AQUASENSE

Monitoring Every Drop !

SMART FLOW METER CATALOGUE

CHAITANYA

RAIN HARVEST PRODUCTS & SYSTEMS PVT. LTD.

OVERVIEW

Our Smart Turbine Type / Electromagnetic type Flowmeter Is of Perfect Performance And Reliability. Based on the successfully Proven Smart Flow Technology of AQUASENSE, the flowmeter is widely used in industries of cement, petroleum, chemical engineering, iron and steel, food electric power, paper making, water treatment, petrochemistry & medicine etc.

FEATURES

Measurement is independent of fluid density, humidity, temperature, pressure and conductivity. There are no obstacle elements in the conduit, no pressure droppage, the requirement of straight pipe is low. The sensor with advanced processing technology is of nice resistance to negative pressure. The liquid crystal display in the converter of smart series Magnetic flowmeter makes it easy to read in the sun or in the dark room. In bad environment parameters can reset up through the infrared ray touch knobs without opening the cover of the converter. The converter has alarm output function of self-diagnosis, empty load test high and low limit of the flow, two-stage flow value, etc. not only apply in generally process test but also in the test of the mineral serosity, paper pulp as well as pastry liquid. High pressure type electromagnetic flow sensor adopting PFA lining technology which is resistant to high pressure and negative pressure is especially applicable in industries of oil, chemistry, etc.

PERFORMANCE SPECIFICATIONS

- *RS 485 Output SCADA / TELEMETRY ENABLED*
- *Nominal Pressure: 0.6~4.0MPa*
- *Accuracy: + 0.5% of the value displayed, +0.3% or +0.2% are optional*
- *Liner Material: Teflon, PFA, F46, Neoprene, Polyurethane*
- *Electrode Type: General type, Scraper type and Replaceable type*
- *Electrode Material: SS316, Hastelloy B, Hastelloy C, Titanium,*
- *Tantalum, Platinum-iridium, stainless steel covered with tungsten.*
- *Medium Temperature Integral type: 100C +800C*
- *Remote Type: Neoprene & Polyurethane Liner --- 100C +800C*
- *PTFE, PFA, F46 Liner 100C +1600C*
- *Ambient Temperature: 250C+600C*
- *Ambient Humidity: 5~100%RH (Relative Humidity)*
- *Medium Electrical conductivity: > 5.0 s/cm*
- *Measuring Range: 1500:1, flowrate< 15m/s*
- *Structure Type: Integral type, remote type, submersible type, ex proof type.*
- *Protection Class: IP65, IP68 (optional), IP65 Dustproof and*
- *Watertight: IP68 Dustproof and submersible for long (only for remote type)*
- *Output signal: 4-20mA, Pulse, RS 485 MODBUS SYSTEM*

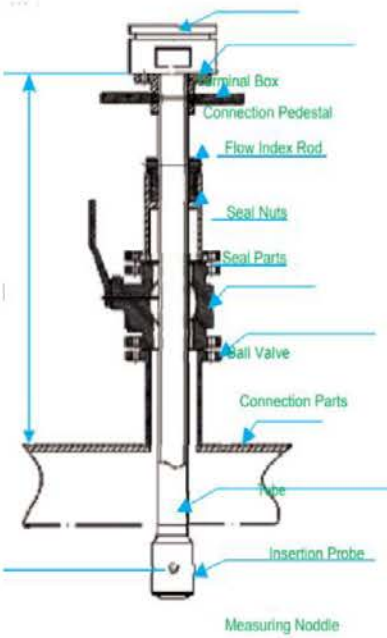
SELECTION PRINCIPALS

The measured liquid must be conductivity liquid of serosity of which the conductivity should be more than 50 s/cm the medium should not contain much magnetic matter of air bubbles. Pressure grade lining material, electrode material and structure type should be selected according to the medium's temperature corrosiveness, abrasion, etc. Normally the sized of flow meter should be the same as the pipe diameter.

Main performances of the electrode materials

Liner Materiral	Main Performances	Applications
PTEF	1. The most steadiest material in plastics which is resistant to boiling hydrochloric acid, vitriolandaqua fortis as well as strong alkali and organic impregnants. 2. Not be perfect in abrasion resistance.	Strong corrosive mediums such as strong acid and alkali
PFA	Having the same abrasion resistance with PTFE. Having strong ability of load pressure resistance.	Applicable in state of load pressure.
F46	1. Having the same abrasion resistance with PTFE. 2. Resistable for low abrasion. 3. Having strong resistance to load pressure.	1. The same as PTFE. 2. Applicable in mediums of low abrassion.
Neoprene	1. Be of good elasticity, refractivity and abrasion resistance. 2. Be resistant to low acid, alkali and salt but not for oxidation mediums.	Water, sewage and slurry, mineral serosity of low abrasion.
Polyurethane	1. Be of good abrasion resistablity (equal to 10 times of enoutchoue). 2. Not be perfect in acid/alkali resistance. 3. Can't be used for water mixed with organic impregnants.	Applicable in mineral serosity, slurry and coal slurry of high abrasion.

MM		XXX	X	X	X	X	X	X	X	X	X	X	X	X
Size	DN10 to DN 3000 refer Table 12													
Body Material	Mild Steel		M											
	SS 304		T											
	SS 316		S											
Liner Material	PTFE			T										
	PFA			F										
	F46			E										
	Neoprene			R										
	Polyurathene			P										
Electrode Material	SS 316 (0Cr18Ni12Mo2Ti)				S									
	Hastalloy B				B									
	Hastalloy C				H									
	Titanium				N									
	Platinum Iridium				P									
	Tantalum				T									
	SS covered with Tungstine				K									
Process Connection	MS Flange					M								
	SS 304 Flange					F								
	SS 316 Flange					G								
	TC end (SS 316)					T								
	Wafer end					W								
Pressure Rating	6 bar						B							
	10 bar						N							
	40 bar						P							
	60 bar						M							
	320 bar						H							
Flange Class	# 150							1						
	PN 10 / 16							2						
	PN 40							3						
	TC 40 mm							4						
	TC 50 mm							5						
Mounting	In Line								1					
	Insertion								2					
Structure	Integral									1				
	Remote									2				
	Integral + Remote									3				
	Remote Submersible Type									4				
	Integral Ex-proof									5				
	Remote Ex-proof									6				
Cable length														
Calibrated range														
Power Supply	220 VAC 50 Hz											1		
	24 VDC											2		
Output	Flow volume 4-20 mA DC / Pulse													A
	Flow volume 4-20 mA DC / RS 232 communication													B
	Flow volume 4-20 mA DC / RS 485 communication													C
	Flow volume HART output / with communication													D



Available Line sizes

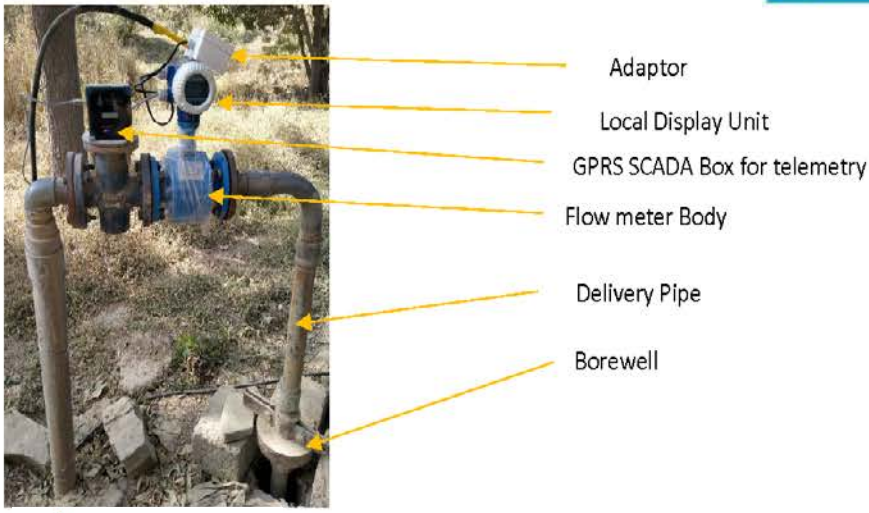
GPRS / Telemetry Unit for Data Transmission

GSM & GPRS Transmitter	
Transmission System	GSM/GPRS/EDGE-based data transmission system
Frequency range	900 MHz, 824-960 MHz/1800MHz,1710-1880 MHz 4G or better
Performance	Data Receptor availability of 99% or better
Communication Direction	Utilize GPRS network for two-way connection with FTP server TCP/IP (INTERNET) connection and SMS
Transmission Trigger	Data collection to be triggered by interrogation from Data Center, or by event-based transmission triggered by remote site
Power Saving	Ability to disable interrogation system in order to save power at remote site
Communication Protocol	HTTP, MQTT to transmit data to the Data Server
Accessories	All associated equipment, mounting hardware, Sensor to GPRS Transmitter cable, Antenna, well cap and mounting sheets for installation
Software for Data Logger	
Operating System	Windows software for system configuration, transfer and analysis of data to computer
Version	English language version
License	All required licenses included

Line Size (mm)	Flow Range(m^3/h) at 0.3 ~ 10 m/s
10	0.06 ~ 2.00
15	0.20 ~ 6.40
20	0.34 ~ 11.3
25	0.53 ~ 17.7
40	1.40 ~ 45.2
50	2.00 ~ 70.7
65	3.58 ~ 119
80	5.43 ~ 181
100	8.48 ~ 282
150	19.08 ~ 636
200	33.9 ~ 1131
250	53.0 ~ 1767
300	76.3 ~ 2544
350	103.9 ~ 3463
400	135.7 ~ 4524
450	171.7 ~ 5726
500	212.0 ~ 7069
600	305 ~ 10179
700	415 ~ 13854
800	542 ~ 18095
900	687 ~ 22902
1000	848 ~ 28274

Flow meter Dashboard – Can be accessed on Any internet enabled device through USER ID/ PASSWORD

Aquasense Flow meter with Telemetry – On Site installation



CHAITANYA
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