

# Nishka INSTRUMENTS

We Measure We Control Your Process



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**Manufacturer & Supplier Of :**

- Level Transmitters
- Level Indicators
- Level Switches
- Flow Meters
- Flow Switches
- Digital & Analogue Pressure Gauges
- Digital & Analogue Temperature Gauges
- RTD & Thermocouples
- Pressure & Temperature Transmitters
- Glass Tube & Metal Tube Rotameters
- Accessories

# LEVEL SWITCHES

## VERTICAL LEVEL SWITCH

A VERTICAL LEVEL SWITCH OPERATES BY DETECTING CHANGES IN LIQUID LEVELS USING A FLOATING ELEMENT THAT MOVES ALONG A VERTICAL SHAFT, TRIGGERING A SWITCH WHEN IT REACHES A SET LEVEL.

**MATERIAL:** SS304/ SS316/ PTFE COATED

**SWITCH TYPE:** SPST/ SPDT- REED SWITCH

**RATING:** 0.5/ 1A AMP @ 24VDC/ 230VAC

**PROCESS CONNECTION:** FLANGE/ THREAD END

**MAX OPERATING PRESSURE:** UPTO 10 BAR

**MAX OPERATING TEMP:** UPTO 125°C

## HORIZONTAL LEVEL SWITCH

A HORIZONTAL LEVEL SWITCH DETECTS LIQUID LEVELS BY USING A FLOAT THAT MOVES ALONG A HORIZONTAL AXIS, ACTIVATING A SWITCH WHEN THE LIQUID REACHES A PREDETERMINED POINT

**MATERIAL:** SS304/ SS316/ PTFE COATED/ PP

**SWITCH TYPE:** SPDT MICRO SWITCH

**RATING:** 8 AMP @ 230 VAC

**PROCESS CONNECTION:** FLANGE/ THREAD END

**TERMINATION HEAD:** WEATHERPROOF/ EXPLOSION PROOF

**MAX OPERATING PRESSURE:** UPTO 20 BAR

**MAX OPERATING TEMP:** UPTO 150°C (ABOVE ON REQUEST)

## VIBRATING FORK LEVEL SWITCH

A VIBRATING FORK LEVEL SWITCH WORKS BY MEASURING THE AMPLITUDE AND FREQUENCY OF A VIBRATING TUNING FORK TO DETECT THE PRESENCE OF LIQUIDS OR SOLIDS

**PROCESS CONNECTION:** FLANGE/ THREAD END

**MATERIAL:** SS304/ SS316/ PTFE COATED

**TERMINATION HEAD:** WEATHERPROOF/ EXPLOSION PROOF/ DIN CONNECTOR

**SWITCH TYPE:** 1/ 2 SPDT

**POWER SUPPLY:** 24 VDC/ 220 VAC

**OPERATING TEMPERATURE:** UPTO 80°C (ABOVE ON REQUEST)

## MICROWAVE LEVEL SWITCH

A MICROWAVE LEVEL SWITCH WORKS BY EMITTING MICROWAVE SIGNALS AND DETECTING THEIR REFLECTION FROM A MATERIAL SURFACE, MEASURING THE TIME DELAY TO DETERMINE THE LEVEL.

**PROCESS CONNECTION:** 1/2" BSP(STD)/ THREAD/ FLANGE END

**MATERIAL:** SS304 WITH PEEK PLASTIC

**OUTPUT:** PNP/ NPN (NO/ NC)

**POWER SUPPLY:** 24 VDC

**OPERATING TEMPERATURE:** UPTO 80°C (ABOVE ON REQUEST)

**MEDIA:** SUITABLE FOR LIQUID/ SOLID/ MIXTURE

## DISPLACER LEVEL SWITCH

A DISPLACER LEVEL SWITCH FUNCTIONS BY SENSING THE CHANGE IN BUOYANCY FORCE ON A SUBMERGED DISPLACER AS THE LIQUID LEVEL VARIES, TRIGGERING A SWITCH MECHANISM

**PROCESS CONNECTION:** FLANGE END

**FLOAT MATERIAL:** SS304/ SS316/ PP/ PTFE COATED

**CONTACT RATING:** 5A X 230 VAC/ 24 VDC/ 12 VDC

**TERMINATION HEAD:** WEATHERPROOF/ EXPLOSION PROOF

**CONTACT FORM:** 2/ 4/ 6 SPDT

**OPERATING TEMPRATURE:** UPTO 80°C

**MEDIA:** SUITABLE FOR STICKY LIQUID



# LEVEL SWITCHES

## SIDE MOUNT MINIATURE LEVEL SWITCH

A SIDE MOUNT MINIATURE LEVEL SWITCH WORKS BY USING A MAGNET - EQUIPPED FLOAT RISES OR FALLS WITH THE LIQUID LEVEL, ACTUATING A REED SWITCH WHEN IT REACHES A SPECIFIC POINT.

**MATERIAL:** SS304/ SS316 /PP

**SWITCH TYPE:** SPST/SPDT REED SWITCH

**RATING:** 0.5/ 1AMP @ 24VDC/ 230VAC

**PROCESS CONNECTION:** 1/4".....1" BSP/ NPT

**TERMINATION HEAD:** BARE WIRE/ DIN CONNECTOR

**MAX OPERATING PRESSURE:** UPTO 3 BAR

**MAX OPERATING TEMP:** UPTO 125°C



## TOP MOUNT MINIATURE LEVEL SWITCH

**MATERIAL:** SS304/ SS316/ PP

**SWITCH TYPE:** SPST/SPDT- REED SWITCH

**RATING:** 0.5/1AMP @ 24VDC/ 230VAC

**PROCESS CONNECTION:** 1/4".....1" BSP/NPT

**TERMINATION HEAD:** BARE WIRE/ DIN CONNECTOR

**MAX OPERATING PRESSURE:** UPTO 3 BAR

**MAX OPERATING TEMP:** UPTO 125°C



## CABLE FLOAT SWITCH

A CABLE FLOAT LEVEL SWITCH FLOATS RIDE ON THE LIQUID SURFACE PARTIALLY SUBMERGED AND MOVE THE SAME DISTANCE THE LIQUID LEVEL MOVES

**MOUNTING:** TOP MOUNT

**PROCESS CONNECTION:** BARE WIRE/ FLANGE END

**MATERIAL:** PP FLOAT AND PVC WIRE

**OPERATING TEMPERATURE:** UPTO 80°C

**OPERATING PRESSURE:** UPTO 1 BAR

**RANGE:** 2MTR TO 100MTR



## RF ADMITTANCE LEVEL SWITCH

RF ADMITTANCE LEVEL SWITCH USES RADIO FREQUENCY (RF) WAVES TO MEASURE THE LEVEL OF A MATERIAL IN A TANK

**MATERIAL:** SS304/ 316 WITH PTFE

**ENCLOSURE:** ALUMINUM/ PP

**PROCESS CONNECTION:** FLANGE/ THREAD END

**OUTPUT:** NO/ NC/ NPN/ PNP

**POWER SUPPLY:** 24 VDC

**PROTECTION:** IP 66

**MAX OPERATING PRESSURE:** UPTO 10 BAR

**MAX OPERATING TEMPERATURE:** UPTO 80°C



# LEVEL TRANSMITTER

## RADAR LEVEL TRANSMITTER FOR LIQUID

A RADAR LEVEL TRANSMITTER OPERATES BY TRANSMITTING MICROWAVES TO A MATERIAL SURFACE AND MEASURING THE TIME IT TAKES FOR THE REFLECTED WAVES TO RETURN, DETERMINING THE LEVEL FROM THE TIME DELAY.

**MEDIA:** LIQUID/ ACIDIC LIQUID

**FREQUENCY:** 76 GHz ~ 81GHz

**RANGE:** UPTO 120 METER

**MAX OPERATING PRESSURE:** UPTO 5 BAR

**MAX OPERATING TEMPERATURE:** UPTO 80 °C (ABOVE ON REQUEST)

**PROCESS CONNECTION:** FLANGE/ THREAD END

**OUTPUT:** 4 TO 20 mA WITH HART / RS485

**ACCURACY:** ± 1mm



## RADAR LEVEL TRANSMITTER FOR SOLID

**MEDIA:** ALL TYPE OF SOLID

**FREQUENCY:** 76 GHz ~ 81GHz

**RANGE:** UPTO 120 METER

**MAX OPERATING PRESSURE:** UPTO 5 BAR

**MAX OPERATING TEMPERATURE:** UPTO 80 °C (ABOVE ON REQUEST)

**PROCESS CONNECTION:** FLANGE/ THREAD END

**OUTPUT:** 4 TO 20 mA WITH HART/ RS485

**ACCURACY:** ± 1mm



## RADAR LEVEL TRANSMITTER FOR SOLID WITH STRONG DUST

**MEDIA:** ALL TYPE SOLID OR POWDER WITH STRONG DUST

**FREQUENCY:** 76 GHz ~ 81GHz

**RANGE:** UPTO 120 METER

**MAX OPERATING PRESSURE:** UPTO 5 BAR

**MAX OPERATING TEMPERATURE:** UPTO 80 °C (ABOVE ON REQUEST)

**PROCESS CONNECTION:** 3"/ 4" FLANGE END (ABOVE ON REQUEST)

**ACCURACY:** ± 1mm



## ULTRASONIC LEVEL TRANSMITTER

ULTRASONIC LEVEL TRANSMITTER ARE USED TO MEASURE LEVEL OF ALL KINDS OF LIQUIDS, THE SENSOR GENERATES ULTRASONIC SOUND WAVES WHICH STRIKES THE MEDIUM AND RETURNS. THE TRANSMITTER GENERATES A CURRENT SIGNAL PROPORTIONAL TO THE DISTANCE OF LIQUID FROM SENSOR.

**MEASURING RANGE:** UPTO 15 MTR

**MAX OPERATING TEMPERATURE:** UPTO 80 °C

**PROCESS CONNECTION:** FLANGE/ THREAD END

**MATERIAL:** PP / PTFE

**POWER SUPPLY:** 24 VDC

**OUTPUT:** 4 TO 20 mA/ RS485

**ACCURACY:** ± 2mm



## ULTRASONIC DISTANCE METER

ULTRASONIC SENSORS WORK BY EMITTING HIGH-FREQUENCY SOUND WAVES AND MEASURING THE TIME IT TAKES FOR THE SOUND TO REFLECT BACK TO THE SENSOR EASY TO INSTALL

**THREAD SIZE:** M18

**OUTPUT:** 4 TO 20 mA/ RS 485 WITH PNP OR NPN

**SENSING RANGE:** 60 - 1000 MM

**RESOLUTION RATIO:** 0.5 MM

**WORKING VOLTAGE:** 15...30 VDC

**ACCURACY:** ± 2mm



# LEVEL TRANSMITTER

## HYDROSTATIC LEVEL TRANSMITTER

HYDROSTATIC LEVEL TRANSMITTER FEATURE RELIABLE AND HIGHLY ACCURATE LIQUID LEVEL MEASUREMENT FOR WATER, DIESEL, GASOLINE AND MILD CORROSIVE LIQUID

**RANGE:** UPTO 300 METER

**POWER SUPPLY:** 24 VDC

**OUTPUT:** 4 TO 20 mA

**MOC:** BODY SS304 & DIAPHRAGM SS316

**MAX OPERATING TEMPERATURE:** UPTO 80 °C

**ACCURACY:** ± 0.5%



## CAPACITANCE LEVEL TRANSMITTER

CAPACITANCE LEVEL TRANSMITTER WORKS ON THE PRINCIPLE OF CHANGE IN CAPACITANCE VALUE, DUE TO CHANGE IN LIQUID LEVEL

**PROBE LENGTH:** UPTO 6000 MM

**MAX OPERATING TEMPERATURE:** UPTO 80 °C

**MAX OPERATING PRESSURE:** UPTO 5 BAR

**PROCESS CONNECTION:** FLANGE/ THREAD END

**MOC:** SS/ PTFE

**OUTPUT:** 4 TO 20 mA

**ACCURACY:** ± 2mm



## FLOAT TYPE LEVEL TRANSMITTER

FLOAT OPERATED LIQUID LEVEL TRANSMITTER CONSIST OF NON MAGNETIC SEALED STEM CONTAINING SERIES OF REED SWITCHES AND RESISTORS.

**MEASURING LENGTH:** 300 MM TO 5000 MM

**MAX OPERATING PRESSURE:** UPTO 10 BAR

**OUTPUT:** 4 TO 20 mA

**PROCESS CONNECTION:** FLANGE/ THREAD END

**ACCURACY:** ± 5 TO 10mm



## RF LEVEL TRANSMITTER

RF ENERGIZED PROBE AND CONTAINER WALL FORM THE TWO POLE PLATES OF THE CAPACITOR. THE INSULATOR OF THE PROBE AND THE SURROUNDING AIR BECOME DIELECTRIC MATERIALS.

**PROBE LENGTH:** UPTO 10000 MM

**MAX OPERATING TEMPERATURE:** UPTO 80 °C

**MAX OPERATING PRESSURE:** UPTO 5 BAR

**PROCESS CONNECTION:** FLANGE/ THREAD END

**MOC:** SS WITH PTFE TUBE

**OUTPUT:** 4 TO 20 mA/ RS485

**ACCURACY:** ± 2mm



## MAGNETOSTRICTIVE LEVEL TRANSMITTER

THE MAGNETOSTRICTIVE LEVEL TRANSMITTER USES BUOYANCY, MAGNETOSTRICTION AND ELECTRONICS TECHNOLOGIES TO ACCURATELY MEASURE THE LEVEL OF A WIDE VARIETY OF LIQUIDS, INCLUDING INTERFACE AND INSOLUBLE MULTIPLE LIQUIDS WITH A TWO-FLOAT DESIGN.

**PROBE LENGTH:** UPTO 6000 MM

**MAX OPERATING TEMPERATURE:** UPTO 80 °C

**MAX OPERATING PRESSURE:** UPTO 5 BAR

**PROCESS CONNECTION:** FLANGE/ THREAD END

**MOC:** SS304/ SS316

**OUTPUT:** 4 TO 20 mA/ RS485

**ACCURACY:** ± 0.1mm



# LEVEL INDICATOR OR LEVEL GAUGES

## TUBULAR LEVEL INDICATOR

A TUBULAR LEVEL INDICATOR WORKS BY USING THE PRINCIPLE THAT LIQUID SEEKS ITS OWN LEVEL. THE INDICATOR IS MADE UP OF A GLASS TUBE PLACED BETWEEN TWO END BLOCKS AND IS MOUNTED PARALLEL TO THE SIDE OF THE TANK. THE LIQUID LEVEL IN THE GLASS TUBE IS THE SAME AS THE LIQUID LEVEL IN THE TANK AND IS INDICATED ON A SCALE MOUNTED ON THE INDICATOR.

**BODY MATERIAL:** CS/ SS304/ SS316/ PP/ PTFE

**PROTECTIVE CHANNEL:** CS/ MS COATED/ SS 304/ SS 316

**CC DISTANCE:** UPTO 5000 MM

**PROCESS CONNECTION:** THREAD/ FLANGE END

**GLASS:** BOROSILICATE

**MAX OPERATING TEMPERATURE:** UPTO 250 °C

**MAX OPERATING PRESSURE:** UPTO 10 BAR



## MAGNETIC FLAPPER LEVEL INDICATOR

MAGNETIC FLAPPER LEVEL INDICATOR SYSTEM IS CONSISTS OF BICOLOUR ROLLERS EQUIPPED WITH MAGNETS MOUNTED ON RAIL INSIDE THE HOUSING. AS THE LEVEL STARTS RISING OR FALLING, MAGNETIC FLOAT ALSO TRAVELS WITH LIQUID LEVEL IN NON MAGNETIC CHAMBER.

**MOUNTING:** TOP/ SIDE

**BODY MATERIAL:** SS304/ SS316/ PP/ PTFE

**FLAPPER:** ALUMINUM/ SS304/ SS316

**CC DISTANCE:** UPTO 5000 MM

**PROCESS CONNECTION:** THREAD/ FLANGE END

**MAX OPERATING TEMPERATURE:** UPTO 300 °C

**MAX OPERATING PRESSURE:** UPTO 50 BAR



## MAGNETIC FOLLOWER CAPSULE LEVEL INDICATOR

MAGNETIC FOLLOWER CAPSULE TYPE LEVEL INDICATOR ARE SUITABLE FOR NON-MAGNETIC FLUIDS. THE FOLLOWER IS ACTUATED BY A MAGNETIC FLOAT, WHICH MOVES WITH THE LIQUID LEVEL IN THE TANK.

**MOUNTING:** TOP/ SIDE

**BODY MATERIAL:** SS304/ SS316/ PP/ PTFE

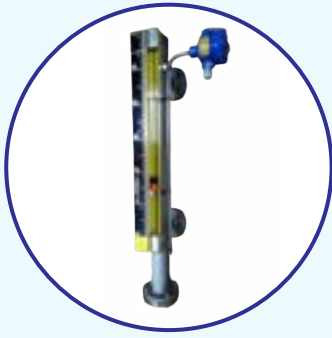
**FOLLOWER MAGNET:** BOROSILICATE GLASS WITH RED MAGNET BALL

**CC DISTANCE:** UPTO 5000 MM

**PROCESS CONNECTION:** THREAD/ FLANGE END

**MAX OPERATING TEMPERATURE:** UPTO 300 °C

**MAX OPERATING PRESSURE:** UPTO 10 BAR



## REFLEX OR TRANSPARENT LEVEL INDICATOR

REFLEX LEVEL INDICATOR WORKING PRINCIPLE IS BASED ON THE LIGHT REFRACTION AND REFLECTION LAWS. REFLEX GLASS LEVEL INDICATOR USE GLASSES HAVING THE FACE FITTED TOWARDS THE CHAMBER SHAPED TO HAVE PRISMATIC GROOVES WITH SECTION ANGLE OF 90°.

**PROCESS CONNECTION:** THREAD/ FLANGE END

**MOC:** CS/ SS304/ SS316

**GLASS:** BOROSILICATE

**OPERATING PRESSURE:** UPTO 50 BAR

**OPERATING TEMPERATURE:** UPTO 350 °C

**CC DISTANCE:** 300 TO 2000 MM



## FLOAT AND BOARD LEVEL INDICATOR

THE FLOAT & BOARD TYPE LEVEL INDICATOR BASICALLY WORKS ON THE PRINCIPLE OF BUOYANCY. THE FLOAT IS WELL CONNECTED TO THE COUNTER WEIGHT ALONG WITH A POINTER THROUGH FLEXIBLE WIRE ROPES, THE POINTER SLIDES ALONG WITH GUIDED ROPE AGAINST A GRADUATED SCALE TO INDICATE CORRESPONDING LEVELS INSIDE THE TANK.

**PROCESS CONNECTION:** ANY STANDARD FLANGES

**RANGE:** AS PER REQUIREMENT

**BOARD:** ALUMINUM/ SS / PP/ FRP

**WETTED PARTS:** MS/ SS304/ SS316/ PP/ FRP



# FLOW SWITCH

## PISTON TYPE FLOW SWITCH

A PISTON FLOW SWITCH WORKS BY USING A PERMANENT MAGNET AND A PISTON TO DETECT CHANGES IN FLUID FLOW AND TRIGGER A REACTION

**MOC:** SS316/ SS304

**CONNECTION:** DIN CONNECTOR

**PROCESS CONNECTION:** 1/4" TO 1" BSP

**RANGE:** 0.7 TO 70 LPM

**MAX OPERATING PRESSURE:** UPTO 10 BAR



## THERMAL FLOW SWITCH

A THERMAL FLOW SWITCH ALSO KNOWN AS A THERMAL DISPERSION FLOW SWITCH, USES THE COOLING EFFECT OF A FLOWING LIQUID OR GAS TO MEASURE ITS VELOCITY.

**MOC:** SS316/ SS304

**ENCLOSURE:** FLAMEPROOF/ WEATHERPROOF

**PROCESS CONNECTION:** 1/2" BSP

**PROBE LENGTH:** 20-100 MM

**MAX OPERATING PRESSURE:** UPTO 10 BAR



## PADDLE TYPE FLOW SWITCH

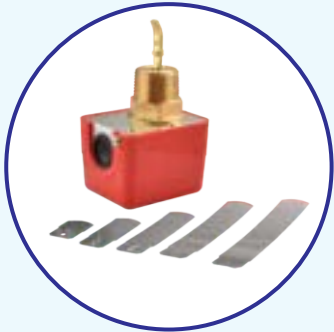
A PADDLE TYPE FLOW SWITCH WORKS BY USING THE FORCE OF A FLOWING LIQUID OR GAS TO MOVE A PADDLE, WHICH IN TURN TRIGGERS A SWITCH

**MOC:** SS316/ SS304/ BRASS

**PROCESS CONNECTION:** 1" NPT

**PROBE LENGTH:** 15-150 MM

**MAX OPERATING PRESSURE:** UPTO 10 BAR



## PADDLE TYPE FLOW SWITCH (WITH FLAME PROOF / WEATHER PROOF)

A PADDLE TYPE FLOW SWITCH WORKS BY USING THE FORCE OF A FLOWING LIQUID OR GAS TO MOVE A PADDLE, WHICH IN TURN TRIGGERS A SWITCH

**MOC:** SS316/ SS304/ BRASS

**PROCESS CONNECTION:** 1" NPT

**ENCLOSURE:** FLAMEPROOF/ WEATHERPROOF

**PROBE LENGTH:** 15-150 MM

**MAX OPERATING PRESSURE:** UPTO 10 BAR



## FLOW INDICATOR

FLOW INDICATORS WORK BY MOVING WHEEL WHEN FLUID PASSES THROUGH THEM, OR BY ALLOWING THE FLOW TO BE SEEN DIRECTLY THROUGH TRANSPERANT GLASS.

**MOC:** SS316/ SS304

**PROCESS CONNECTION:** 1/4" TO 1" BSP

**RANGE:** 0.7 TO 70 LPM

**MAX OPERATING PRESSURE:** UPTO 10 BAR



# FLOW METER

## ELECTRO MAGNETIC FLOW METER

AN ELECTROMAGNETIC FLOW METER WORKS ON FARADAY'S LAW OF ELECTROMAGNETIC INDUCTION, WHICH STATES THAT A VOLTAGE IS INDUCED WHEN A CONDUCTOR MOVES THROUGH A MAGNETIC FIELD.

**MOC:** MS/ SS WITH PTFE LINING

**FLOW RATE:** 0.1 TO 1500 M<sup>3</sup>/HR

**MEDIA:** CONDUCTIVE LIQUID

**OUTPUT:** 4 TO 20 mA/ RS 485/ PULSE

**POWER SUPPLY:** 24 VDC/ 230 VAC

**PROCESS CONNECTION:** FLANGE END

## TURBINE FLOW METER

THE TURBINE FLOW METER WORKS BY USING THE MECHANICAL ENERGY OF A FLUID TO ROTATE A ROTOR, WHICH THEN GENERATES A PROPORTIONAL ELECTRIC SIGNAL

**MOC:** SS304

**FLOW RATE:** 0.67 TO 13333 LPM

**MEDIA:** RO WATER, CHEMICAL SOLVENT

**OUTPUT:** 4 TO 20 mA/ RS485/ PULSE

**POWER SUPPLY:** 24 VDC

**PROCESS CONNECTION:** THREAD/ FLANGE END

## VORTEX FLOW METER

THE VORTEX FLOWMETER IS A BROAD-SPECTRUM FLOW METER WHICH CAN BE USED FOR METERING, MEASUREMENT AND CONTROL OF MOST STEAM, GAS AND LIQUID FLOW FOR A VERY UNIQUE MEDIUM VERSATILITY, HIGH STABILITY AND HIGH REALIABILITY WITH NO MOVING PARTS, SIMPLE STRUCTURE AND LOW FAILURE RATE.

**MEDIA:** DM WATER/ STEAM/ GAS

**MOC:** SS304/ SS316

**POWER SUPPLY:** 24 VDC

**MAX OPERATING TEMPERATURE:** UPTO 350 °C

**OUTPUT:** 4 TO 20 mA/ RS 485/ PULSE

**PROCESS CONNECTION:** FLANGE END

## OVAL GEAR FLOW SENSOR AND METER

OVAL GEAR FLOW METER WORKS ON THE POSITIVE DISPLACEMENT PRINCIPLE CONSIDERING ACCURACY & PRECISION AS THE CORE OF THEIR PERFORMANCE.

**MOC:** ALUMINUM/ SS 304/ SS 316/ PTFE

**MEDIA:** OIL/ PETROLEUM PRODUCTS/ CHEMICALS/ HIGH VISCOUS LIQUID

**OUTPUT:** PULSE

**POWER SUPPLY:** 24 VDC

**FLOW RANGE:** 0.6 TO 50000 LPH

**PROCESS CONNECTION:** THREAD/ FLANGE END

## ULTRASONIC FLOW METER

ULTRASONIC FLOW METER MEASURE THE FLOW RATE OF A LIQUID BY ANALYZING THE SPEED OF SOUND WAVES TRAVELLING THROUGH IT. THE WORKING PRINCIPLE IS BASED ON THE TRANSIT-TIME DIFFERENTIAL METHOD OR THE DOPPLER EFFECT

**MOC:** ALUMINUM

**MEDIA:** WATER

**OUTPUT:** 4 TO 20 mA/ RS485/ PULSE

**POWER SUPPLY:** 24 VDC/ BATTERY OPERATED

**FLOW RANGE:** 0.6 TO 50000 LPH

**PROCESS CONNECTION:** CLAMP ON TYPE





# FLOW METER AND ROTA METER

## PLASTIC TURBINE FLOW METER

PLASTIC TURBINE FLOW METER USED FOR LIQUIDS WHICH HAVE A RELATIVELY SIMPLE THEORY OF OPERATION, AS A FLUID FLOWS THROUGH THE TUBE OF THE FLOW METER IT IMPACTS UPON TURBINE BLADES. THE TURBINE BLADES ON THE ROTOR ARE ANGLED TO TRANSFORM ENERGY FROM THE FLOWING LIQUID INTO ROTATIONAL ENERGY.

**MOC:** PP

**MEDIA:** WATER/ UREA

**PROCESS CONNECTION:** 1/2" - 1" BSP

## MECHANICAL OVAL GEAR FLOW METER

MECHANICAL OVAL GEAR FLOW METER CONSIST OF TWO TOOTHED PRECISION WHEELS THAT ARE OVAL SHAPED. AS FLUID PASSES THROUGH THE METER, THE OVAL WHEELS ROTATE PROPORTIONATELY, THE NUMBER OF ROTATIONS IS EQUAL TO THE VOLUME MEASUREMENT.

**MOC:** CS

**MEDIA:** OIL/ PETROLEUM PRODUCTS

**OUTPUT:** ON REQUEST

**FLOW RANGE:** 0.15-340M3/HR

**PROCESS CONNECTION:** FLANGE END

## SWRILL FLOW METER

A SWRILL FLOW METER MEASURES THE FLOW RATE OF A FLUID BY MEASURING THE FREQUENCY OF THE FLUID'S OSCILLATION.

**MOC:** SS304/ SS316

**MEDIA:** GAS/ STEAM/ WATER

**POWER SUPPLY:** 24 VDC

**MAX OPERATING TEMPERATURE:** UPTO 350 °C

**OUTPUT:** 4 TO 20 mA/ RS 485/ PULSE

**PROCESS CONNECTION:** FLANGE END

## METAL TUBE ROTAMETER

METAL TUBE ROTAMETERS ARE VARIABLE AREA FLOWMETERS FOR MEASURING VOLUMETRIC FLOW RATES OF LIQUIDS AND GASES. THE CONSTRUCTION INCLUDES A TAPERED STAINLESS-STEEL TUBE. A FLOAT WITH A MAGNET EMBEDDED IN IT, MOVES INSIDE A TAPERED TUBE. THE FLOAT IS MAGNETICALLY COUPLED WITH AN INDICATING POINTER ASSEMBLY. THE FLOAT POSITION INSIDE THE TUBE IS RESULT OF BALANCING OF BUOYANCY AND GRAVITATIONAL FORCE. AS FLOW TUBE IS TAPERED FROM INSIDE, GAP IS CREATED BETWEEN INSIDE WALL OF TAPERED TUBE AND THE OUTER DIAMETER OF FLOAT AND FLUID FLOW PASSES THROUGH IT. AS THE FLOAT MOVES VERTICALLY UP AND DOWN INSIDE THE TUBE, THE MAGNETIC COUPLING MOVES THE INDICATING POINTER ASSEMBLY WHICH IS INDICATES THE FLOW RATE

**MOC:** MS/ SS WITH PTFE LINING

**MEDIA:** LIQUID/ GAS

**PROCESS CONNECTION:** FLANGE/ TRICLOVER END

## GLASS TUBE ROTAMETER

THE GLASS TUBE ROTAMETER IS BASED ON THE VARIABLE AREA PRINCIPLE. THAT IS, THE FLOW OF A LIQUID RAISES THE FLOAT INSIDE A TAPERED TUBE, INCREASING THE AREA THROUGH WHICH THE LIQUID CAN PASS. THE LARGER THE FLOW, THE HIGHER THE FLOAT WILL BE RAISED.

**MOC:** MS/ SS/ SS WITH PTFE LINING

**MEDIA:** LIQUID/ GAS

**PROCESS CONNECTION:** FLANGE/ TRICLOVER END



# PRESSURE TRANSMITTER

## PRESSURE TRANSMITTER

A PRESSURE TRANSMITTER, ALSO KNOWN AS A PRESSURE TRANSDUCER, WORKS BY CONVERTING MECHANICAL PRESSURE INTO AN ELECTRICAL SIGNAL.

**MOC:** SS304/ SS316

**OUTPUT:** 4 TO 20 mA

**PROCESS CONNECTION:** 1/4" BSP/ FLANGE END

**RANGE:** -1 TO 0... 1000 BAR

**ACCURACY:**  $\pm 0.5\%$  (ABOVE ON REQUEST)

## FLUSH TYPE PRESSURE TRANSMITTER

A FLUSH PRESSURE TRANSMITTER WORKS BY USING A DIAPHRAGM TO SENSE PRESSURE AND CONVERT IT INTO AN ELECTRICAL SIGNAL.

**MOC:** SS304/ SS316

**OUTPUT:** 4 TO 20 mA

**PROCESS CONNECTION:** THREAD END

**RANGE:** -1 TO 0... 100 BAR

**ACCURACY:**  $\pm 0.5\%$  (ABOVE ON REQUEST)

## PRESSURE TRANSMITTER WITH DISPLAY

A PRESSURE TRANSMITTER WITH A DISPLAY WORKS BY CONVERTING MECHANICAL PRESSURE INTO ELECTRICAL SIGNALS, WHICH ARE THEN DISPLAYED.

**MOC:** SS304/ SS316

**OUTPUT:** 4 TO 20 mA

**PROCESS CONNECTION:** 1/4" BSP/ FLANGE END

**RANGE:** -1 TO 0... 1000 BAR

**DISPLAY:** 4 DIGIT LED DISPLAY

**ACCURACY:**  $\pm 0.5\%$  (ABOVE ON REQUEST)

## FLAMEPROOF PRESSURE TRANSMITTER

A FLAMEPROOF PRESSURE TRANSMITTER WORKS BY CONVERTING MECHANICAL PRESSURE INTO AN ELECTRICAL SIGNAL, SIMILAR TO OTHER PRESSURE TRANSMITTERS

**MOC:** SS304/ SS316

**OUTPUT:** 4 TO 20 mA

**PROCESS CONNECTION:** THREAD/ FLANGE END

**RANGE:** -1 TO 0... 1000 BAR

**ENCLOSURE:** FLAMEPROOF

**ACCURACY:**  $\pm 0.5\%$  (ABOVE ON REQUEST)

## PRESSURE TRANSMITTER WITH TRICLOVER OR DIAPHRAGM SEAL

A DIAPHRAGM PRESSURE TRANSMITTER WORKS BY MEASURING THE FORCE APPLIED TO A FLEXIBLE DIAPHRAGM AND CONVERTING THAT FORCE INTO AN ELECTRICAL SIGNAL.

**MOC:** SS304/ SS316

**OUTPUT:** 4 TO 20 mA

**PROCESS CONNECTION:** TRICLOVER/ FLANGE END

**RANGE:** -1 TO 0... 100 BAR

**ACCURACY:**  $\pm 0.5\%$  (ABOVE ON REQUEST)

# DIGITAL AND ANALOUGE PRESSURE GAUGE

## DIGITAL PRESSURE GAUGE

DIGITAL PRESSURE GAUGE MEASURES PRESSURE VARIATIONS AND CONVERTS THEM INTO PROPORTIONAL ELECTRICAL SIGNALS. AN INTEFRATED MICROPROCESSOR THEN CONVERTS THOSE ELECTRICAL SIGNALS INTO NUMERIC VALUES, WHICH ARE SHOWN ON GAUGE'S DIGITAL DISPLAY

**MOC:** SS304/ SS316

**PROCESS CONNECTION:** 1/4" BSP (TRICLOVER AND DIAPHRAGM SEAL ON REQUEST)

**RANGE:** -1 TO 0... 2500 BAR

**ACCURACY:**  $\pm 0.25\%$  (ABOVE ON REQUEST)



## MAGNEHELLIC PRESSURE GAUGE

A MAGNEHELLIC PRESSURE GAUGE USES A DIAPHRAGM AND A MAGNET TO MEASURE AND INDICATE PRESSURE DIFFERENTIALS. THE DIAPHRAGM IS SENSITIVE TO PRESSURE VARIATIONS AND FLEXES ACCORDINGLY. AS THE DIAPHRAGM MOVES, IT CHANGES THE POSITION OF A MAGNET, WHICH IN TURN ROTATES A POINTER ON A SCALE TO PROVIDE PRESSURE READINGS.

**MOC:** ALUMINUM

**PROCESS CONNECTION:** 1/8" NPT

**RANGE:** -5 TO 5 KPA; -750 TO 750 PA; -500 TO 500 MMWC

**ACCURACY:**  $\pm 2\%$

**ACCESSORIES :** SS BOX



## DIGITAL MAGNEHELLIC PRESSURE GAUGE

A DIGITAL MAGNEHELLIC PRESSURE GAUGE USES A DIAPHRAGM AND A MAGNET TO MEASURE PRESSURE DIFFERENTIALS AND GIVES DIGITAL INDICATION

**MOC:** PLASTIC

**PROCESS CONNECTION:** 1/8" NPT

**OUTPUT:** 4 TO 20 mA (2 NO + 2 NC ON REQUEST)

**RANGE:** -5 TO 5 KPA; -500 TO 500 PA

**ACCURACY:**  $\pm 2\%$

**ACCESSORIES :** SS BOX



## DIGITAL PRESSURE SWITCH

A DIGITAL PRESSURE SWITCH WORKS BY DETECTING PRESSURE AND THEN ACTIVATING A RELAY OR TRANSISTOR SWITCH WHEN THE PRESSURE EXCEEDS A USER-DEFINED THRESHOLD

**MOC:** SS304/ SS316

**PROCESS CONNECTION:** 1/4" BSP (TRICLOVER AND DIAPHRAGM SEAL ON REQUEST)

**RANGE:** -1 TO 0... 600 BAR

**OUTPUT:** 1 NO + NC WITH 4 TO 20 mA OR 2 NO + 2NC

**ACCURACY:**  $\pm 0.25\%$  (ABOVE ON REQUEST)



## INDUSTRIAL PRESSURE GAUGE

AN INDUSTRIAL BOURDON TYPE PRESSURE GAUGE WORKS BY MEASURING THE ELASTIC DEFORMATION OF A TUBE THAT IS BENT INTO A COIL OR ARC SHAPE. WHEN PRESSURE IS APPLIED TO THE TUBE, IT EXPANDS OR CONTRACTS, AND THIS MOVEMENT IS TRANSLATED INTO A PRESSURE INDICATION ON A SCALE.

**DIAL SIZE:** 1.5"/2"/2.5"/4"/6"/10"/12"

**MOC:** SS304/ SS316/ PTFE COATED

**PROCESS CONNECTION:** 1/4", 3/8" OR 1/2" BSP/NPT

(OR ANY OTHER STANDARD TRICLOVER AND DIAPHRAGM SEAL ON REQUEST)

**RANGE:** -1 TO 0... 2500 BAR

**ACCURACY:**  $\pm 1$  TO  $2\%$



# TEMPERATURE SENSOR & GAUGE

## RTD, PT 100 SENSOR



THE WORKING PRINCIPLE OF AN RTD ( RESISTANCE TEMPERATURE DETECTOR) IS BASED ON THE RELATIONSHIP BETWEEN THE TEMPERATURE OF A METAL AND IT'S ELECTRICAL RESISTANCE.

**MOC:** SS304/ SS316 / PTFE COATED.

**PROCESS CONNECTION:** THREAD/ FLANGE END

**ENCLOSURE:** FLAMEPROOF/ WEATHERPROOF

**RANGE:** -50 TO 1600 °C

**ACCURACY:** ± 1% (ABOVE ON REQUEST)

**STEM DIAMETER:** 1 TO 10 MM (ABOVE ON REQUEST)

**STEM LENGTH:** 10 TO 300 MM (ABOVE ON REQUEST)

## TEMPERATURE TRANSMITTER



A TEMPERATURE TRANSMITTER CONVERTS A TEMPERATURE SENSOR'S SIGNAL INTO A STANDARD INSTRUMENTATION SIGNAL THAT CAN BE SENT TO A CONTROLLER.

**MOC:** SS304/ SS316 / PTFE COATED.

**PROCESS CONNECTION:** 1/4" BSP OR ANY OTHER STANDARD

**ENCLOSURE:** FLAMEPROOF/ WEATHERPROOF

**RANGE:** -50 TO 1600 °C

**ACCURACY:** ± 1%

**OUTPUT:** 4 TO 20 mA/ RS485

**STEM DIAMETER:** 1 TO 10 MM ( ABOVE ON REQUEST)

**STEM LENGTH:** 10 TO 300 MM ( ABOVE ON REQUEST)

## DIGITAL TEMPERATURE GAUGE



A DIGITAL TEMPERATURE GAUGE USES A SENSOR TO MEASURE TEMPERATURE AND DISPLAY IT ON A DIGITAL DISPLAY.

**MOC:** SS304/ SS316 / PTFE COATED

**PROCESS CONNECTION:** 1/4" BSP( ADJUSTABLE) OR ANY OTHER STANDARD

**RANGE:** -50 TO 400 °C ( 600 °C ON REQUEST)

**STEM DIAMETER:** 6/8/10 MM

**STEM LENGTH:** 63 TO 300 MM ( ABOVE ON REQUEST)

**POWER SUPPLY:** 24 VDC OR BATTERY OPERATED

## BI METAL TEMPERATURE GAUGE



BIMETAL TEMPERATURE GAUGE WORK ON THE PRINCIPLE THAT DIFFERENT METALS EXPAND AT DIFFERENT RATES WHEN HEATED OR COOLED, CAUSING THE STRIP TO BEND AND MOVE A POINTER TO INDICATE THE TEMPERATURE.

**MOC:** SS304/ SS316

**PROCESS CONNECTION:** THREAD END

**DIAL SIZE:** 2.5"4"/6" (ABOVE ON REQUEST)

**RANGE:** 0 TO 300 °C

**STEM DIAMETER:** 6/8/10 MM (ABOVE ON REQUEST)

**STEM LENGTH:** 63 TO 300 MM ( ABOVE ON REQUEST)

## GAS FILLED TEMPERATURE GAUGE



WITH A GAS - ACTUATED TEMPERATURE GAUGE THE STEM, THE CAPILARY AND THE BOURDON TUBE ARE JOINED TOGETHER INTO ONE UNIT. THE INSTRUMENT IS FILLED WITH NITROGEN GAS. IF THE TEMPERATURE CHANGES, THE INTERNAL PRESSURE WILL ALSO CHANGE.

THE POINTER IS MOVED BY THE ACTION OF THE PRESSURE VIA MEASURING TUBE.

**MOC:** SS304/ SS316

**PROCESS CONNECTION:** 1/4" BSP OR ANY OTHER STANDARD

**DIAL SIZE:** 2.5"4"/6" (ABOVE ON REQUEST)

**RANGE:** -50 TO 600 °C (ABOVE ON REQUEST)

**STEM DIAMETER:** 6/8/10 MM (ABOVE ON REQUEST)

**STEM LENGTH:** 63 TO 300 MM ( ABOVE ON REQUEST)