



# INSTRUMENTATIONS CATALOG



A handwritten signature in black ink, appearing to read "Yusuf Hamdani".

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QTLT Electromagnetic Flowmeter Code Table

QTLT		XXX	X	X	X	X	X	X	X	X
Caliber	DN10~DN3000 3-digital code seeing caliber code table 13									
Nominal pressure	0.6MPa		1							
	1.0MPa		2							
	1.6MPa		3							
	4.0MPa		4							
	Other		5							
Connection mode	Flange connection		1							
	Clamp connection		2							
	Sanitary connection		3							
Liner material	PTFE		1							
	PFA		2							
	Neoprene		3							
	Polyurethane		4							
	Ceramic		5							
Electrode material	316L		1							
	Hastelloy B		2							
	Hastelloy C		3							
	Titanium		4							
	Platinum-iridium		5							
	Tantalum		6							
	Stainless steel covered with tungsten carbide		7							
Structure type	Integral type		1							
	Remote type		2							
	Remote type immerse		3							
	Integral type Ex-proof		4							
	Remote type Ex-proof		5							
Power	220VAC 50Hz							E		
	24VDC							G		
Output/communication	Flow volume4~20mADC/pulse							A		
	Flow volume4~20mADC/RS232C communication							B		
	Flow volume4~20mADC/RS485 communication							C		
	Flow volume HART output/with communication							D		
Converter figure	Square							A		
	Circular							B		

Optional selection

X	
1	Grounding electrode
2	Coupled flange
3	Entrance protection flange
4	Scraper type electrode
5	Other

table 13  
Caliber code table

Caliber	code
10	100
15	150
20	200
25	250
32	320
40	400
50	500
65	650
80	800
100	101
125	125
150	151
200	201
250	251
300	301
350	351
400	401
450	451
500	501
600	601
700	701
800	801
900	901
1000	102
1100	112
1200	122
1400	142
1500	152
1600	162
1800	182
2000	202
2200	222
2400	242
2600	262
2800	282
3000	302

QTLT Electromagnetic Flowmeter



- Accuracy:  $\pm 0.2\%$  of the measurement value  $+0.3\text{m/s}$ ;
- Excellent small flow measurement accuracy, can measure duplex flow;
- Underground sensor (IP68) installed without building measuring well;
- Pipe connection: JIS 10K, JIS 20K, ANSI 150, ANSI 300, DIN PN10, DIN PN16;
- Cold, heat measure function;
- Double frequency excitation, stable zero point;
- Self-diagnosis, intelligent work;
- Build-in ground electrode, no need the grounding ring;





## LUGB Series Vortex Flow Meter

### Flow Range

Liquid and working condition gas flow range

Nominal Diameter (mm)	Water	Normal pressure and temperature air(NPT air)
	Standard Measuring Range(m <sup>3</sup> /h)	Standard Measuring Range(m <sup>3</sup> /h)
25	1.3-15	8-100
32	1.5-16	14-350
40	3-33	18-450
50	4-44	30-750
65	6-66	50-1250
80	13-140	70-1750
100	20-220	100-2500
125	36-400	200-5000
150	50-600	400-10000
200	100-1200	600-15000
250	150-1800	1000-25000
300	200-2400	

### Flow Sensor Model Selection

Vortex flow meter sensor model describe as: LUGB-Z-X X XX-X

Special Mark(Table 1)

Nominal Diameter(Table 2)

Measured Medium(Table 3)

Connection Mode(Table 4)

Table 1: Special Mark

Format	Common	Standard Signal Output	Intrinsically Safe Explosion-proof	On Site Display	High Temperature (350℃)	Temperature Compensation	Pressure Compensation	Temperature/Pressure Compensation
Mark No.	None	M	B	X	G	W	Y	Z

Table 2: Nominal Diameter  
Flange /Wafer Type

Size	15	20	25	32	40	50	65	80	100	125	150	200	250	300
Mark No.	150	200	250	320	400	500	650	800	101	125	151	201	251	301

Insertion Type

Size	100	125	150	200	250	300	350	400	500	600	700	800	900	1000	1200	1400	1600	1800	2000
Mark No.	100	125	151	201	251	301	351	401	501	601	701	801	901	102	122	142	162	182	202

Table 3: Measured Medium

Measured Medium	Liquid	Common Gas	Saturated Steam	Superheated Steam	Others
Mark No.	1	2	3	4	5

Table 4: Connection Mode

Connection Mode	Flange Connection	Wafer Connection	Insertion Type	Others
Mark No.	1	2	3	4

## LUGB Series Vortex Flow Meter



- Brand new digital processing calculation, enjoy excellent anti-vibration & anti-interference performance;
- Adopt built-in sensor structure, better protect the flow sensor;
- Flow sensor embedded temperature sensor, reduce the leakage point;
- Main body adopt precision casting technology, stronger swirl generating body;
- -40℃~350℃ to choose;
- Flange DIN, ANSI, JIS standard selectable;
- HART, RS485 communication to choose;
- Main body SS304, SS316 material selectable;

## HORIZONTAL WOLTMANN DETACHABLE DRY-DIAL COLD (HOT) WATER METER LXLG-50-500E LXLGR-50-300E



This Range of Water Meter is used to measure the total quantity of cold(hot) potable water which consumed in Industrial and mining enterprise passing through the pipeline.

**Compliance with standard:** Technical data conforms to ISO 4064 Class B standard for horizontal installation.

### PRODUCT FEATURE

Woltmann Detachable Type.

Dry-dial, Magnetic drive.

Selected high quality material for steady & reliable characteristic, low head loss and enable use a long life span.

Vacuum sealed register ensures the dial kept free from fog and keep the reading clear in a long term service.

Universal use within this range detachable, without removing the meter from the pipeline for easy maintenance and replacement, good looking, etc.

Hot water meter and remote reading transmission system for option.

### INSTALLATION REQUIREMENTS

1. The meter should be installed in horizontal position with the register face upwards
2. Pipeline must be flushed before installation.
3. The meter should be constantly full of water during operation.

### MAXIMUM PERMISSIBLE ERROR

In the lower zone from  $Q_{min}$  inclusive up to but excluding  $Q_t$  is  $\pm 5\%$

In the upper zone from  $Q_t$  inclusive up to and including  $Q_s$  is  $\pm 2\%$

(Hot Water Meter  $\pm 3\%$ )

### WORKING CONDITION

Water temperature:  $0^{\circ}\text{C} \leq t \leq 40^{\circ}\text{C}$  (For Cold Water Meter)

$0^{\circ}\text{C} \leq t \leq 90^{\circ}\text{C}$  (For Hot Water Meter)

Water Pressure: 1.  $\leq 1.0 \text{ Mpa}$ , 2.  $\leq 1.6 \text{ Mpa}$

**Electromagnetic Flowmeter**

**ART-DC Series Standard Model**

- Local Display
- 4-20mA output
- Flange Connection
- Lining: CR (DN500)
- Electrode :316L SS
- Accuracy: 1%R; 0.5R (opt.)
- Working temperature: <60°C

**Turbine Flowmeter**

**TB1000 Standard Type**

- Dia: DN4-200mm; Signal output: Pulse, Frequency, 4-20mA
- Tube Material: SS304, SS316
- Accuracy: 1.0% of rate, 0.5% of rate
- Connection: Thread (DN4-40mm), Flange (DN40-200mm)
- Battery Life Time: 3 Years
- Flow Display: Flow rate, Total Flow

**Turbine Flowmeter**

**FTB700 Series**

- Choices of PVC or Carbon Steel Body
- High-Accuracy Machined Turbine
- Internals Removable with Meter in Line
- Standard Meter Bodies are Flanged
- Optional 4-20 mA Transmitter Available-Blind or with rate and total display

**Vortex Flowmeter**

**MSW 2000 Standard Thread Type**

- Diameter: DN10-50mm
- Tube Material: SS304
- Liquids: Conductive Liquids
- Accuracy: 1.0% of rate (Span: 0.4-10m/s)
- Connection: Thread
- Power Supply: Battery Supply, 24VDC
- Flow display: Flowrate, Total Flow

**Electromagnetic Flowmeter**


- Light and compact version
- Flow velocity range: 0-12 m/s, precisely in flow appli
- High accuracy of +/-0.4% value of reading (or +/-0.2% value of reading)
- With forward/reverse flowrate measurement function

**Sensor For Bulk Mass Flow**

**Optimass 2000**

- Large diameter for bulk measurement and custody transfer of liquids and gasses
- Stainless steel measuring tubes (NACE Compliant)
- Super duplex option offering a maximum operating pressure of 180 barg

**Electromagnetic Flowmeter**

**MAG 3000 Sanitary Type**

- Diameter: DN25-DN100mm
- Accuracy: 0.5% of rate (Span: 0.5-10m/s) 0.5% FS (Span: 0-0.5m/s)
- Electrodes: 316L, Titanium, Tantalum HC, Monel, Pt-Ir6
- Lining: FEP; Sensor Housing Material: SS304
- Connection: Tri-Clamp, Thread (DIN11851)

**Transit-Time Ultrasonic Flowmeter**

**Model AUF750 Series**

- 4 Line LCD display w/flowrate, totalizer & signal condition
- Stores up 64 Day/Month/Year Totalizer daily value
- Wide range velocities of 0.01 +/-32 m/s
- Transducers for pipe size from 15 to 6000 mm
- High accuracy of +/-0.5% of reading
- Data logger function, include date, totalizer, signal condition

**Ultrasonic Flowmeter Flange Type**

**Model AUF760 Series**

- 4 Line LCD display w/flowrate, totalizer & signal condition
- Stores up 46 Day/Month/Year Totalizer daily value
- Batch control function
- Wide range velocities of 0.01 +/-32 m/s
- High accuracy of +/-1% of reading





### Electromagnetic Flowmeter



#### AMP601 Series

- Flow Velocity range: 0-12 m/s, precise in low flow applic
- IDF Tri-Clamp or Union screw Connection
- Excellent for high pressure application
- PTFE Liner is suitable for vacuum tube
- High accuracy of  $\pm 0.4\%$  value of reading (or  $\pm 0.2\%$  value of reading)

### Turbine Flowmeter



E-MAG-R  
(separated Type)

E-MAG-I  
(Combined Type)

- Mounting Style: Flange connection type
- Connection flange standard: JIS10K, ANSI150# JIS20K, DIN PN10
- Principal material: Case-carbonsteel
- Linings: PFAteflon, Polyurethane, NBR
- Measuring tube materials: SUS304
- Cable connection part: 3/4-14NPT made s

### Turbine Flowmeter



#### ART-DCT Serials Battery Supply Serials

- Remote Type
- Local Display
- Battery Supply
- Without Output
- Length of Wire: < 10m
- Life of Battery: 3 Years

### Rotameter



- Working press: <1.5Mpa
- Operating Temperature: 0-90°C
- Accuracy:  $\pm 4\%$
- Body material: Acrylic
- Fitting Material: SS
- Float Material: SS
- O-ring Material: Silicon Rubber
- Customized specifications are available
- The fixed screw of center distance F is M6x11

### Portable Transit-Time Ultrasonic Flowmeter



#### Model AUF610 Series

Transducers for pipes size from 15 to 6000mm (1/2"-240")  
Built-in magnet in transducers, no need for steady tool on metal pipe. Data logger which record flowrate date, total flow, signal condition...etc Response time less than 1 second 4 line LCD to display flowrate,, totalizer signal condition...etc The flowmeter is designed in high accuracy  $\pm 1.0\%$  small sized (210\*90\*30)

mm light-weight (500g) wide range Velocities (0.01~ $\pm 32$ m/s)  
Ni-MH. Battery last for over 10 hours continuous operation.  
Maximum temperature 160°C

### Sensor For Mass Flow



#### Optimass 7000

- The optimum meter for demanding applications
- A single straight measuring tube
- Choice of 4 tube materials

### Paddle Type Flow Switch



- Application: Liquid
- Operating Temperature: 30-150X
- Contac Rating: 60W, 220Vac/200Vdc SPDT
- Operating Pressure: Max 355 PSIG
- Length: 1"-3"
- Housing Material: IP65, AL, Alloy, Ex d IIC T6

### Coriolis Mass Flowmeter



#### Optimass 6400

- Innovative twin tube design
- Temperature range -200°C to +400°C
- Optional Insulation/Heating Jacket
- Modular electronics concept: electronics and sensor are easy to replace

### Variable Area Flowmeter



#### AVF250 Series

- Heating jacket design
- 4 digit flowrate & 8 digit totalizer
- Local indication without auxiliary power 4-20mA & scale pulse output
- Low pressure loss in gas and steam application
- Damper for Gas/Steam Application
- Consistent overall length

### Ovalgear Meter



- Size: 10A-200A
- Material: Cast iron Cast Steel, Stainless Steel
- Connection: Flange type ~ JIS 10K RF (standard) ANSI, DIN (option)
- Accuracy: 0.5% of rate / 0.2% (option)
- Fluid Temperature: -20~+100°C/200°C (option)



**Vortex Flowmeter**

**MSW 1000 Standard Flange Type**

- . Diameter: DN10-200mm
- . Electrodes: SS316L
- . Tube Material: SS304
- . Liquids: Conductive Liquids
- . Accuracy: 1.0% of rate (Span: 0.4-10m/s)
- . Power Supply: Battery Supply, 24VDC
- . Battery Life Time: 3 Years
- . Flow Display: Flowrate, Total Flow

**Electronic Oval Gear Flowmeter**

**OGM-25/40/50P & M-OGM-25E**

Alluminium oval gear meter pulser with a pulse output function has the ability to handle a wide range of fluid viscosities with exceptional levels of repeatability and durability, applying in the petroleum chemical, food industry, etc.

**Electronic Oval Gear Flowmeter**

**M-JYM/L-1**

The electronic oval gear flowmeter is for different viscosity liquid, such as fuel oil, lubricating oil. High accuracy, low pressure loss, small and light, easy installation.

**Mechanical Flowmeter**

**M-FM-120/M-FM-900**

Flowmeter is to measure the exact quantity of the dispensed fuel. They are designed for noncommercial use only. These flow meters are reliable, easy to install and sample to calibrate on the work place. Aluminium metering chamber. 1 thread connection. Mechanical readout device with rotating wheels. 4 digital subtotals can be set to zero. 8 digits total readouts can not

**Oval Gear Flowmeter**

**OGM-25/40/50**

Aluminium oval gear meter has the ability to handle a wide range of fluid viscosities with exceptional levels of repeatability and durability, applying in the petroleum, chemical, food industry, etc.

**Turbine Type Flowmeter**

**M-TEM-25/M-TEM-40**

High accuracy, Durable, Compact. Two cumulants (resetting and accumulating) Gallon or liter option. Easy maintenance lithium battery supplying 9000 hours power

**STD. Flange Lvl Transmitter**

**LMP-631**

- . Pressure range: 0~0.1bar and 0~20bar
- . Excellent long-term stability
- . Small thermal effect
- . Flush diaphragm
- . Application: Level monitoring in open tanks

**Precision STD Hydros. Lvl Transmitter**

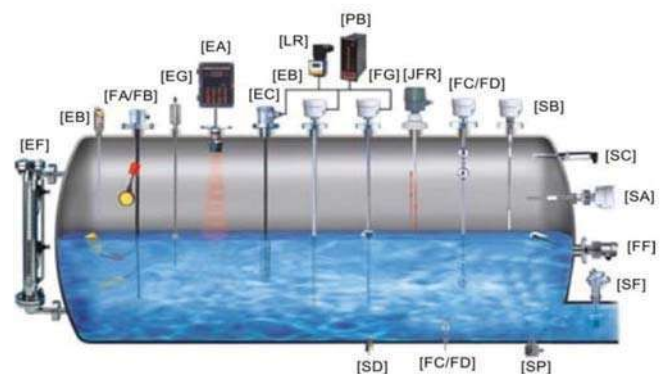
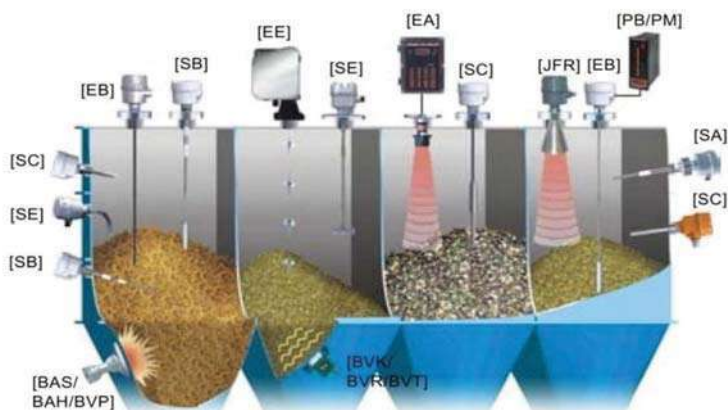
**LMP633X**

- . Pressure range: 0~0.7bar and 0~20bar
- . Small Dia. of 28mm;
- . Excellent repeatability and long term stability
- . Cable w/ integrated air tube for atmospheric
- . Application: Depth/ lvl measurement in wells and open waters, ground water lvl measurement

**STD Hydrostatic Lvl Transmitter**

**LMP633**

- . Pressure range: 0~0.1bar and 0~20bar
- . Small Dia. of 28mm;
- . Excellent repeatability and long term stability
- . Cable w/ integrated air tube for atmospheric
- . Application: Depth/ lvl measurement in wells and open waters, ground water lvl measurement





## Electromechanical Lv. Measuring System



- . App: Ore, Clinker, Coal, Cement, Grain, Plastic Powder, Feed stuffs, Granule & any liquid
- . Operating Temperature:  $-35^{\circ}\text{C}$ ~ $80^{\circ}\text{C}$
- . Ambient Temperature:  $-35^{\circ}\text{C}$ ~ $60^{\circ}\text{C}$
- . Supply Voltage: 13-36 Vdc
- . Temp: Ambient ( $-20^{\circ}\text{C}$ ~ $70^{\circ}\text{C}$ ), Operating ( $-20^{\circ}\text{C}$ ~ $70^{\circ}\text{C}$ )
- . Power Supply: 100~240Vac  $\pm 10\%$ , 50/60 Hz

## Magneto Strictive Level Transmitter



- . App: LPG Liquid medium, Pharmaceutical, Chemical, Water Treatment, Oil Industry
- . Power Supply: Loop Power 24Vdc  $\pm 10\%$
- . Op.Temp:  $-30^{\circ}\text{C}$ ~ $200^{\circ}\text{C}$ ; Op.Press: 5~30Bar
- . Weight: 2.5kg (5.5Lb)
- . Conn: 1/2"PT, 3/4"PT
- . Enclosure: IP67 (IEC 60529); . Housing: SUS304, SUS316

## Magnetic Float Level Transmitter



- . Material: Alluminium, PP+Fiber, PC
- . Resolution:  $\pm 6.35$  mm,  $\pm 12.7$  mm
- . Measuring Range: max 6M
- . Enclosure: IP65, Ex d IIBT4
- . Temperature:  $-20^{\circ}\text{C}$ ~ $200^{\circ}\text{C}$
- . Weight: 33~250g; Output: Loop power and 3 wire resistance
- . Housing: Explosion proff and anti corrosive

## Bay-Pass Level Transmitter



- . Material: PP/PVDF, Titanium, SUS316
- . Op.Temperature: PP ( $80^{\circ}\text{C}$ ~ $400^{\circ}\text{C}$ ), PVDF ( $120^{\circ}\text{C}$ ~ $400^{\circ}\text{C}$ )
- . Connecting: Flange, Screw, Ball Valve
- . Flag Indicator:  $140^{\circ}\text{C}$ ~ $400^{\circ}\text{C}$
- . C-C Distance: Min. 150mm Max. 5800mm
- . Op.Pressure: 5~130Bar; Bottom End: Dual fl w/ 1/2" PT plug
- . Top End: Dual Flange with 1/2" PT plug

## Mini By-Pass Level Transmitter



- . Material: SUS304/SUS316L
- . Op.Temperature:  $140^{\circ}\text{C}$ ~ $200^{\circ}\text{C}$
- . Connecting: Flange, Slip Pipe
- . C-C Distance: Min. 150mm Max. 3000mm
- . Op.Pressure:  $140^{\circ}\text{C}$ ~ $400^{\circ}\text{C}$ /cm3
- . Top End: Dual Flange with 1/4" PT plug/Cap
- . Bottom End: Dual Flange with 1/4" PT plug

## RF-Capacitance Level Transmitter



- . Op.Voltage: 12~36Vdc; Op.Pressure: 15~40kg/cm<sup>2</sup>;
- . Op.Temp:  $-40^{\circ}\text{C}$ ~ $200^{\circ}\text{C}$ ; Ambient Temp.:  $-40^{\circ}\text{C}$ ~ $100^{\circ}\text{C}$
- . Output: 4~20mA resolution  $\pm 2\%$
- . Acc:  $\pm 1\%$ FS(25%); Weight Material: Ceramic, SUS304, PTFE
- . Connection: 1" or 3"x5kg/cm3 Flange/ 1"PT Screw
- . Weight: Approx 2.3~4.2kg (1M)
- . Probe Material: SUS304, SUS316, Coating

## Radar level Transmitter



- . Operating Pressure: 0~64Bar
- . Housing Material: Aluminium
- . Measuring Range: Max 30m
- . Supply Voltage: 13~36Vdc
- . Temp: Ambient ( $-20^{\circ}\text{C}$ ~ $70^{\circ}\text{C}$ ), Operating ( $-20^{\circ}\text{C}$ ~ $70^{\circ}\text{C}$ )
- . Power Consumption: 100mA/24Vdc
- . Output: 4~20mA; . Blind Distance: 500mm

## Rotary Paddle Level Switch



- . Application: Powder (producing&processing) food plastic chemical, Medical, Mining and Ceramic
- . Material: IP65, ADC-12, Aluminium Alloy
- . Temperature: Up to 200X;
- . Contact capacity: SPDT 3A/250Vac
- . Torque: 0.5~1.0kg-cm
- . Power Consumption: 1.5 W, 3W, 11W/Dc24V

## Mini Float Level Switch



- . Material: SUS 304, SUS 316, NBR, PP, PVDF, Nylon
- . Op. Temperature: Max  $200^{\circ}\text{C}$
- . Connecting: Different connection types
- . C-C Distance: Min. 150mm Max. 5800mm
- . Op. Pressure: 4~35kg/cm3
- . Application: Wafer fountain, Machinery, Electrical, Chemical, Marine, Test instrument, Food machinery

## Pressure Level Transmitter



- . Application: Liquid measurement device, Control device
- . Housing Material: Alluminium, IP65
- . Pressure Range: 0.1~100 Bar
- . Supply Voltage: 13~36Vdc
- . Operating Temperature: Max  $350^{\circ}\text{C}$
- . Connection: 1-1/2"PT, 1-1/2"x5kg/cm<sup>2</sup>, 10kg/cm<sup>2</sup>
- . Output: 4~20mA

## Vibrating Probe Level Switch



- . Application: Powder, peanuts, Beans, Pellets, Soda, Styrofoam, Gravel finely, Chalk, etc.
- . Operating Pressure: 10 Bar
- . Lev. Sensor Housing: Aluminium/ IP65, Ex d IIC T3-T6
- . Probe Const: SUS304, SUS316, Teflon (coat)
- . Mounting: 1"PT, Flange 1", Screw 1" PT/PF, Flange 1-6"DIN/JIS/ANSI
- . Power Supply: 20~250Vac/Vdc, 50/60Hz

## Tuning Fork Level Switch



- . Application: Powder, Liquid, Solid
- . Operating Pressure: Max 40 Bar
- . Housing Material: SUS304, Aluminium/IP65, Ex d IIC T3-T6
- . Output: SPDT Relay, SSR Mosfet
- . Probe Const: SUS304, SUS316, Teflon (Coat)
- . Mounting: 1"PT, Flange 1", 2"Sanitary, 3/4"PT



**Ultrasonic Level Transmitter**

**EA Series**

- Measuring Range: Liquid max 50M, Solid max 50M
- Power Supply: 12~28Vdc, 100~240Vac, 50~60Hz
- Op. Temperature: -40°C~+80°C (-40°F~176°F)
- Mounting Screw: 1"NPT/2"NPT or 1"BSP/2"BSP
- Weight: 2.5kg (5.5Lb)
- Loop Current: 2 wire, 4 wire 4~20mA, 750 Ohm@24Vdc, @28Vdc
- Sensor Housing: PP, PVDF, EA~10P, EA~10F

**Loop Indicator**

**LR Series**

- Transmission: 4~20mA
- Display: 4 Digits LCD display
- Ranges: 4~20mA, 10~50mA
- Connection: DIN 43650 plug
- Operation Keys: 3 Keys

**Side Mounting Float Switch**

**FF Series**

- Operating Temp.: -200~3500C
- Material: IP65, SUS304, SUS316
- Contact Capacity: Max5A.60W 250 Vac 200Vdc
- Contact Element: Micro switch, Reed Switch
- Applicable S.G: 0.8-0.65
- Agency Approval: ABS, GL, NEPSI (Eex d)

**Mini Size Magnetic Level Gauge**

**R, T, B-Series Large chamber Type**

- Gauge are designed in wide range including R series.  
T series. B series and illuminato type. Which meet various pressure, temperature to application by customer.
- Feature:
- High Quality; Material: CS, SS304, SS316 are available
  - Low Cost; Special material are available by requested

**Magnetic Float Level Switch**

**FC/FD Series**

- Material: SUS304, SUS316, PVDF, PP, PVC
- Op. Temperature: Max 200°C(SS)
- Connecting: Flange, Screw
- Application: Liquid processing, heat exchanger, hydraulic, power plant, oil, ship building and petrochemical
- Housing: Explosion proof & anti corrosive

**Optical Level Switch**


- NPN, PNP open collector output to energize relay or PLC
- Outer material of PC, Polysulfone, SUS 304/316 for acidity and alkaline; applicable in grease, waste water, Liquid solution, Liquor, alcohol
- Over-Current and reverse polarity protection
- LED status indication
- Application: Liquid leakage detection motor/ pump protector

**Capacitance Level Switch**

**SA Series**

- Temperature: -20°C~800°C
- Pressure: Max 25kg/cm3
- Probe Material: SUS304, SUS316, PP, PVDF, PTFE, UPEcoating
- Insulated Material: UPE, PTFE, Ceramic
- Connection: Screw, Flange, PP, PVDF, SUS
- Power Supply: 110/220Vac +/- 10%, 16~24Vdc
- Housing Spec: Aluminium IP65

**RF-Capacitance/Admittance Lv Switch**

**SB Series**

- Application: Storage tank, Well, reservoir, Medical tank, Acidic tank, Liquid, Powder; Housing Spec: Aluminium IP65
- Operating Temp: -40°~550°C
- Pressure: 20kg/cm3
- Probe Material: UPE, PTFE, Ceramic, PEEK
- Connection: 1/4", 3/4", 1"
- Supply Volt: 115/230Vac +/-10% or 24Vdc +/-20%

**Pressure Switch**

**SQ Series**

- Application: Hydraulic industry, Hydraulic detection, ABS Medical equipment, Pressure detection
- Body Material: Zinc, Plated Steel, SUS316, Brass
- Pressure Range: 0.2-100 Bar
- Hex Length: 24mm, 27mm
- Membran Material: NBR, Viton, EPDM
- Contact rating: 4A/42Vdc, 4A/220Vac

**Smart Diff Press Lvl Transmitter**

**Model ADP9000L Series**

- Updating time of output current 200ms
- 0.075 accuracy; Explosion proof & weather proof housing
- Two years stability of 0.15%
- Parameter setting by keypad directly
- 4-20mA output plus direct digital HART communication
- Automatic zero calibration by push-button

**Digital Differential Pressure Transmitter**

**EC Series**

- Accuracy: +/-0.075%~0.1%
- Capacitance sensor: Enhance over-pressure resistance capacity; Measurement: Meter, Absolute, Negative Press.
- Output: 4~20mA/ 2 wire
- Housing Material: SUS304, SUS316/L, PC
- Diaphragm Materials: Various
- LCD Display: 6 digits; Calibration: RS485 or HART

**Diaphragm Pressure Regulator**

**DRV 10 Series**
**PR Series**

- The PR Series is a pressure regulating valve that are suitable for pressure control of air, gas, water, oil and similar fluids requiring constant outlet pressure between 10 and 150 psig
- The DRV-10 is a LOW pressure regulating valve that is suitable for pressure control of air, gas, constant outlet pressure between 100 and 6000mmH2O

## Remote Pressure Transmitter

**DMP3051-RT**

- . Pressure range: 0~6kPa and 0~6.8MPa
- . Excellent long-term stability
- . High overload pressure; Suitable for all the bad industry environment
- . Application: Process control, chemical industry

## High Stable Piezoresistive Press Sensor

**LG190H**

- . Pressure range 0~20kPa...35MPa
- . Gauge, absolute, sealed gauge
- . Constant current power supply
- . Isolated construction, enable to measure various media; Dia19mm std press sensor; Full SS316L
- . Application: Industrial process control

## General Quasi-Flush Diaph Press Trans

**SMP134**

- . Pressure range: 0~0.2bar and 0~700bar
- . Rugged and reliable under most conditions
- . Excellent long term stability
- . Small thermal effect
- . Application: Chemical industry, Foodstuff industry, Paper industry

## General Pressure Transmitter

**SMP133**

- . Pressure range: 0~0.02bar and 0~600bar
- . Wide range of measuring pressure
- . Excellent long-term stability
- . Small thermal effect
- . Application: Petroleum, chemical industry, electric power & others process controls

## STD Pressure Transmitter

**SMP2088**

- . Pressure range: 0~0.1bar and 0~600bar
- . Variety of certifications
- . Small thermal effect
- . Protection classification IP67
- . Application: The equipment of petroleum, chemical industry, metallurgy, pharmacy&others

## Precision Compact Pressure Transmitter

**SMP131X**

- . Pressure range: 0~0.7bar and 0~35bar
- . Excellent long-term stability; Small thermal effect
- . CPU linearity: temperature compensation technology
- . Application: Leak detection, high-precision measurement and calculation

## Refrigeration Pressure Transmitter

**SMP531**

- . Pressure range: 0~1bar and 0~100bar
- . Excellent long-term stability
- . Small thermal effect
- . Unique anti-condensation technology
- . Application: Refrigeration equipments

## Pressure Gauge



## PP Diaphragm Gauge

Model:  
P300

- Dial: 63mm  
Scale Range: 0~2kgf/cm<sup>2</sup> to 0~40kgf/cm<sup>2</sup>  
Accuracy +/- 1.6% of Full Scale  
Conection: 1/2" PT, NPT  
Thread: Female Thread  
Temperature: Working Temperature: Max 60°C  
Case: PP antiimpact, all in one protect from acidification

## Direct-Mount/remote diaphragm seal



Model: D Series

- The maximum temperature comes up to 280°C  
Multiple connection modes-Flange style/ Tri-Clamp style  
Multiple diaphragms/alternative connection material.  
Vegetable oil can be used for fill fluid for food industry  
Extreme hot and cold temperature  
SS with PPC coating capillary  
Oil-free treatment & Water-free treatment

## Electrical Contact Pressure Gauge

Model:  
P510 Series

- Dial Size: 100mm; Connection Ttype: 3/8", 1/2" BSPT  
Scale Range (mbar, mmH<sub>2</sub>O):-76cmHg~4to0~1000 kgf/cm<sup>2</sup>  
Working Pressure: Steady: 75% Full Scale  
Over Range Protection: 130% of Full Scale  
Blow Protection: Back, Rubber Disc  
Accuracy: +/- 1.0% of Full Scale for Pressure Indication  
Case&Cover: SS304; Element & Connection: 316SS

## Diaphragm Seal Type Pressure Gauge

Model:  
P700 Series

- Upper Flange: 304SS  
Diaphragm: 316LSS  
Dial Size: 63, 100, 150mm  
Range: 0~250kgf/cm<sup>2</sup>  
Connection: 1/2" NPT  
Options: Silicon Oil Filled



### Digital Pressure Gauge



Model:  
P130

- . Dial Size: 75mm
- . Scale Range: 0~1 bar to 0~1000 bar
- . Connection 1/4" NPT
- . Battery Type: 9V
- . Accuracy: Class +/- 0.5 %
- . Working Temperature: 10° C ~ 60° C
- . Connection: 316SS; Case: Alluminium Alloy

### Multi-Function Temp & Safety Speed Meter



- . Keypad lock with Password to avoid Unexpected dialing
- . Delay star
- . Overload Delay
- . RS-485 Modbus communication Interface

### Controller For Dust Collector System



- . Jet pulse timing of sequential controller: 0-0.2 seconds.
- . Jet pulse interval: 2-180 seconds
- . No switch contact in the circuit, operating life is half-eternity
- . Power supply: 110/220 Vac, 24 Vdc
- . Control points: 10, 20, 40 points

### Safety Cable Pull Switch



SRS Series

- . App.: Conventional Belt Conveyors, Stacker, Ship Load/Unload, Crane, Apron, Heavy Duty Limit Switch.
- . Switching Capacity: 10A, 125/250Vac/1/2A 125Vdc SPDTx2
- . Ambient Temp: -20°C~60°C
- . Action Force: 3.4~5.4N.m (0.35-0.55kgf.m)
- . Enclosure protection grade: IP67
- . Enclosure Material: Die Cast Iron; . Weight: Approx 2.9kg

### Conveyor Belt Misalignment Switch



SRT Series

- . App: Conventional Belt Conveyor, Shuttle Conveyor, Bucket Elevator, Packaging Lines, Stockpile, Crane, Shovel, Dragline, Ship Loading/Unloading, Horizontal Feed Systems
- . Switch Capacity: 10A, 125/250Vac, 1/2A, 125Vdc SPDTx2
- . Ambient Temperature: -20°~60°C; Weight: Approx 2.9kg
- . Action Force: 49 +/- 9.8n (5+/-1 kgf.m)
- . Enclosure Protection Grade: IP67; Die Cast ADC

### Electric Actuator AOX Quick Opening Series



#### Modulating Type & Standard Type

- . Electric current position transfer (output 4-20mA DC)
- . Water proof actuator IP68, 10m, 250HR; Heater
- . Potentiometer unit (1K-10K)
- . Local Control Units
- . Travel 120°, 180°, 270°
- . Self reset when power failure

### Electric Actuator



#### CHQ Explosion Proff Series

- . Water proff actuator IP68, 10m, 250HR
- . Potentiometer unit (1K-10K)
- . Proportion control unit (Control signal 4-20mA)
- . DC/1-5V/1-10V
- . Electric current position transfer (output 4-20mA DC)
- . High&Low Temperature resistance actuator (-10°C~+100°C)

### Speed Monitor



ED Series

- . Maximum monitoring range: 1-999 rpm
- . 7 seg LED display 0-999
- . Alarm monitoring: low speed, stop reverse, blackout and overload
- . Start up delay function allow motor to run up gradually
- . Alarm delay function to avoid false alarm, which may caused by temporary slow down or load change

### Microprocessor Bargraph Display



- . Specially designed for universal app.mode
- . Function are controlled by microprocessor
- . 1-20/20 Output
- . Naturel equipment and material detected

### Cloth Seam Detector



PS Series

- . App: Dyeing Machine, Pressure Vessel
- . Relay Output: SPST 5A/250Vac
- . Power Supply: 80~265Vac +/-15%, 56/60Hz
- . Memory: Kept for 7 years
- . Material: Controller (Plastic), Seam detector(Plastic), Magnet (Teflon); . Drill Hole: 91.6 x 45.3mm
- . Signal Cable: 22AWG 800C 300V 2 Core (isolation)

### Programmable Sequential Controller



AE611/621 Series

- . Digital display: 2 Set
- . Jet Pulse Timing: Adjustable
- . Jet Pulse Interval: Adjustable
- . Control point of solenoid: Adjustable
- . Circular Cleaning: Continues
- . Function controlled: Microprocessor

### Programmable Vibrating Controller



- . Specially designed for universal application modes
- . Functions are controlled by microprocessor
- . 1-10/20 Output
- . Users can choose the best application mode based on the natures of the equipment and material detected
- . Applied in sequential controller of vibrators.

## Air Hammer

**BAS/BAH/BVP Series**

- . Body: Highly strengthened aluminium
- . Frequency: 2-6 Bar (low/continuous impact model)
- . Air Consumption: Min 90-730 t/min
- . Weight: 0.9-4.5 Kg
- . Application: Pipe accumulation, Life testing, get Rid of Blockage, Concrete injection, Defoaming while filling

## Pneumatic Vibrator

**BVK/BVR/BVT Series**

- . Body: Special aluminium alloy, small size, light weight
- . Frequency: 2-6 Bar
- . Air Consumption: Min 230-300 t/min
- . Weight: 140-23000 g
- . Frequency and amplitude of vibration system: adjusted as required

## FA/FB Series



- . Material: PVC, SUS 304, PP
- . Cable Spec: Neoprene, PVC, Silicone Cable
- . Measuring Range: max 6M
- . Actuation Angle: Min  $10^{\circ}$   $\pm 2^{\circ}$
- . Temperature:  $-0^{\circ}\text{C}$ ~ $170^{\circ}\text{C}$
- . Pressure: 2~4.5kg/cm<sup>3</sup>
- . Contact Rating: 1A/230Vac~15A/250Vac

## Analogue Temperature Transmitter

**THA33**

- . Design for Pt100
- . Output signal 4~20mA tpo wires
- . Configurable measuring ranges
- . Large ambient temperature range
- . Compact and inexpensive

## Integrated Temperature Transmitter

**LG200-K**

- . Thermal resistance, thermocouple sensor
- . Match intelligent type, users can customize measuring range
- . Safe and reliable, excellent EMC
- . Application: Process industry, petrochemical, chemical industry, electric power, steel, cement

## Thread Type Thermowells



Welded Type: WST, WLT

- Drilled bar stock type: BST, BLT, BTT, BTLT, BPST, BPLT  
Material: SS304, SS316, SS316L, Monel, Hastelloy C276  
Brass, Carbon Steel, Titanium (special material available upon request)  
Process con: W\_2~ male available (special thread upon request); Instrument connection: WNPT~NPT Female available (special thread upon request)

## Thermowell

Selection of Thermowell

1. Material: Refer to the table
  2. Model: Refer to the table
  3. Bore Size Diameter (ID/ OD)
  4. Insertion Length ("U")
  5. Extension Length ("T")
- Connection Type: 1/2" BSPT

## Thermocouple Assemblies



- Head housing: IP65 & IP67  
Explosion proof available. R type available. Insulator dial size: 04.0-06.0mm on request. Insulated material: Ceramic  
Protection tube material: Metal, Non-Metal. Refer to protection tube table. Working temp. Limited:  $-200$ ~ $1700^{\circ}\text{C}$  according to applicable standards table. Measuring junction type: Grounded type, Ungrounded type/ Separated Type

## Temperature Type Thermowells



- Drilled bar stock type: BSF, BLF, BTF, BTLF, BPSF, BPLF  
Material: SS304, SS316, SS316L, Monel, Hastelloy C276  
Brass, Carbon Steel, Titanium (special material available upon request)  
Process con: W\_4N flange available ANSI, DIN, JIS available (special flange upon request). Instrument connection: WNPT Female available (special thread upon request)

## Industrial BI-Metal Thermometer

Model:  
T120

- Dial Size: 63, 75, 100mm  
Connection Type: 1/2", 3/8" BSPT  
Options: Thermowell  
Scale range:  $-50$ ~ $50^{\circ}\text{C}$  to  $-50$ ~ $100^{\circ}\text{C}$   
Case: 304SS, Window Glass, Stem OD: 6,8,10mm

## Fully Stainless Capillary Thermometer

Model:  
T210

- Dial Size: 100, 150mm  
Connection: 1/2" BSPT  
Options: Thermowell, Oil Filled  
Scale range:  $-50$ ~ $50^{\circ}\text{C}$  to  $-50$ ~ $100^{\circ}\text{C}$   
Case: 304SS, Window Glass, Stem OD: 6,8,10mm

## Glass Thermometer

Model:  
T400

- Connection Type: 1/2" BSPT  
Stem Length: 21/2", 4", 6"  
Options: Thermowell  
Scale Range:  $-30$ ~ $50^{\circ}\text{C}$   
Case: Nylon Fiber  
Temperature Element: Alcohol  
Stem: Brass; Stem OD: 10mm



### Temperature Gauges



#### BIRMETAL THERMOMETERS

- Suitable for measuring high precision temperature of media with Caustic with stem and screw-retained thermo well, screwed connection, stainless steel case.
- Connection: NPT, PT, BSP

### Thermal Dispersion Flow Switch



- Apply: Water power plant, HVAC system, steel making petrochemical, shipyard, food, pharmaceutical, semiconductor, cooling pipe; Conn: G1/2, G1/4, NPT1/2
- Operating pressure: Max 100Bar
- Ambient & Operating Temp: -20<sup>o</sup>-80<sup>o</sup>C
- Housing material: SUS304, SUS316/L, PC
- Output Alarm: Relay 5A/250Vac; Powerconsump: 50-60mA

### Temperature Switch Explosion Proof



CLASS I, GROUPS D, C & O  
CLASS II, GROUPS E, F & G NEMA 4,7,9  
Temperature: -200 - +650<sup>o</sup>C

### 2 Valve Manifold PN 420 DN 5



- Body: steel phosphatized
- External stem thread
- Stem with cold rolled surface, back seat and non-rotating needle tip
- Special types are available
- The manifolds can be supplied according to NACE-standard

### 3 Valve Manifold PN 420 DN 5



- Body: die-pressed part
- External stem thread
- Stem with cold rolled surface, back seat and non-rotating needle tip
- Special types are available
- The manifolds can be supplied according to NACE-standard

### Shut-off Valve PN400 DN 5



- External stem thread
- Stem with cold rolled surface, with back seat
- Replaceable soft seat, roddable
- Valve body made of steel (C 22.8) on request
- Special types are available on request
- The valves can be supplied according to NACE-standard

### Water Syphon



for pressure gauges DIN 16 282

circular-shaped ('pigtail') for vertical tapping

- Surface: Type 1 to 4 steel phosphatized Type 5 oiled
- Range of application: For liquids, gas or steam
- Other materials, pressure/ temperature ratings & connections onrequest

### Monoflanges



- ASME B16.5 flange connections; Flange size 1/2" to 2" (DN15 to DN50); Flange class 150 to 2.500
- Outlet connection 1/2 NPT female
- Vent connection 1/2 NPT female; Press. tested EN 12266
- Seat metal/ Metal; Vent valve w anti-tamper head unit
- Packing PTFE or graphite; ISO 10497/API607 fire tested
- Material of construction 316/316L

### Pressure Gauges Cocks Female/Female



- Range of application:
- For liquids, gas or steam, from -10<sup>o</sup>C up to + 50<sup>o</sup>C
- For pressure gauges with sealing washer according to DIN EN 837-1
- Plastic handle

### Pressure Gauge Valves



Pressure Gauge Valves DIN 16 270

- Body: brass: pressed part;  
steel/ stainless steel: die pressed part
- Surface: Steel phosphatized
- Internal stem thread
- Stem with cold rolled surface and non-rotating needle tip



### 2 Valve Manifolds for Direct Mounting



- . PN 420 DN 5 for Direct mounting to pressure transmitters
- . External stem thread
- . Stem with cold rolled surface, back seat & non-rotating needle tip
- . The manifolds can be supplied according to NACE-standard

### 3 Valve Manifolds for Remote Mounting



- . PN420 DN 5 for remote mounting
- . External stem thread
- . Stem with cold rolled surface, back seat & non-rotating needle tip
- . Special types are available
- . The manifolds can be supplied according to NACE-standard

### 5 Valve Manifolds for Remote Mounting



- . PN420 DN 5 Type 1b-for remote mounting
- . External stem thread
- . Stem with cold rolled surface, back seat and non-rotating needle tip
- . Special types are available
- . The manifolds can be supplied according to NACE-standard

### Gauges Snubbers



- . Surface: steel phosphatized
- . Max. Temperature: 120°C
- . Also available with connection thread G 1/4, G 3/8 and 1/4 NPT
- . The brass and stainless steel types can be supplied for oxygen

### Pressure Instrument Accessories



#### Water syphon for pressure gauges DIN 16 282 U-shaped for horizontal pressure tapping

- . Surface: Type 1 to 4 steel phosphatized; Type 5 oiled
- . Range of application: For liquids, gas or steam
- . Other materials, pressure/ temperature ratings & conn on request

### Gauges Protectors



- . Body: brass; pressed part; stainless steel: die-pressed part
- . App: Gauge protectors close at a set point protecting gauges from overrange pressures.
- . Function: By reaching the adjusted pressure, the valve closes automatically and blocks the flow to the pressure instrument. After decrease of pressure by about 25% below the closing pressure, the valve opens again.

### Shut-Off Valves PN100 DN 4 DVGW tested



- . Internal stem thread
- . Stem with cold rolled surface and non-rotating needle tip
- . Basis of type examination: DVGW VP 308
- . Max. operating pressure: 100 bar
- . Temperature: -20°C up to +60°C
- . For all kinds of gas in accordance with DVGW-list numb G 260

### Integral Manifolds for Rosemount Transmitter



- also available with soft tip in KEL-F® (PCTFE) or POM
- Packing PTFE or graphite
- Available with material certificates according to EN 10 204 / 3.1
- 100% pressure tested
- For any other requirements please consult the factory

### Angle Seat Valve DN 8, PN 160



- . Valves with special welding connections optional
- . Body: die-pressed part
- . Surface: steel phosphatized
- . Internal or external stem thread
- . Replaceable valve seat
- . Stem with cold rolled surface, back seat and non-rotating needle tip

