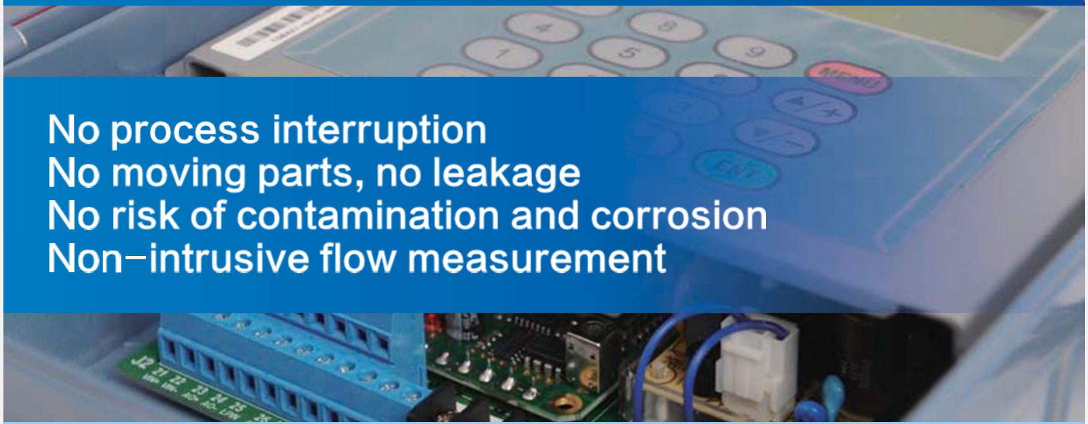
Silvergate
Measure & Control

SG-EFB Clamp-on Flow & Energy Meter



The SG-EFB accurately captures flow measurements using three approaches: clamp-on, flow-cell and insertion. Automatically memory the positive, negative, net totaliser flow rate and heat quantity of the last 512 days, 128 months, 10 years.

- Better than 1% accuracy
- 0.2% of repeatability
- 2×20 LCD display
- 4×4 key tactile-feedback membrane keypad
- 85~264VAC or 24VDC power supply
- Pipe diameters from 15mm to 6000mm
- RS485 output
- Operate with clamp-on, insertion and flow-cell transducer
- One channel programmable 4-20mA output
- Two channel programmable digital out (isolated OCT and Relay)
- Frequency output
- IP65
- SD USB data memory (1G, 4G ,8G etc)

Liquid

- Water (hot water, chilled water, city water, sea water, waste water, etc.);
- Sewage with small particle content;
- Oil (crude oil, lubricating oil, diesel oil, fuel oil, etc.);
- Chemicals (alcohol, acids, etc.);
- Plant effluent;
- Beverage, liquid food;

Pipe Material

- Carbon steel
- Stainless steel
- Cast iron
- Ductile iron
- Copper
- PVC
- Aluminum
- Asbestos

Application

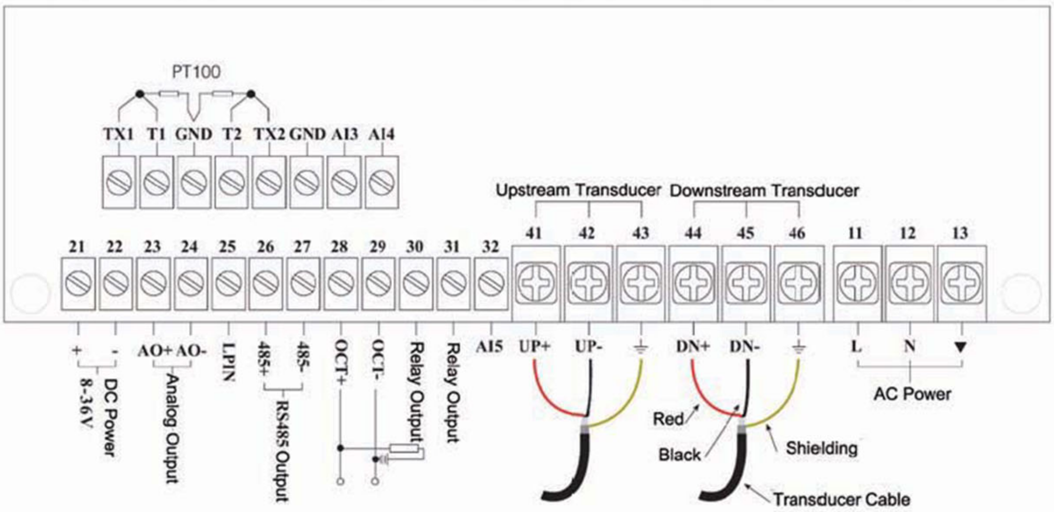
+ Water and waste water management;
+ Water and waste water treatment plants;
+ Power plants, such as nuclear power plants and hydraulic power plants;
+ Mining and metallurgy plants;
+ Petroleum process monitoring and control;
+ Chemical process monitoring and control;
+ Pulp and paper process monitoring and control;
+ Food and beverage processing;
+ Marine maintenance and operation;
+ Energy supply and production systems;
+ Flow measurement networking.

Clamp-On Transducer

A pair of clamp-on transducers measure the flow from outside of a pipe.There is no pressure drop, no leaks and no contamination. The installation is very simple and no special skills or tools are required.

Technical parameters	S2-type	M2-type	L2-type
			
Pipe size (mm)	DN15~100	DN50~700	DN300~6000
Pipe size (inch)	(1/2~4")	(2~28")	(12~240")
Material	Plastic alloy		
Frequency	1MHz		
Installation method	V(N/W)	V/Z	Z
Calibration	Calibrate with main unit		
Magnetism	Magnetic		
Temperature	32F~320F (0℃~160℃)		
Protection class	IP65		
Cable	Standard length 5m×2. Can be extended to 10m×2 or 15m×2		

Wiring Diagram



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Performance & Parameters

Accuracy	Better than ±1.0%
Repeatability	0.2%
Velocity	±0~32m/s
Measurement Period	500mS
Measurement Principle	Transit-time measurement principle
Display	LCD with back light, 2x20 letter
Keypad	4x4 key membrane keypad with tactile feedback
Unit	English(US.) or metric
Input	Five channel 4-20mAcurrenct for signals such as temperature, pressure,liquid level, and etc. Accuracy 0.1%. Two of the five input channels are wired to terminal blocks. The remaining three channels are optional.
Output	Analogue output: 4-20mA or 0-20mA current output. Impedance 01kΩ
	Isolated OCT output for frequency output (0-9.999Hz), alarm driver, or totaliser pulse output, ON/OFF control, etc. Relay output1A@125VAC or 2A@30VDC. For ON/OFF control, alarm driver, totaliser output, etc.
	Internal Alarm (Buzzer): user programmable. External Alarm Driver: alarm signal can be transmitted to Relay or OCT output terminals to drive an external alarm.
	RS232 serial port
Others	Capable of offline compensation for flow totaliser, automatic/ manual selectable. Self-diagnosis. Automatically record the following information: The first 64 days/ 64 months/ 5 years totaliser data. The first 64 times power on/offand flow rate. Allow manual or automatic flow loss compensation.
Pipe material	All metal, most of plastic, fiber glass, etc. Allow the pipe liner.
Pipe Size	1/2-240" (DN15mm-6000mm)
Power	AC:110V/220V, DC:24V
Power consumption	Less than 2W
Working time	continuous
Environment Humidity	85% RH
Environment Temperature	-30-80 Centigrade
Weight	Main unit: 3kg (6.6lb)
Enclosure	Die-cast alluminum enclosure Protective class: IP65 (NAME 4X) Size: 9.88x7.56x3.15” (251x192x80mm) for standard version
Clamp-on type sensor	S1 type: for pipe size DN15-100mm M1 type: for pipe size DN50-700mm L1 type: for pipe size DN300-6000mm S1H type: for pipe size DN15-400mm M1H type: for pipe size DN50-700mm