

# SITRANS Clamp-on Ultrasonic Flowmeters

## Product Overview



SITRANS

Answers for industry.

**SIEMENS**

# Welcome to the SITRANS F US clamp-on ultrasonic flowmeter product overview

Dedicated	Portable	Hazardous Area	Check Metering Kits
 <p data-bbox="127 680 319 755">Dedicated FUS1010, FUE1010, FUH1010, FUG1010</p>	 <p data-bbox="462 680 662 734">Waterproof Portable FUP1010</p>	 <p data-bbox="845 680 1037 755">Compact FUS1010, FUH1010, FUG1010</p>	 <p data-bbox="1212 680 1476 734">FUP1010 Portable General Liquid Check Metering Kit</p>
 <p data-bbox="127 957 207 1010">Basic FST020</p>	 <p data-bbox="462 957 622 1010">Portable Energy FUE1010</p>	 <p data-bbox="845 957 1037 1032">Wall Mount FUS1010, FUH1010, FUG1010</p>	<p data-bbox="1212 766 1436 819">FUP1010 Portable Water Check Metering Kit</p> <p data-bbox="1212 840 1468 893">FUE1010 Portable Energy Check Metering Kit</p> <p data-bbox="1212 925 1468 978">FUG1010 Transportable Gas Check Metering Kit</p>

## SITRANS FUS1010

General purpose, dedicated liquid meters. SITRANS FUS1010 provides accurate, non-intrusive mass and volumetric flow measurement in full pipes. It is field programmable for two modes of operation: WideBeam transit time for relatively homogeneous liquids or Doppler for liquids with extensive suspended solids or aeration.

## SITRANS FUP1010

General purpose, portable liquid meters. SITRANS FUP1010 are ideal as a check meter for existing conventional meters and monitor applications that do not have existing metering. Single and dual channel models are available that come with both WideBeam transit time and Doppler technology, making them ideal for plant testing and survey applications.

## SITRANS FUE1010

Energy, dedicated and portable meters. The dedicated version is available in single and dual channel models, and the portable as dual channel. Using the dual channel function, the meter can be configured to measure two different pipes, or to apply the second channel as a dual path for convoluted pipe configurations. The built-in data logger, makes it easy to time-stamp all data and download it for billing, efficiency and operation analysis.

## SITRANS FST020

General purpose, basic, dedicated single channel meter provides affordable high performance flow measurement. With basic functionalities it is considered an affordable alternative to more complex flow measurement solutions.

## SITRANS FUH1010

Liquid hydrocarbon, oil, refined petroleum, liquefied gas, dedicated meters available in three versions:

SITRANS FUH1010 interface detector offers extremely precise interface, crude oil and multi-product identification. It is ideal for scraper "pig" and density indication. The system provides the user with outputs that include API number, density, and specific gravity at base temperature and pressure at both reference and current operating conditions.

The SITRANS FUH1010 for viscosity-compensated volumetric flow measurement dynamically compensates for viscosity changes as liquid properties change for continuous Reynolds number correction. It allows analog output of inferred viscosity values in addition to diagnostic data.

The SITRANS FUH1010 for accurate standard volume/mass flow measurement required for high-end application such as varying viscosity liquids and multi-product pipelines. Also ideal for line balance applications requiring normalized volume or mass output.

## SITRANS FUG1010

Natural and process gas, dedicated. SITRANS FUG1010 is ideal for most natural and process gas industry applications, including check-metering, allocation, flow survey verification, ect. It is available in single, dual or four beam versions and comes in an optional rugged stainless steel sensor enclosure, permitting permanent and direct burial installations.

## Check Metering Kits

The clamp-on ultrasonic flowmeters from Siemens are also available as pre-configured check metering kits. These kits are an ideal solution for flow surveys or when checking the performance and accuracy of any type and brand of flow or energy meter.

All the kits come in weatherproof and sturdy rolling cases with a telescope handle. The cases hold all the required equipment including cables, multiple ultrasonic sensors and the transmitter; no extra parts need to be ordered.

The clamp-on ultrasonic check metering kits are available for the following industries: general liquid, water and wastewater, energy and gas.

	<b>FUS1010 dedicated wall-mount</b>	<b>FUP1010 waterproof portable</b>	<b>FST020 dedicated wall-mount</b>
Display	128 x 240 pixel LCD with backlight		2 x 16 alphanumeric LCD
Keypad	33 keypad buttons with tactile feedback		5 keys
Accuracy	± 0.5% ... 1.0%	± 0.5% ... 2.0%	± 0.5% ... 1.0%
Flow range	± 12 m/s (± 40 ft/s), bidirectional		
Pipe diameters	6.4 mm ... 9.14 m (0.25" ... 360")		
Data outputs	2xCurrent, 2xVoltage, 4xStatus Alarm Relays, 2xFrequency Dedicated: Optional 6x Current Outputs		1xCurrent: 1xStatus Alarm Relay, 1xPulse
Data inputs	2xCurrent, 2xVoltage, 2xTemperature; Dedicated: 2xFrequency		2xTotalizer
Communication	RS232, MODBUS, N2	RS232	RS232 with DB9 connector
Enclosure ratings	IP65 (NEMA 4X)	IP67	IP65 (NEMA 4X)
Approvals	INMETRO, CSA, FM, CE, ATEX, C-TICK	UL, ULc, CE	UL, ULc, CE, C-TICK

	<b>FUE1010 dedicated wall-mount</b>	<b>FUE1010 portable</b>
Display	128 x 240 pixel LCD with backlight	
Keypad	33 keypad buttons with tactile feedback	
Accuracy	± 0.5% ... 1.0% of flow, for velocities greater than 0.3 m/s (1 ft/s)	
Flow range	± 12 m/s (± 40 ft/s), bidirectional	
Pipe diameters	6.4 mm-9.14 m (0.25"-360")	
Data outputs	2xCurrent, 2xVoltage, 4xStatus Alarm Relays, 2xFrequency	
Data inputs	2xCurrent, 2xTemperature	2xCurrent, 2xVoltage, 2x-4xTemperature
Communication	RS232, MODBUS / N2	RS232
Enclosure ratings	IP65 (NEMA 4X)	IP40 (NEMA 1)
Approvals	FM, CSA, CE, C-TICK	UL, ULc, CE

	<b>FUH1010 dedicated wall-mount</b>	<b>FUH1010 hazardous area wall-mount</b>	<b>FUH1010 hazardous area compact</b>
Display	128 x 240 pixel LCD with backlight		2 x 16 alphanumeric LCD
Keypad	33 keypad buttons with tactile feedback		5 magnetic switches
Accuracy	± 0.5% ... 1.0% of flow, depending on version; ± 0.05 of API # for Interface Detectors / Density Meters		
Flow range	± 12 m/s (± 40 ft/s), bidirectional		
Pipe diameters	6.4 mm ... 9.14 m (¼" ... 360")		
Data outputs	2xCurrent, 2xVoltage, 2xPulse rate (TTL), 4xRelays		2xCurrent, 2xOutput logic gates, 1xPulse rate
Data inputs	4xCurrent, 2xTemperature, 4xDigital		2xCurrent, 1xTemperature, 2xDigital
Communication	RS232, MODBUS		
Enclosure ratings	IP65 (NEMA 4X)	IP66 (NEMA 7)	IP65 (NEMA 7)
Approvals	INMETRO, CSA, FM, CE, ATEX, C-TICK	INMETRO, CSA, FM, CE, ATEX, C-TICK	INMETRO, CSA, FM, CE, ATEX

	<b>FUG1010 dedicated wall-mount</b>	<b>FUG1010 hazardous area wall-mount</b>	<b>FUG1010 hazardous area compact</b>
Display	128 x 240 pixel LCD with backlight		2 x 16 alphanumeric LCD
Keypad	33 keypad buttons with tactile feedback		5 magnetic switches
Accuracy	1% ... 2% of actual volume reading (higher accuracy is pipe condition and flow profile dependent)		
Flow range	± 30 m/s (± 100 ft/s), bidirectional		
Pipe diameters	25 mm ... 1.52 m (1" ... 60") (for other sizes, consult Siemens)		
Minimum gas pressure	7 ... 10 bar (100 ... 145 psi), typical (plastic pipes support operation at atmospheric pressure)		
Data outputs	2xCurrent, 2xVoltage, 2xDigital pulses, 2xTTL pulse square wave, 4xRelays		2xCurrent, 1xDigital pulse, 2xOutput logic gates
Data inputs	4xCurrent, 1xTotalizer clear switch, 1xTotalizer hold switch		2xCurrent, 1xTotalizer clear and hold switch
Communication	RS232, MODBUS		
Enclosure ratings	IP65 (NEMA 4X)	IP66 (NEMA 7)	IP65 (NEMA 7)
Approvals	INMETRO, CSA, FM, CE, ATEX, C-TICK	INMETRO, CSA, FM, CE, ATEX, C-TICK	INMETRO, CSA, FM, CE, ATEX

## Get more information

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