable from outside of the body. Hysteresis (delay) is the difference in flow between the switch closing and opening again. The difference is the result of the movement required by the float to reclose the open contact. Therefore, shorter the difference; greater the accuracy. Choosing of the right magnets and reed switches; the delay of EFS 71 is adjusted to minimum.

Applications :

Monitoring of cooling circuits in welding machines, compressors, heat exchangers and centrifuges. Monitoring of sealing media for seals and pump dry running, motor cooling systems etc.

EFS THERMAL FLOW SWITCH



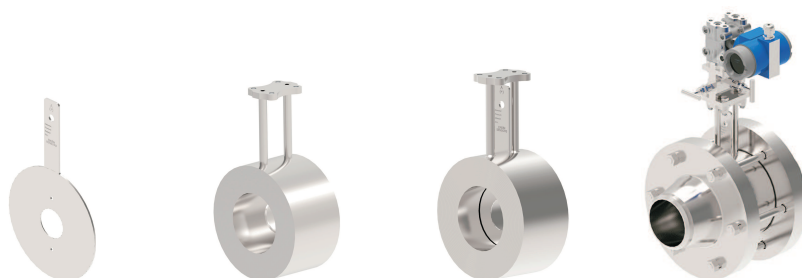
Technical Specifications:

Measurement Range	Water : 0,3...3 m/sec Air : 2...3 m/sec Oil : 0,3...3 m/sec
Accuracy	± %1 , ± 0,1 m/s
Setting Time	3 min.
Max. Pressure	100 bar
Ambient temperature	(-) 20 °C ... (+) 80 °C
Material of Housing	PVC
Material of Wetted Parts	316 Stainless Steel
Setting	With potentiometer
Output	PNP - NO / NC Relay - NO / NC Opt. NPN-NO/NC
Contact Current	5A / 250 VAC 30 VDC For Relay Max. 250 mA For PNP or NPN
Power Supply	24 VDC (Std.) Opt. 220 VAC
Consumption Current	<60 mA
Response Time	2 (2...10)sec
Max. Temperature Change	300 K/min.
Gradient of Medium	
Output Protection	Reverse, Short, Overload
Electrical connection	M12 Socket
Protection Class	IP 67

EFS 81 flow switch used the precision electronic components, reliable and stable circuit design, which are widely used in aerospace, automotive, military and other high-tech fields, make the flow signal more accurate and stable, at present the products have been widely used in iron and steel, metallurgy, pharmaceutical, chemical industry, etc.

EFS 81 flow switch is based on the principle of heat exchange design, probe the built-in heating module as well as the thermal module, heat dissipation of heating module and the flow velocity is closely related to the body. If there is no medium flow in the pipe, thermal circuit receives a fix value, when the fluid flows through the probe, thermal circuit receives the signal changes over medium velocity, thermal circuit will convert the temperature difference signals of heating module and thermal module into electrical signals, the processor will convert into PNP / NPN / RELAY signal output.

EFO FLOW MEASUREMENT WITH ORIFICE

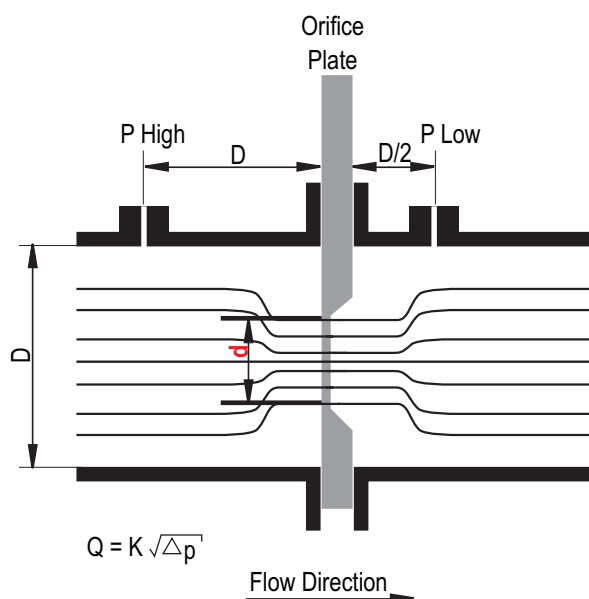


Technical Specifications :

Type	Orifice Plate Compact Orifice Plate- With Flange Compact Orifice Plate - D -D/2 Type Single (monolith) Block Orifice Compact (monolith) Block Orifice Double Block Orifice Compact Double Block Orifice
Plate Material	304 Stainless Steel , 316 Stainless Steel
Body Material	304 Stainless Steel , 316 Stainless Steel
Gasket Material	PTFE (Std.)
Bolt, Nut Material	Carbon Steel , 304 Stainless Steel , 316 St.St.
Flange Material	Carbon Steel , 304 Stainless Steel , 316 St.St.
Flange standard	EN 1092-1 , ANSI B16.5
Pipe Dimension	DN 50.... DN 400 mm
Pressure Class	PN 10 / 16 / 25 / 40 / 64 , 150 lbs / 300 lbs / 600 lbs
Temperature	(-)100 °C...(+) 500 °C
Fluid	Fluid, Steam, Gas
Marking	Flow up (+) face

Advantages :

Can be used in liquids and gases
No moving parts
Low risk of malfunction
Low Cost



$\Delta P = P \text{ High} - P \text{ Low}$
Q : Flow
K : Correction Factor

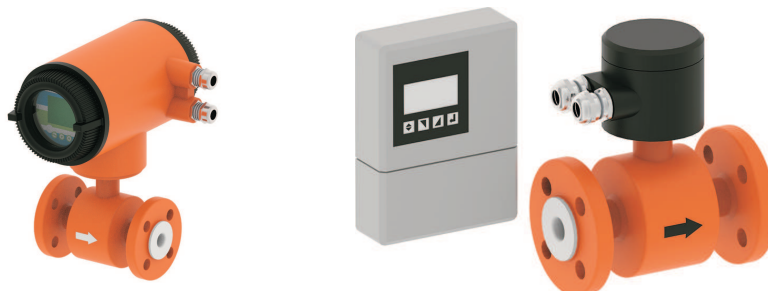
In industrial facilities, different types of flow measurement devices are being used, and each measuring method have advantages to each other, which depends on where they are being used. EFO model orifice plates are the most frequent method for flow measurement. It works according to Bernoulli theorem.

Volume value of a flow inside a constant space in a pipe, equals to square root of differential pressure value created by orifice plate inside that pipe. It is mounted on where flow is laminar.

A flat stainless-steel metal plate is drilled as calculated holes therefore the pressure difference between inflow and outflow can be calculated. Options are available for measure of the holes and type of the flow.

Accuracy of measurement is affected by production measures and quality, mounting conditions and type of the liquid. Model EFO offers economic and easy mounting solution for variety of liquid types. Model EFO produced in EN ISO 5167 standards.

EFM ELECTRO MAGNETIC FLOWMETER



Technical Specifications :

Measure Group	Liquids
Pipe Diameter	DN 10 ... DN 2400 mm
Speed Measure Interval	0.1 m/sec to 10 m/sec
Flow Measure Interval	0.0045 m³ to 113 094 m³
Case Material	Aluminum Alloy, Opt. 304 Stainless Steel , 316 Stainless Steel
Sensor Material	316 SS. , Opt. Hastelloy C, Opt. Hastelloy B, Titanium, Tantalum
Wet Part Material	PTFE or Rubber
Temperature Interval	(-) 20 °C / (+)150 °C PTFE ; (-) 20 °C / (+) 60 °C Rubber
Sensitivity	0.2 % High Sensitivity
Humidity Interval	5 – 95 % RH
Minimum Conductivity	20 µS
Connection	Flange Connection
Supply	85...265 VAC or 24 VDC
Protection Class	IP 67 Opt. IP 68
Output	Pulse, Analog, RS 485, Relay
Sample Interval	0.2 secs to 100 secs Daily
Record	Weekly, Monthly, Annually Total

Electro-magnetic flowmeters are commonly preferred in flow measure of conductive liquids. Electro-magnetic flowmeters returns volumetric values as L/sec. , L/min. , L/h. , m³/sec., m³/min., m³/h. Electromagnetic method is based on Faraday's Law of Induction. Due to following aspects, electromagnetic flowmeters are advantages: Not-including moving part, wet part's material are optional for different liquids, no pressure loss, showing excellent performance. Electromagnetic flowmeters outputs current flow and total flow thus; with the help of electrical signals returns data of flow to the system.

Applications :

Treatment Plants, Chemical, Petrochemical Industry, Food Sector, Textile Industry, Paper Production Sector, Power Plants, Water Distribution Networks Agricultural irrigation sector.

Technical Specifications :

Input (Selectable)	4-20 mA, 0-10 VDC, 0-5 VDC, Puls (PNP,NPN,Push-Pull,Reed)
Output (Selectable)	4-20 mA , 0-10VDC ve Puls (push-pull)
Communication	Modbus RTU-RS485
Analog Input Resolution	10 bit
Digital Input Speed	Max.10 KHz
Digital Output Speed	Max. 50 Hz
Indicator	4.3" 480 mm x 272 mm pixel resistive touchscreen
Working Humidity	% 10...% 85 (Non-condensate)
Power Supply	24 VDC, ±%10
Power consumption	3 W
Dimensions	144 mm x 144 mm (Front) , 134 mm x 134 mm (Rear) , Depth 100 mm
Protection Class	IP 65 (Front)

SMART CONTROL DEVICE

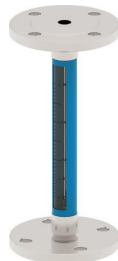


Advantages :

Tft Display
The Units Can Be Selected On The Display.
Simulation Properties

ESD100 Series, is the universal input is suitable for many measuring sensors. (Panel type pressure,temperature,level and flow display)Thanks to TFT display it can be easily read in dark or sunny environments. The selected units can be seen on the display. Device has standard communication output which can be also simulated.

EF FLOWMETER



Technical Specifications :

Measuring tube	Borosilicate Glass
Tube Length	100 mm
Protection Class	Polycarbonate
Float Stop Material	PTFE
Float Material	316 Stainless Steel
Seal Material	Viton
Max. Working Pressure	16 Bar
Max. Working Temperature	100 °C
Connections (R)	1/4" BSP / NPT
Needle Valve	316 Stainless Steel
Accuracy	Class 2.5
Weight	600 g.

Technical Specifications :

Fluid	Water, Air Special fluids should be stated
Max. Working Pressure	7...15 bar
Max. Working Temperature	150 °C
Measuring Tube	Borosilicate Glass
Float Material	316 Stainless steel
Float Stop Material	PTFE
Connections	316 Stainless steel
Case	Coated Steel
Accuracy	+/- %1 t.s.

Technical Specifications :

Fluid	Water or Air
Max. Working Pressure	10 bar
Max. working Temperature	70 °C
Measuring Tube	Trogamid
Float Material	PVDF
Guide Material	316 Stainless Steel
O-Ring Material	Viton
Connections	Thread
Accuracy	± % 3 t.s.

It is designed to be adjustable precisely for small flow. It is an economical flowmeter as well as it enables comfortable following and adjusting offlow with its compact structure.

Advantages :

Wetted parts are stainless steel
With needle valve
Accurate flow setting

Areas of Application :

Water, air, various gases.

Float which moves freely without friction in the measuring tube, changes location by being pushed by fluid. This changing flow rate depends on weight of float and density and viscosity of fluid. Pressure release remains area by raising flow rates so as to depend on increasing flow area by raising flow rate and speed of fluid. It should be assembled vertically.

Advantages :

Wetted parts are stainless steel
Accurate flow setting

Float which moves freely without friction in the measuring tube, changes location by being pushed by fluid. This changing flow rate depends on weight of float and density and viscosity of fluid. Pressure release remains area by raising flow rates so as to depend on increasing flow area by raising flow rate and speed of fluid. It should be assembled vertically.

Advantages :

Easy monitoring
Contact can be mounted

EF TURBINE FLOWMETER



Technical Specifications :

Fluid	Fluid
Working Temp.	-10/+80 C
Max. Pressure	17 bar
Range	1...33 l/min (0,18...2000 l/h)
Output	340 Puls/l (NPN)
Accuracy	+/- %2
Connections	1/2" BSP Male
Cable	PVC 0.2 m.
Wetted Parts	ABS
Protection	IP 68
Power Supply	3 ... 18 VDC
Electrical Connection	Yellow:Pulse Output Black: (-) Supply Red:(+) Supply



Technical Specifications :

Fluid	Fluid
Working Temp.	-10/+80 C
Max. Pressure	17 bar
Range	3...50 l/min (0,18...3000 l/h)
Output	370 Puls/l (NPN)
Accuracy	+/- %2
Connections	3/4" BSP Male
Cable	PVC 0.2 m.
Wetted Parts	ABS
Protection	IP 68
Power Supply	3 ... 18 VDC
Electrical Connection	Yellow:Pulse Output Black: (-) Supply Red:(+) Supply



Technical Specifications :

Fluid	Fluid
Working Temp.	-10/+80 C
Max. Pressure	17 bar
Range	0,15...8m/sec.
Output	Puls (NPN)
Accuracy	+/- %2
Connections	1 1/4" BSP Male
Cable	PVC 0.2 m.
Wetted Parts	ABS
Protection	IP 68
Power Supply	3 ... 18 VDC
Electrical Connection	Yellow:Pulse Output Black: (-) Supply Red:(+) Supply

It's designed for low flow measuring and monitoring. With the compact format ensures high accurate flow measurement and control. Cable and high precision pulse sensor placed into the body provides to get accurate values in the long time.

Applications:

Smart drinking Fountains , beverage industry , tea and coffee machine , water purifier , liquid filling machines...

Advantages:

Economical.
Easy to assemble.
Easy to adjust.

EPS PRESSURE / DIFFERANTIAL PRESSURE SWITCH



Technical Specifications:

Body materials	316 St.St., PP
Range	0...(+) 1 bar / 3.5 bar / 5 bar / 10 bar 20 bar / 100 bar / 200 bar / 400 bar (-) 0.8 bar ... (-) 01 bar
Diaphragm	NBR, Stainless Steel, Viton
Plastic Parts	PP
O-Ring	NBR
Mechanical Connections	1/4 " BSP. , 1/2 " BSP
Max.Pressure	x 1.5
Max. Current	5 A / 250 VAC
Contact	1 x NO / NC
Working Life	10.000.000 times (Depends on working range)
Working Temperature	(-) 40 °C...(+) 150 °C , (-) 25 °C...(+) 60 °C
Relative Humidity	5-95 % RH
Protection Class (EN60529)	IP 65

Technical Specifications:

Model	EPS200	EPS201
Diff. Pressure Range	0,3 bar... 3 bar	0,5 bar ... 4 bar
Display	Not available	Available
Repeatability	± % 2 , at 20 °C	
Average Dead Band	0.25 bar until 1.5 bar 0.8 bar until 1.5 bar	
Max. Pressure	35 bar	10 bar
Contact	1 x NO/NC , 3 A / 250 VAC	
Electrical Connection	DIN 43650 A Socket	
Mechanical Connection	1/4 " BSP Std	8 mm Hose
Working Temperature	(-) 20 °C....(+) 80 °C Ops.(-) 40 °C...(+)120 °C	
Body Material	Aluminium	Stainless Steel
Diaphragm Material	Buna-N, Opt. Viton	
Connection	Steel Opt. Stainless Steel	Stainless Steel
Spring	Stainless Steel	
Protection Class (EN60529)	IP 65	
Weight	0,5 kg	1,25 kg

Advantages :

High reliable accuracy
Easy adjustable
Economical

Working Principle:

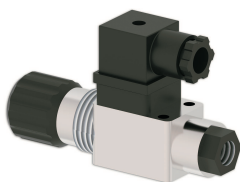
Inside the body , there are a compressed spring and a diaphragm.The spring and diaphragm move with pressure and trigger the contact and give pressure information.When the pressure is come down to adjusted pressure value , the contact is turn back to former position.
High precision and durable contact is used.

The EPS Pressure Switch is used for inline pressure measurement and control. The ideal type of assembly is vertical.

Application Areas :

It provides pressure information at high reliability without consuming energy in cooling water or lubricating oil circuits in devices such as water heater, combi boiler, heater. Filters, level measurement, backflow systems.

EPS OEM PRESSURE SWITCH



Technical Specifications:

Model	EPS300h	EPS...c	EPS...c
Type	Hydraulic	High Pressure	Low Pressure
Working Principle	With Piston , Adjustable	With Piston , Stationary	With Membrane , Stationary
Size range	50 - 350 bar	50 - 150 bar 50 - 200 bar	1 - 5 bar 1 - 10 bar 10 - 20 bar 20 - 50 bar
Static Pressure	Max. 500 bar	Max. 500 bar	Max. 300 bar
Working Temperature	(-)20 °C... (+) 100 °C	(-)20 °C... (+) 100 °C	(-)20 °C... (+) 100 °C
Mechanical Connection	1/4 " BSP Female (Std.)	1/4 " BSP , 1/8 "BSP (Std.)	1/4 " BSP , 1/8 " BSP (Std.)
Connection Material	Aluminum Casting	Steel-Nickel Coated Opt. Brass. St.St.	Steel-Nickel Coated Opt. Brass. St.St.
Output	2 A NO / NC - 42 / 220 VAC	2 A NO / NC - 42 / 220 VAC	2 A NO / NC - 42 / 220 VAC
Contact Sensitivity	< % 3	< % 5	< % 5
Contact Life	500000 times	1000000 times	1000000 times
Protection Class (EN60529)	IP 65	IP 65	IP 65



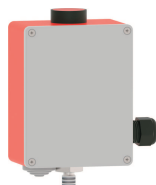
Technical Specifications:

Model	EPS...v	EPS...m
Type	Vacuum	Mini
Working Principle	With Membrane , Stationary	With Membrane , Stationary
Size range	(-)200 mbar ... (-)800 mbar	0,1 - 1 bar , 0,5 - 5 bar 1 - 10 bar , 10 - 20 bar 20 - 50 bar 50 - 100 bar
Static Pressure	Max. 20 bar	Max. 300 bar Max. 500 bar
Working Temperature	(-)20 °C... (+) 100 °C	(-)20 °C... (+) 100 °C
Mechanical Connection	1/4 " (Std.) BSP	1/4 " BSP , 1/8 " BSP (Std.)
Connection Material	Steel-Nickel Coated Opt. Brass. St.St.	Steel-Nickel Coated Opt. Brass. St.St.
Output	2 A NO or NC - 42 / 220 VAC	2 A NO or NC - 42 / 220 VAC
Contact Sensitivity	< % 5	< % 5
Contact Life	1000000 times	1000000 times
Protection Class (EN60529)	IP 65	IP 65

Advantages :

Small size.
Long life.
Easily adjustable and mounted
Economical

EPS PRESSURE SWITCH



Technical Specifications:

Contact Pressure	3 bar (when it falls) It can be manufactured upon request.
Max. Working pressure	200 bar
Test Pressure	300 bar
Contact	2 x 10A NO / NC - 250VAC
Housing Protection Class	IP 54
Red Color Protection Button	(Above)
Test Button	(Below)
Connection	1/4" BSP (Std.) Ops. Can be manufactured upon request.
Housing Material	Aluminium
Working Temperature	(-) 20 / (+) 50 ° C
Process Connection Material	304 Stainless Steel (Std.)
Electrical Connection Material	PG 11 Plastic

EPS 300 Model pressure switch is designed for wet or dry pipe systems with alarm check-valves preaction or deluge valves; in such special designs with automatic fire sprinkler systems to be used for detecting water flow. It is also used in low pressure control, between 3-15 PSI (0 - 10bar) adjustable.

Applications :

Fire pipelinecontrol systems, liquid pipelines that needs pressure regulation.

Advantages:

Test button is available.
There is an arming button.
Max. working pressure.
It is easy to commission.



Technical Specifications:

Thread Material	Polyamide Fiber
Housing Material	Polyamide Fiber
Diaphragm Material	Viton
Contact	10A-125 / 250 VAC 2,5A-24VDC
Output	1 or 2 Relay NO/NC
Connection	1/2" BSP Male Thread (Std.)
Dimensions	85x102x123 mm
Measure Area	0-10 bar (std.) Opt.
Working Temperature	(-)0...(+)60 °C
Default Setting	0,2 - 1,0 bar (3-15 PSI)
Max. Working pressure	21 bar (300 PSI)
Differential	0,21 bar 3 PSI
Protection Class	IP 66
Weight	290 g.

EPS 400 Model pressure switch is designed for wet or dry pipe systems with alarm check-valves preaction or deluge valves; in such special designs with automatic fire sprinkler systems to be used for detecting water flow. It is also used in low pressure control, between 3-15 PSI (0,2-1 bar) adjustable.

Applications :

Fire pipelinecontrol systems, liquid pipelines that needs pressure regulation.

Advantages:

Economical.
Set value can be adjusted.

ELX COOLING APPARATUS

SIPHON

Technical Specifications:

Material	: ST 37 Steel, 304 Stainless Steel 316 Stainless Steel
Max. Working Pressure	: 16 bar , 30 bar
Working Temperature	: 250 °C
Total Length	: 180 mm , 240 mm , 290 mm
Process Connection	: 1/4 " BSP, 1/2 " BSP Female , 1/2 " BSP Male
Sensor Connection	: 1/4 " BSP, 1/2 " BSP Female , 1/2 " BSP Male



THERMOWELL

Technical Specifications:

Material	: 304 Stainless Steel Opt. 316 Stainless Steel
Max. Working Pressure	: 16 bar (Std.) Opt. 30 bar
Working Temperature	: 250 °C (Std.) 600 °C
Total Length	: According to the order
Process Connection	: It is selected from the table.
Sensor Connection	: It is selected from the table.



CAPILLARY COOLER

Technical Specifications:

Material	: 304 Stainless Steel Opt. 316 St.St.
Max. Working Pressure	: 30 bar
Working Temperature	: 1200 °C / 800 °C / 400 °C
Total Length	: 200 mm / 150 mm / 100 mm
Process Connection	: 1/4 " BSP, 1/2 " BSP Female
Sensor Connection	: 1/4 " BSP, 1/2 " BSP Female



COOLER

Technical Specifications:

Material	: 316 Stainless Steel
Max. Working Pressure	: 80 bar
Working Temperature	: 180 °C / 250 °C
Total Length	: 87 mm / 107 mm
Process Connection	: 1/2 " BSP
Sensor Connection	: 1/2 " BSP , 1/4 " BSP



SAMPING VESSEL

Technical Specifications:

Max. Working Pressure	: 25 bar Opt. 50 bar
Max. Working Temperature	: 238 °C
Body	: 304 Stainless Steel Opt. 316 St.St.
Serpentine	: Copper Pipe Opt. 316 Stainless Steel
Cooler Liquid	
Input-output connection	: 1/4 " BSP
Max. Body Pressure	: 10 bar Opt. 50 bar
Elbow Material	: 304 Stainless Steel Opt. 316 Stainless Steel
Volume	: 2 L.



CONDENSATION TANK

Technical Specifications:

Material	: 316 Stainless Steel
Test Pressure	: 155 bar
Connection	: 3 x 1/2 " BSP



VORTEX COOLING TUBE

Technical Specifications:

Max. Working Pressure	: 7 bar
Flow Rate	: 6 L/hour
Weight	: 500 g.



ELX INSTRUMENT VALVE

Needle valves are designed especially for corrosive and dangerous environments. These valves can be used in the process control, instrumentation and flow control application. It is designed with maximum efficiency in order to provide high quality and low cost in various liquid and gas control system.

Test pressure : x 1,5

Standard;

Design: ASME B16.34

Wall Thickness: ASME B16.34

Pipe Thread: ASME B1.20.1.B521

DIN 2999 / 259 , ISO228/1 , JIS.B 0203 , ISO7/1

Inspection & Testing: M55 SP-110, EN12266

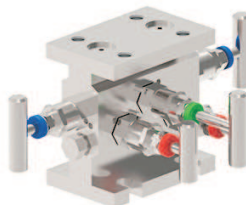
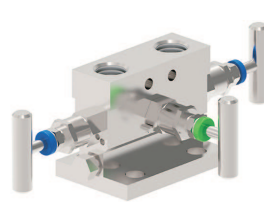
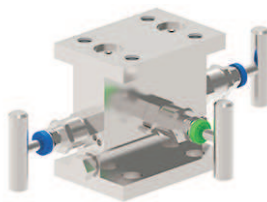
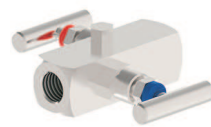
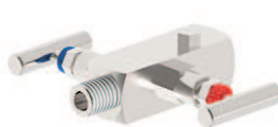
Advantages:

Complete Stainless Steel

Weldness Single Part Body

Max. 690 bar

Max. 400 °C



ETT TEMPERATURE SENSOR AND TRANSMITTER



Technical Specifications:

Type	Stem and wall
Range	(-)200 °C....(+)800 °C
Mechanical Connection	1/2 "BSP (Std) (Depends on request.)
Electrical Connection	Socket (ISO 4400) , Terminals, With Cable
Sensor	1 x pt100 3 Wire Cable (Class B - EN 60751) (Class A - EN 60751)
Output	1 or 2 x Pt 100 2 Wire 4-20 mA (Std.) 3 Wire 4-20 mA, 0-20 mA 0-5 V, 1-5 V, 0-10 V
Supply	10 - 30 VDC
Material	St.St. , PTFE , Aluminium , Plastic
Stem Length	Min. 10 mm Max. 10m. - On Request
Protection Class (EN60529)	IP 65 , IP 66
Pipe Diameter	Ø 6 , Ø 8 , Ø 10 , Ø 11 , Ø 14 mm On Request

Advantages:

Models up to max. of 600 bar
Practical and economical
Digital display can be mounted

Areas of application :

Machines, tank, boilers, gas and liquid fluid,
surface temp. measurement,
ambient temperature measurement.

Resistance thermometers are used in the locations where precise temperature measurement is demanded in the industry. It is based on change of electrical resistance of conductor subject to the temperature. It is used the resistance detector that is wound from thin platinum or nickel wire insulated within enamel, glass or ceramic as conductor. Detector provides 100 ohm resistance output in 0°C.

Increasing or decreasing values of resistance subject to temperature are measured and then, temperature is detected.

Copper, silver or nickel-chromium connection wires are added into two ends of resistance detector. It can be used from -200°C to +850°C. Analogue output information is taken through pt100 sensors in compliance with EN60751 and then, assessed in the automation system.

In order that resistance thermometers can measure accurately, it is recommended that it has dipping length as much as 6 and 15 times of dipping diameter.

Copper or Silver wire is used up to 500 °C and Nickel chromium is used after 550 °C between Pt 100 and connector. Copper conducting wire is used between device and pt100. It should have 2 wires up to 10 m., 3 wires up to 150 m. and 4 wires after 150 m.

EKS TEMPERATURE CALIBRATOR - DRY BLOCK



Technical Specifications:	ERCIYES SERIAL	ERCIYES SERIAL	VOLCANO SERIAL
Model	E500	E650	V1200
Range	(+) 40 °C... (+) 500 °C	(+) 40 °C... (+) 650 °C	(+) 80 °C... (+) 1200 °C
Block Type	Fixed Block	Variable Block	Variable Block
Resolution	0,1 °C	1 °C	1 °C
Stability	± 0.15 °C (at 200 °C) ± 0.15 °C (at 3 50 °C) ± 0.15 °C (at 500 °C)	± 0.1 °C (at 200 °C) ± 0.2 °C (at 400 °C) ± 0.2 °C (at 650 °C)	± 0.3 °C (at 700 °C)
Homogeneity Between Holes	± 0.4 °C (at 500 °C)	± 0.3 °C (at 400 °C) ± 0.3 °C (at 650 °C)	
Axial Uniformaty	± 0.3 °C (at 500 °C)	± 0.8 °C (at 650 °C)	± 0.3 °C (at 700 °C) (Bottom 4 cm) ± 1.7 °C (at 700 °C) (Bottom 1,5 cm)
Cell Diameter	130 mm	145 mm	130 mm
Heating Time (Including stabilization time)	40 °C to 500 °C 25 min.	40 °C to 650 °C 25 min.	*
Cooling Time	500 °C to 300 °C 40 min.	650 °C to 400 °C 23 min.	*
Type of Use	Bench Top / Portable	Bench Top / Portable	Bench Top / Portable
Dimensions (W x H x D)	17.8 cm x 30.1 cm x 25 cm	17.8 cm x 30.1 cm x 25 cm	19.6 cm x 36.3 cm x 28.2 cm
Weight	9.5 kg.	9.5 kg.	12.5 kg.
Power Supply	220 / 230 VAC, 50 Hz, 900 W	220 / 230 VAC, 50 Hz, 1100 W	220 / 230 VAC, 50 Hz, 1500 W
Package Included	Device (Homogeneity block included)	Device (Homogeneity block included)	Device (Homogeneity block included)
Optional Accessory	Carrying Case Homogeneity block options A Type (Ø 8 mm , Ø 10 mm , Ø 12 mm) 1 Piece B Type (Ø 12 mm) 3 Pieces C Type (Ø 8 mm) 5 Pieces D Type (Ø 8 mm , Ø 18 mm) 1 Piece E Type (Ø 5 mm) 8 Pieces F Type (Ø 5 mm , Ø 8mm) 4 Pieces	Carrying Case Homogeneity block options	Carrying Case Homogeneity block options A Type (Ø 12 mm) 3 Adet B Type (Ø 8 mm , Ø 21 mm) 1 Piece C Type (Ø 8 mm , Ø 12 mm) 2 Pieces D Type (Ø 8 mm , Ø 16 mm) 1 Piece E Type (Ø 8 mm , Ø 10 mm , Ø 12 mm) 1 Piece
Connection	Opt. USB Port	Opt. USB Port	Opt. USB Port

Advantages:

Functional apparatus , Aesthetic design , Clean structure

Used to calibrate any type thermometer such as resistance thermometers, liquids-in glass thermometers, thermocouples and analog or digital thermometers. Its oers the possibility to use with varios bath liquid such as water, silicone oil etc. depending on working temperature.

Areas of application :

Calibration Laboratories, Test Laboratories, Quality Control Laboratories, Universities, R&D Centers, Chemical / Pharmaceutical Industry
Marine Industry.

EKS TEMPERATURE CALIBRATION BATH



Technical Specifications:

Model	M 200
Range	(+) 30 °C... (+) 200 °C
Resolution	0,1 °C
Stability	± 0.07 °C (at 100 °C) ± 0.07 °C (at 175 °C)
Homogeneity	± 0.1 °C (at 100 °C)
Between Holes	± 0.3 °C (at 175 °C)
Liquid Reservoir	Tank Diameter: 66 mm Depth: 150 mm Immersion Depth: 120 mm Volume: 0.5 L
Heating Time (Including stabilization time)	30 °C to 175 °C 35 min.
Cooling Time	175 °C to 50 °C 60 min.
Type of Use	Bench top / Portable
Dimensions (W x H x D)	13 cm x 27 cm x 21 cm
Weight	6 kg.
Power Supply	220 / 230 VAC, 50 Hz, 500 W
Package Included	Probe basket, Transport / pour cover , Stir bar. Box Content
Optional Accessory	Carrying Case Liquid in glass thermometer holder 6 x 15 mm , Blackbody EN 12470-5 Tank Extender Liquid in glass thermometer holder 8 x 10 mm Thermometer holder disc. (diameter 15 mm) Dow Corning silicone oil Liquid in glass thermometer calibration module Mounting fixture
Connection	Opt. USB Port

Technical Specifications:

Model	MF350
Range	+40 °C... +350 °C
Resolution	0,1 °C
Stability	±0.06 °C (at 350 °C)
Homogeneity	± 0.1 °C (at 200 °C)
Between Holes	± 0.3 °C (at 350 °C)
Axial Uniformity	± 0.8 °C (at 200 °C) ± 2,1 °C (at 350 °C)
Hole Depth	80 mm
Heating Time (Including stabilization time)	30 °C to 350 °C 7 min.
Stabilization time	6 min.
Cooling Time	200 °C to 100 °C 11 min. 350 °C to 100 °C 19 min.
Type of Use	Bench top / Portable
Dimensions (W x H x D)	11 cm x 7 cm x 16 cm
Weight	1.2 kg.
Power Supply	220 / 230 VAC, 50 Hz, 400 W
Package Included	Device (Homogeneity block included)
Optional Accessory	Carrying Case Homogeneity block options
Opt. USB Port	Opt. USB Port

Micro calibrator is an ideal handheld dry-well calibrator with a working range of 40 °C ... 350 °C and ultra-compact dimensions for laboratories offering mobile calibration services. It is weighted about 1.2 kg. and easily carried in all difficult areas such as production sites and maritime sector. Despite its micro size, it has high stability and homogeneity values.

Advantages:

Functional apparatus
Aesthetic design
Clean structure

Provides high stability / uniformity with PID temperature controller and speed-controlled magnetic stirrer.

Compact size allows quick heating, saves time.

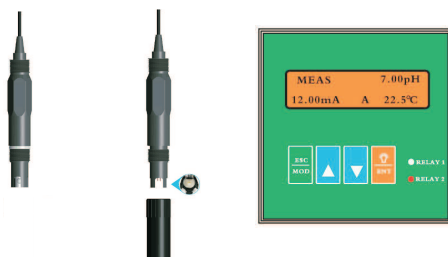
Thanks to its leakproof transport cover, the bath may be carried with liquid inside.

Used to calibrate any type thermometer such as resistance thermometers, liquids-in glass thermometers, thermocouples and analog or digital thermometers. It offers the possibility to use with various bath liquid such as water, silicone oil etc. depending on working temperature.

Areas of application :

Calibration Laboratories, Test Laboratories, Quality Control Laboratories, Universities, R&D Centers, Chemical / Pharmaceutical Industry
Marine Industry.

EPH PH SENSOR PH CONTROL DEVICE



Technical Specifications:

PH	Measure Range	-2.00 ~ 16.00 pH
	Resolution	0.01 pH
	Accuracy	± 0.01 pH
	Input Impedance	$3 \times 10^{12} \text{ } \Omega$
ORP	Measure Range	-2000 ~ 2000mV
	Resolution	0.01 mV
	Accuracy	±1 mV
	Measure Range	-25 ~ 130 °C
Temperature	Resolution	0.01 pH
	Sensor	PT1000
	Compensation	Automatic / Manual
	PH / ORP	4-20 mA (Adjustable)
Signal Output	Current Accuracy	1 % FS
	Load	< 750 W
	On / Off	2 SPST Relays
	Load	5A 250VAC / 5A 30 VDC
Relay Output		RS485 For (EPH-Ci)
		Compatible With standard MODBUS-RTU
	Power	100 ~ 240 or 24VDC
	Working Tem.	0 ~ 60 °C
Data interface	Humidity	< 90 %
	Protection Class	IP 55
	Installation	Panel Mounting
	Dimensions	96x96x138 mm (H*W*D)
	Weight	0.5 kg

Advantages:

LCD display with backlight, English operation interface.

Calibration and setting can set cryptoguard. Technical parameters can be set with buttons on site.

High stability, high accuracy, can measure PH, ORP and temperature.

Temperature compensation.

Multiple output (2 relays, 4-20mA, RS485).

Supper anti-interference design can be used for strong interference with field operations and anti-electromagnetic interference.

The built-in memory chip ensures that the parameters and calibration data are not lost when shut down or off normally.

Can automatically detect the temperature probe and enter the automatic temperature compensation program.

Application : Soilless cultivation, aquaculture, water treatment, thermal power, metallurgy, pharmaceutical, enviromental protection, food, tap water, chemical industry etc.

Ensim water quality analysis instrumentation hardware used the precision electronic components, strong anti-interference and reliable stable patent integrated circuit design, which are widely used in aerospace, automotive, military and high-tech fields, simple operation and rich interface software instrumentation system, make the detection signal is more accurate and stable, the current products have been widely used in metallurgy, electronic power, pharmaceutical, chemical, oil, water treatment, food and other industries.

EBQ GSM CONTROL MONITORING AND TRACKING



GSM RELAY CONTROL AND WARNING DEVICE

Technical Specifications:

Model	EBQ100
Power Need	2 VDC 1.5 A
Relay Output	8 Panasonic Relay (5 A 277 VAC / 3 A 30 VDC)
Inputs	4 (Dry Contact)
LCD	2 x 16 LCD
Buzzer	Yes
Call Notification	10 Number
SMS Notification	10 Number
Email Notification	3 Mail Address (No SSL, May be accepted as spam from servers)
Antenna	SMA Connector (3 m. GSM Antenna included)
Terminal	Plug-in Terminal (3.81 mm)
Enclosure	Rail Type Plastic Enclosure Also suitable for wall mounth 157 mm x 90 mm x 60 mm



GSM RELAY CONTROL AND WARNING DEVICE

Technical Specifications:

Model	EBQ103
Power Need	2 VDC 1.5 A
Relay Output	2 Panasonic Relay (5 A 277 VAC / 3 A 30 VDC)
Inputs	3 (Relay Contact)
Analog Sensor	2 Analog Input (1 x 4-20 mA, 1x 10K NTC Temperature Sensor Input)
Buzzer	No
Call Notification	10 Number
SMS Notification	10 Number
Email Notification	10 Mail Address
Antenna	SMA Connector (3 m. GSM Antenna included)
Terminal	Plug-in Terminal (3.81 mm)
Enclosure	Rail Type Plastic Enclosure Also suitable for wall mounth 110 mm x 90 mm x 60 mm



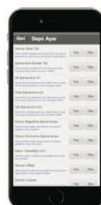
EXPANDABLE GSM RELAY CONTROL AND WARNING DEVICE

Technical Specifications:

Model	EBQ119
Power Need	12 - 24 VDC 1 A
Relay Output	Max 24 Relay with external device (With EBQ352 or EBQ351-19 device)
Dry Contact Input	Max 24 Input with external device (With EBQ360 or EBQ51-19 device)
Modbus Register	8 Modbus Register
Alarm	20 Modbus Alarm , 40 Digital Input Alarm
Communication	RS 232 (For device Settings) RS 485 (Form Modbus Registers)
Buzzer	Yes
Alarm Notification	10 Number for SMS Notification 10 Number for Silent Call 3 Email Address for Mail Notification
Antenna	SMA Connector (Antenna Included)

SMS ASSISTANT

SMS Asistan Application makes easy to adjust the settings or to control the all GSM control units. We have both Android and IOS versions. You can add many devices to the software and control them individually. You can add many macros for frequently used settings or control commands.



EBQ INDUSTRIAL AUTOMATION PRODUCTS



Technical Specifications:

Model	EBQ370-02 EBQ370-02N
Power Need	24 VDC
Input	6 x 4-20 mA Sensor Input
ADC	16 Bit 12 Bit
Protocol	Modbus RTU
Terminal	Screw Terminal (5.08 mm)
Enclosure	Rail Type Enclosure 70 mm x 90 mm x 60 mm

Technical Specifications:

Model	EBQ420
Power	24 VDC
Requirements	GPRS / TCP Ethernet
Internet Access	4 Pcs. Relay
Number of Relays	1 Pcs. 12C
Sensors	Temperature humidity sensor 4 Pcs. 4,-20 mA sensor 4 Pcs. Digital Input 10 Pcs. RS 485 Mudbus Register
Terminals Type	Plug-in Terminals (3.81 mm)
Box	157 mm x 90 mm x 60 mm

Technical Specifications:

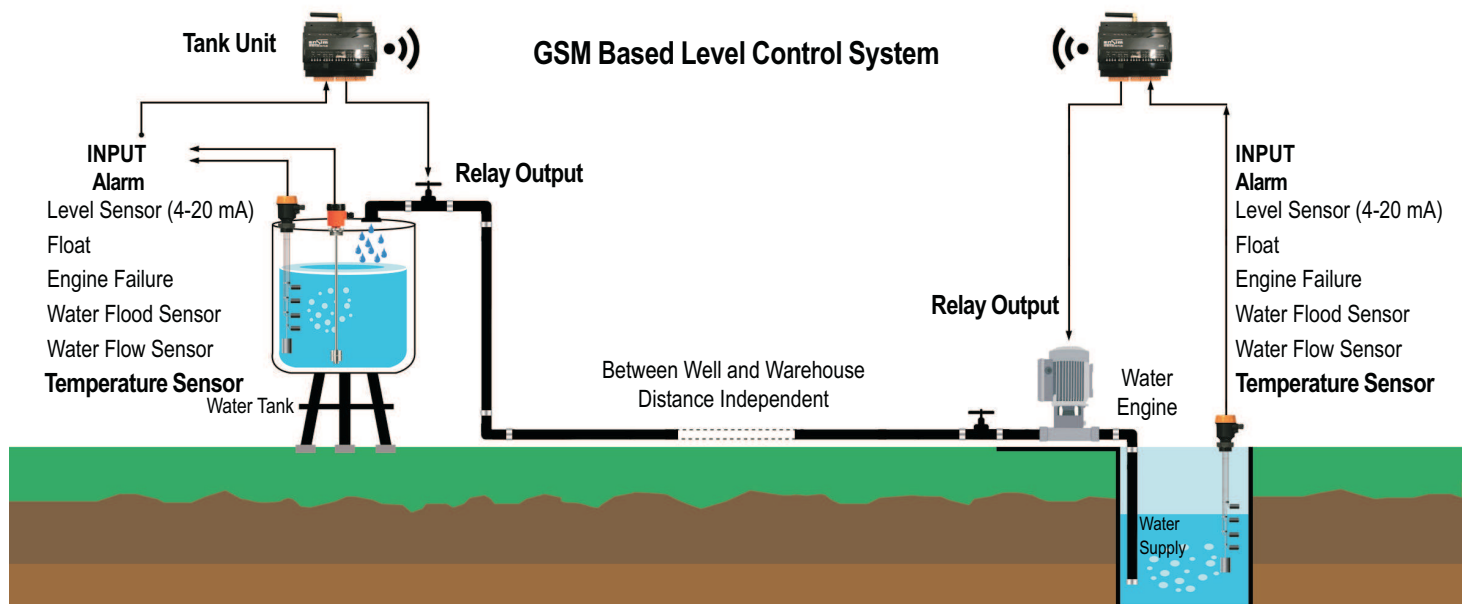
Model	EBQ485
Voltage Isolation	1000 V
USB Connector	USB A Type Male
RS485 Connector	Plug-in Terminals (3.81 mm)
Dimensions	50 mm x 30 mm x 15 mm

Technical Specifications:

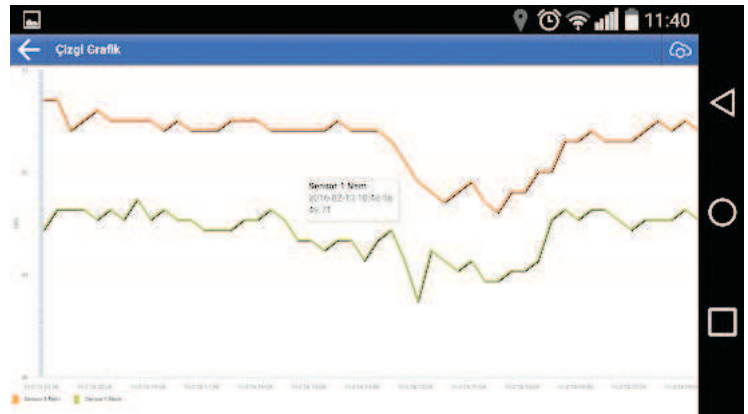
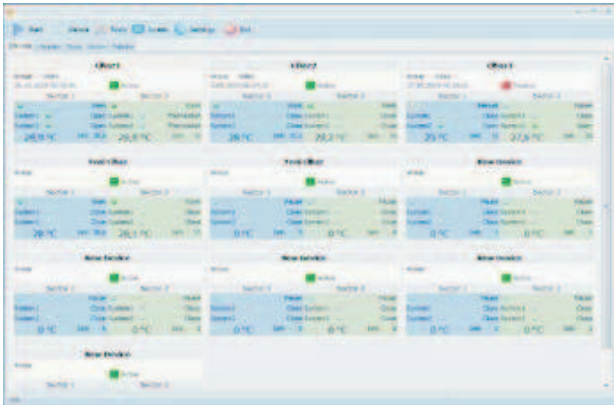
Model	EBQ113
Power Need	12 VDC 1.5 A
Relay Output	2 Panasonic Relay
Digital Inputs	Max. 3 level switch
Level Sensor	4-20 mA Level Sensor
Temperature Sen.	10K NTC Input
Enclosure	Plastic Rail Type 110 mm x 90 mm x 60 mm



GSM Based Level Control System



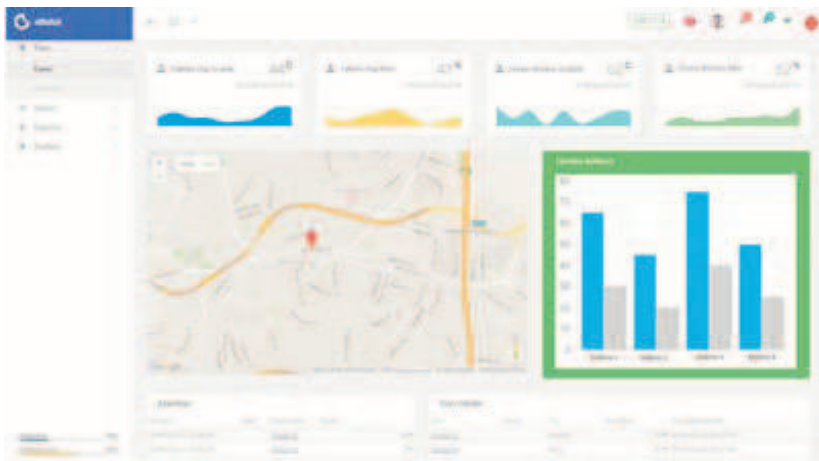
ENSIM SCADA



Basic Scada is a program that, easy to use and based on windows operation system. Thanks to this program, you can connect devices from modbus RTU and modbus TCP protocol to read and save the data. Also this program gives you opportunity to control connected devices. Recorded data can be reported, analysed and shown on graphics. More over this program can produce new virtual parameters with data that read by using mathematical calculations .For example ; You can calculate volume of a tank with using its height, or you can calculate its dew point value with using temperature and humidity information. Due to usage of network based database, data collector programs can be run more than one at different locations from eachother. Also, you can access analyse programs on other computer by using network to get reports. Program can upload the data on our industrial cloud system or create alarm records by your definitions.



ensim^{live} INDUSTRIAL CLOUD



Industrial cloud system is a system that can save data from devices to its own memory for tracking and reporting. Also it can inform its users in critical conditions by creating alarm. You can export you data from PLC and Scada systems to cloud and track them from your phone or tablet device. You can fastly access important devices data without using web interface by using E-Cloud application which can be downloaded from Apple and Adroid market. You can identify alarm criterias on system parameters to get calls, sms or e-mails in those alarm situations, or get push notifications from mobil devices with "1clIndustrial Cloud Alarm". Also it is possible to create virtual parameters on system. For example ; You can calculate volume of a tank with using its height, or you can calculate its dew point value with using temperature and humidity information to show as its natural parameter to system. Panel screens can be customized due to usage and you can identify different authority to users. You can view saved data on devices to create reports or graphics.

HIGH PRECISION INDUSTRIAL PRESSURE MEASUREMENT



Technical Specifications:

XMP i

Nominal pressure	0 ... 400 mbar to 0 ... 600 bar (XMP i) (turn-down 1:10 adjustable) 0 ... 160 mbar to 0 ... 20 bar (XMP ci) (turn-down 1:5 adjustable)
Accuracy (According to IEC 60770)	0.1 % FSO (XMP i) 0.1 / 0.2 % FSO (XMP ci)
Process connection	Inch and NPT threads, DRD, flange
Housing	Two chamber aluminium die cast case, stainless steel field housing
Option	Display and operating module, flameproof enclosure, cooling element up to 300 °C (XMP i), diaphragm 99.9 % Al2 O3 (XMP ci)



Technical Specifications:

DMP 331P

Nominal pressure	0 ... 400 mbar to 0 ... 40 bar
Accuracy (According to IEC 60770)	0.1 % FSO
Characteristics	excellent temperature response 0.04 % FSO / 10 K, process connections suitable for hygienic application, vacuum resistant
Option	IS-version, communication interface for adjustment of offset, span and damping



Technical Specifications:

DMP 200

Differential pressure	0 ... 1 mbar to 0 ... 20 bar
Accuracy (According to IEC 60770)	0,075 % FSO
Characteristics	Static over pressure 400 bar, rangeability max. 100:1, aluminium die cast case, HART®-communication
Option	IS-version, LC display, stainless steel housing



Technical Specifications:

DMK 331

Nominal pressure	0 ... 400 mbar to 0 ... 600 bar
Accuracy (According to IEC 60770)	0.5 % FSO
Option	IS-version, compact field housing, pressure port PVDF, oxygen application, pressure port G 1/2" flush

HIGH PRECISION INDUSTRIAL PRESSURE MEASUREMENT



Technical Specifications:

DS 400 / 401

Nominal pressure	0 ... 100 mbar to 0 ... 600 bar (DS 400) 0 ... 400 mbar to 0 ... 600 bar (DS 401)
Accuracy (According to IEC 60770)	0.25 / 0.35 % FSO (DS 400) 0.5 % FSO (DS 401)
Characteristics	up to 2 contacts, 4-digit LED-display in ball housing, rotatable and configurable display module
Pressure port	Inch and NPT threads
Option	IS-version, pressure port PVDF (DS 401)



Technical Specifications:

DS 201P / 200P

Nominal pressure	0 ... 100 mbar to 0 ... 40 bar (DS 200 P) 0 ... 60 bar to 0 ... 400 bar (DS 201 P)
Accuracy (According to IEC 60770)	0.25 / 0.35 % FSO (DS 200 P) 0.5 % FSO (DS 201 P)
Characteristics	up to 4 contacts, 4-digit LED-display, rotatable and configurable display module
Pressure port	Inch thread (flush), dairy pipie, clamp, varivent® (DS 200 P)
Option	Cooling element up to 300 °C (DS 201 P)

HIGH PRECISION INDUSTRIAL LEVEL MEASUREMENT



Technical Specifications:

LMP 307

Level	0 ... 1 mH2 O to 0 ... 250 mH2 O
Temperature	0 ... 30 °C to 0 ... 70 °C (LMP 307 T)
Housing material	Stainless steel 1.4404 (316 L)
Accuracy (According to IEC 60770)	0.1 / 0.25 / 0.35 % FSO (LMP 307) 0.25 / 0.35 / 0.5 % FSO (LMP 307 T)
Special feature (LMP 307T)	1° C (LMP 307 T) Two galvanic separated signal circuit for pressure and temperature
Option (LMP 307)	IS-version, cable protection via corrugated pipe, drinking water certificate acc. to DVGW and KTW



Technical Specifications:

LMP 307

Level	0 ... 40 cmH2 O to 0 ... 200 mH2 O
Housing material	stainless steel 1.4404 (316 L), CuNiFe
Accuracy (According to IEC 60770)	0.1 / 0.25 % FSO
Special feature (LMP 307T)	permissible temperature up to 125 °C, chemical resistance against seawater and HFO
Option (LMP 307)	IS-version, diaphragm 99.9 % Al2 O3 , screw-in and flange version


HUMIDITY & TEMPERATURE MEASUREMENT



Technical Specifications:

Relative humidity measurement	
Measuring/sensor element	Capacitive
Output range	0...100 % RH
Accuracy	±2 % RH at 5...95 % RH and 10...40 °C
Temperature measurement	
Sensor element	Pt100 Class B
Output range	-20 ... + 80 °C
Accuracy	±0.2 K (otherwise ±0.3 K)
Electrical specifications	
Signal output	Supply voltage
4...20 mA	13 ... 24 V DC (intrinsically safe)

 II 1/2G Ex ia IIC T4

 II 2D Ex tb IIIC T95 °C

-40 °C ≤ Ta ≤ +80 °C

Approved for use in potentially explosive atmospheres:
EC Type Examination Certificate
IBExU 07 ATEX 1114

ATEX C.Ex

- Operating temp. up to 80 °C
- Accuracy: ±2 % RH
- IP 66
- ATEX approval
- Categories 1/2 G and 2D
- Stainless steel sensor tube

Technical Specifications:

Relative humidity measurement	
Measuring/sensor element	Capacitive
Output range	0...100 % RH
Accuracy	±2 % RH at 5...95 % RH 10...40 °C
Temperature measurement	
Sensor element	Pt100 Class B
Output range	-30 ... +70 °C (-ME) -20 ... + 80 °C -25 ... +125 °C 0 ... +200 °C
Accuracy	
with voltage output	±0.2 K
with current output	±0.3 K
Electrical specifications	
Signal output	Supply voltage
0...10 V	3/4-wire 15 ... 30 V DC /24 V AC
4...20 mA	2-wire 12 ... 30 V DC



GC / KC / ZC

In this series

- Operating temp. up to 200 °C
- Accuracy: ±2 % RH
- Options
- IP 65
- Pressure-resistant up to 25 bar
- Stainless steel sensor tube

HUMIDITY MEASUREMENT FOR PAPER



Technical Specifications:

Measuring range	1 to 50% water content (depending on the material)
Resolution	0.5% water content
Measuring depth:	max. 500mm
Operation temperature	0 to +50°C / 32 to 122°F
Protection class:	IP64

Your benefits:

Quickly and highly accurate measurement using a non-destructive method
 Digital displaying in “%” water content (weight percentage)
 Simple handling of moisture meter
 Pre-programmed calibration for different materials and bale densities
 Handy, applicable everywhere on site

Measurement of compressed bales, roles and pulp possible.

Measuring range of 1 to 50% water content, measuring depth 500mm.

Furthermore it is possible to connect external sensors to the humimeter RP6.

Automatic temperature compensation

Measurement within seconds without prior treatment of samples

Hold function, automatic datalog for up to 10,000 logs with measuring point report



Technical Specifications:

Measuring range	1% to 25% water content
Resolution	0.1% water content
Measuring depth:	50 mm
Paper temperature for determination of water content	0 to +80°C / 32 to 176°F
Infrared temperature measurement	-25 to +125°C / -13 to 257 °F

Your benefits:

Quick and highly accurate measurement using a non-destructive method
 Simple handling, small, handy, applicable everywhere on site

For paper manufacturers, paper processors and paper retailers, for a non destructive determination of absolute moisture of paper and cardboard at warm, running paper rolls as well as at stagnant, cool rolls. With non-contact infrared paper temperature measurement. Non-destructive measurement through the packaging!

Automatic temperature compensation

Non-contact infrared temperature measurement with 90° optics

LIQUID CONCENTRATION AND DENSITY MEASUREMENT



In-line liquid concentration or density measurement for process control in general industry applications

Technical Specifications:

Model :	PR-43-G Series
Measurement Range :	0... 100 % concentration.
Accuracy :	± 0.1 % by weight
Repeatability :	± 0.02 % by weight
Process pressure :	Up to 25 bar (350 psi) at 20°C (70°F).
Process temperature :	-40°C...150°C
Ambient temperature :	Min. -40°C (-40°F), max. 45°C
Process wetted parts :	AISI 316L stainless steel, prism ; sapphire, prism seal ; modified PTFE.
Protection class :	IP67, Type 4X (for outdoor use).
Current output :	4-20 mA
Power Supply :	+24 VDC +/-10% , Max 2 VA
Options :	Prism wash, Increased safety (Ex e) certification for hazardous area installations

Indication Options :

Multichannel User Interface
Compact User Interface
Web User Interface

Typical Applications :

Alkalies And Chlorine
Chemicals
Plastics, Resins,
Fibers And Synthetic Rubber
Metal Machining And Mining
Salts And Sodium Compounds
Effluent And Water Treatment

For measuring Brix in the demanding cane and beet sugar refining and milling processes

Technical Specifications:

Model :	PR-23-GP/GC Series
Measurement Range :	0... 100 % concentration.
Accuracy :	± 0.1 % by weight
Repeatability :	± 0.05 % by weight
Process pressure :	Up to 15 bar at 20°C
Process temperature :	-40°C...130°C
Ambient temperature :	Min. -40°C, max. 45°C
Process wetted parts :	AISI 316L stainless steel, prism ; sapphire, prism seal ; modified PTFE.
Protection class :	IP67, Type 4X (for outdoor use).
Options :	Prism wash, Increased safety (Ex e) certification for hazardous area installations



INDICATING TRANSMITTER

Display: 320x240 pixel graphical LCD with LED backlight

Keypad: 18 membrane keys

Current output: , Two independent current outputs, 4-20 mA, max. load 1000 Ohm,
galvanic isolation 1500 VDC or AC (peak), hold function during prism wash

Fieldbus and industrial Ethernet connectivity : Through Fieldbus converter to Modbus/TCP, Modbus RTU and Ethernet/ IP networks

Power: AC input 100-240 VAC/50-60 Hz, optional 24 VDC, 30 VA

Alarms/Wash relays: Two built-in signal relays, max. 250 V/3 A

Transmitter protection class : Polycarbonate enclosure IP66, Type 4X (Indoor use);

AISI 304 Stainless steel enclosure IP66 (Indoor use).

Typical Applications :

Chemicals, Plastics And Fibers, Pulp And Paper Industry, Salts And Sodium Compounds, Soap And Detergents, Starch Sweeteners, Sugar.

LIQUID CONCENTRATION AND DENSITY MEASUREMENT



In-line liquid concentration or density measurement for process control in chemically aggressive liquids

Technical Specifications:

Model :	PR-23-W/M Series
Measurement Range :	0... 100 % concentration.
Accuracy :	± 0.1 % by weight
Repeatability :	± 0.05 % by weight
Process pressure :	Max 10 bar
Process temperature :	-20°C...130°C
Ambient temperature :	Sensor: -20 °C...45 °C Indicating transmitter: 0 °C...45 °C
Sensor wetted parts :	lining ; ETFE, prism ; sapphire, prism seal ; modified PTFE O-ring ; Kalrez , adaptor ; sapphire
Protection class :	IP67, Type 4X (for outdoor use).
Options :	Prism wash, ATEX certified, FM certified



Typical Applications :

Chlor-Alkali Industry ,
Corrosive Chemicals ,
Ultra Pure Fine Chemicals,
Electronic Chemicals.

INDICATING TRANSMITTER

Display: 320x240 pixel graphical LCD with LED backlight

Keypad: 18 membrane keys

Current output: Two independent current outputs, 4-20 mA, max. load 1000 Ohm, galvanic isolation 1500 VDC or AC (peak),
hold function during prism wash

Fieldbus and industrial Ethernet connectivity : Through Fieldbus converter to Modbus/TCP, Modbus RTU and Ethernet/ IP networks

Power: AC input 100-240 VAC/50-60 Hz, optional 24 VDC, 30 VA

Alarms/Wash relays: Two built-in signal relays, max. 250 V/3 A

Transmitter protection class : Polycarbonate enclosure IP66, Type 4X (Indoor use);

AISI 304 Stainless steel enclosure IP66 (Indoor use).

For in-line Brix and concentration measurement

Technical Specifications:

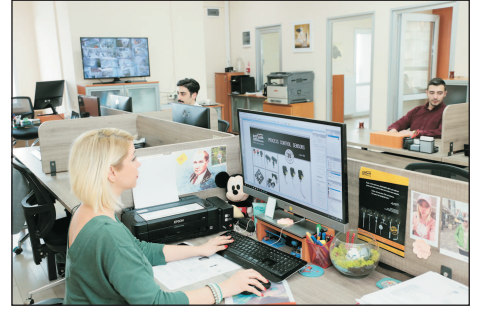
Model :	PR-33-AC
Measurement Range :	0... 100 % concentration.
Accuracy :	± 0.1 % by weight
Repeatability :	± 0.05 % by weight
Process pressure :	Up to 15 bar at 20°C , 9 bar at 120°C
Process temperature :	-40°C...130°C
Ambient temperature :	Min. -20°C, max. 45°C
Process connection:	Sanitary 3A-clamp 2.5"; Varivent® in-line access unit clamp DN65 or via elbow flow cell (for line sizes of 2.5" and smaller)
Process wetted parts :	Stainless steel 1.4435 (AISI 316L), prism ; sapphire, prism seal ; modified PTFE.
Sensor housing material:	AISI 304 stainless steel
Current output:	Isolated 4–20 mA (1000 Vdc isolation voltage)
Power supply:	+24V, less than 2 W
Ethernet output:	10/100BaseT Ethernet, web server for configuration and diagnostics, UDP/ IP connection for data acquisition
Protection class :	IP67, Type 4X (for outdoor use).
Options:	Interconnecting cables, flow cells, blind flange for Sanitary clamp 2.5 inch



Typical Applications :

Beverages
Cereals
Confectionary
Cultures, Enzymes, Yeast
Dairy
Egg
Flavours And Ingredients
Fruit And Vegetable Processing
Product And Cip Interfaces
Quality Control And Testing
Sugar Dissolving

SALES OFFICE



PRODUCT LINE



QUALITY CONTROL





ensimsensors



ensimTM
sensors

 **EnsimSightTM**

 **WATERSENSTM**

 **EnbellowTM**

ELORIONTM
sensors

 **EnabarTM**

 **FUELSSENSTM**