Overview

SITRANS FS130

SITRANS FST030 can be used together with FSS200 clamp-on sensors and with the FSS100 inline sensors. Please order the FSS100 7ME381 sensors for the SITRANS FST030 separately.

The SITRANS FST030 transmitter delivers true multi-parameter measurements i.e. volume flow, standard volume flow, density, mass flow, fluid sound velocity and temperature. The multiple outputs and bus communication mean that all primary process information can be read either instantaneously (10 ms update) or periodically as required by plant operations.

The SITRANS FST030 can be used with the FSS100 sensors (SONOKIT).To get a SITRANS FS130 system, the SITRANS FST030 transmitter and FSS100 sensors must be ordered separately. The FSS100 sensors are tested and quality controlled individually and do not require to be paired or calibrated with an FST030 transmitter.

The transmitter related to this system is the SITRANS FST030 (see Technical specifications for SITRANS FST030).

Process value

- Volume flow
- Mass flow
- Flow velocity
- Sound velocity
- Density
- Kinematic viscosity
- Pressure
- Medium temperature
- Totalizer 1
- Totalizer 2
- Totalizer 3

Benefits

Flow calculation and measurement

- Dedicated volume flow calculation with DSP technology
- 100 Hz update rate for all output on all primary process values
- Maximum data age from sensor to output is 20 ms
- Independent low flow cut-off settings for volume and mass flow, standard volume flow and velocity
- Zero-point adjustment on command from discrete input or host system

Operation and display

User-configurable operation display:

- Full graphical display 240 × 160 pixels with up to 6 programmable views
- Self-explaining alarm handling/log in clear text
- Help text for all parameters appears automatically in the configuration menu

SensorFlash technology stores production specific system documentation and provides removable memory of all flowmeter setups and functions:

- Factory certification
- Non-volatile memory backup of operational data
- Transfer of user configuration to other flowmeters
- 8 GB SD card for storage and data logging
- Audit trail of all parameter changes
- Alarm logging

Alarms and safety

- Advanced diagnosis and service menu enhances troubleshooting and meter validation
- Configurable upper and lower alarm and warning limits for all process values
- Alarm handling can be selected between Siemens and NAMUR standard configurations

Outputs and control

Monitoring comprising of 3 individually configurable totalizers.

Multi-parameter outputs, configurable outputs assigned individually to any of the following parameters:

- Volume flow
- Standard volume flow
- Mass flow
- Flow velocity
- Sound velocity
- Density
- Process viscosity
- Process pressure
- Process/medium temperature

Up to six I/O channels are configured as follows.

Channel 1

Channel 1 is 4 to 20 mA analog output with HART 7.5. The current signal can be configured for massflow, volumeflow and includes the

Benefits (continued)

availability of active or passive function selected by wiring on the non-Ex terminals. Alternative Modbus RTU RS 485 is available.

Channel 2

Channel 2 is a signal output which can be freely configured for any process variable:

- Analog current (0/4 to 20 mA)
- Frequency or pulse
- Operational and alarm status

Channels 3 and 4

Channels 3 and 4 can be ordered with signal (freely configured for any process variable) or relay outputs, or signal input.

Signal output

Signal output can be user configured to:

- Analog current (0/4 to 20 mA)
- Frequency or pulse
- Redundant frequency or pulse (linked to channel 2)
- Operational and alarm status

Signal input

Signal input can be user configured for:

- Totalizer reset functions
- Force outputs or freeze process values
- Initiate automatic zero point adjustment

Relay

Relay output(s) can be user configured to:

- Alarm status

4-20 mA signal outputs and inputs are ordered as active or passive for Ex versions, active and passive for non-Ex versions – function selected by wiring on the terminals.

During initial commissioning of the flowmeter, all outputs can be forced to a preset value for simulation, verification or calibration purposes.

Channels 5 and 6 (with internal DSL)

- RTD temperature inputs for 1000, 500 or 100 Ω RTD's 2-, 3- or 4-wire RTD's supported
- Channels 5 and 6 (with external DSL option)
- RTD temperature inputs or 4-20 ma inputs. Selectable in menu

Approvals and certificates

The SITRANS FST030 transmitter was designed to comply with or exceed the requirements of international standards and regulations.

Design

The SITRANS FST030 is designed in an IP67/NEMA 4X aluminum enclosure with corrosion resistant coating. It can be wall or pipe mounted and the enclosure can be locked with a padlock or wired with lead security seals. Includes all flow and DSL functions integrated into one unit.

The FST030 is available as standard with one current, HART 7.5 output and can be ordered with additional input/output functions.

The SITRANS FST030 wall mount housing transmitter has a modular design with discrete, replaceable electronic modules and connection boards to maintain separation between functions and facilitate field service. All modules are fully traceable and their provenance is included in the transmitter setup.

SensorFlash

SensorFlash is a standard, 8 GB micro SD card with the ability to be updated by PC. It is supplied with each transmitter and comes with a complete set of certification documents including report if ordered. Factory conformance certificates are optional at ordering.

The Siemens SensorFlash memory unit offers the following features and benefits:

- Copy site setups to SD card for easy transfer to other similar transmitters
- Permanent database of operational and functional information from the moment that the flowmeter is switched on
- New firmware updates can be downloaded from the Siemens internet portal for Product Support and placed onto SensorFlash (unmounted from the transmitter and inserted into a PC's SD card slot). The firmware is then inserted into the existing flowmeter for system/firmware upgrade

SITRANS FST030 industrial housing

Separate field enclosure with modular design. The FST030 can installed direct in the field. The SITRANS FST030 use always the seperate FS DSL for the sensor connection.

Function

The following functions are available:

- Up to four configurable outputs and 2 RTD input channels selected at ordering
- Outputs can be individually configured for mass flow, volume flow, etc.
- Three built-in totalizers which can count positive, negative or net flows
- Independent low flow cut-offs, adjustable
- Uni/bidirectional flow measurement
- Flow direction adjustable
- Alarm system consisting of alarm-log, alarm pending menu
- Change log, logs all changes made to menu parameters or via communications
- Internal data logger
- Display of operating time with real-time clock
- Flowrate outputs are freely configurable between maximum negative and maximum positive flows according to the sensor capacity
- Limit switches programmable for flow, density and temperature. Limit points can be graded as warning and alarm for values both above and below nominal process conditions
- Zero adjustment menu, with zero point evaluation display
- Full service menu for effective and straight forward application and meter troubleshooting
- Precise temperature measurement ensures optimal accuracy on massflow and density
- Fully compatible with Siemens PDM version 8.2 service pack 1 or higher

Selection and ordering data

SITRANS FS130 inline flowmeter	Article No. 7ME3723-										Order code		
	0	A	A	3	●	-	●	●	●	●	●	●	●
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.													
Sensor mounting kit													
SITRANS FST030 for SITRANS FSS100 (SONOKIT), please order SITRANS FSS100 separately													
Number of paths (sensor pairs)													
Transmitter only – no sensor					0								
Environment													
Standard							1						
Transmitter/DSL material and mounting style													
Industrial enclosure transmitter with external FS DSL for remote to the sensors. Transmitter and DSL: aluminum cast, NEMA 4X, max. 4-path, M12 connection between transmitter and FS DSL with SSL cable								G					
Industrial enclosure transmitter with external FS DSL for remote to the sensors. Transmitter and DSL: aluminum cast, NEMA 4X, max. 4-path, cable connection between transmitter and FS DSL with SSL cable								K					
Wallmount transmitter, internal DSL, transmitter: aluminum wallbox, NEMA 4X, DSL: none, direct connected sensor cables, (max. 2-path, max. 20 meter sensor cable)								U					
Wall box housing, external DSL, remote to sensor Transmitter: aluminum wallbox, Nema 4X DSL: aluminum cast, Nema 4X, M12 socket for DSL to transmitter interconnect cable (max. 4-path, max. 20 meter sensor cable, max. 150 meter interconnect cable)								V					
Wall box housing, external DSL, remote to sensor Transmitter: aluminum wall box, Nema 4X DSL: aluminum cast, Nema 4X, terminal block for DSL to transmitter interconnect cable (max. 4-path, max. 20 meter sensor cable, max. 150 meter interconnect cable)								W					
Ex approvals													
Non Ex									A				
ATEX, wallbox enclosure									B				
ATEX, industrial enclosure									C				
IECEx, wallbox									E				
IECEx, industrial enclosure									F				
FM, FMc, wallbox enclosure									G				
FM, FMc, industrial enclosure									H				
CSA, wallbox enclosure									L				
CSA, industrial enclosure									M				
ATEX, IECEx, FM, CSA, industrial enclosure									N				
ATEX, IECEx, FM, FMc, wallbox enclosure									P				
NEPSI									Z		Q	0	B
INMETRO									Z		Q	0	D
KCs									Z		Q	0	F
Local User Interface													
Blind version transmitter										1			
Graphical local user interface, 240 × 160 pixels										3			

	Order code
Further designs Please add "-**Z**" to Article No. and specify Order code(s).	
Cable glands – transmitter, DSL (not for sensor cables)	
No glands, metric threads on transmitter	A01
No cable glands, NPT thread, nickle plated brass, quantity based on option "G" data place 14	A20
No cable glands, NPT thread, stainless steel, quantity based on option "G" data place 14	A21
Cable glands, nickle plated brass, quantity based on option "G" data place 14	A22
Cable glands, plastic, quantity based on option "G" data place 14	A24
Cable glands, stainless seel, quantity based on option "G" data place 14	A26
No cable glands, NPT thread, nickle plated brass, quantity based on option "K" data place 14	A30
No cable glands, NPT thread, stainless steel, quantity based on option "K" data place 14	A31

	Order code
Cable glands, nickle plated brass, quantity based on option "K" data place 14	A32
Cable glands, plastic, quantity based on option "K" data place 14	A34
Cable glands, stainless seel, quantity based on option "K" data place 14	A36
No glands, metric thread with NPT thread adapters, nickel plated brass: quantity based on selection "N" in data place 14	A40
No glands, metric thread with NPT thread adapters, stainless steel: quantity based on selection "N" in data place 14	A41
Nickel plated brass glands: quantity based on selection "N" in data place 14	A42
Plastic glands: quantity based on selection "N" in data place 14	A44
Stainless steel glands: quantity based on selection "N" in data place 14	A46
No glands, metric thread with NPT thread adapters, nickel plated brass: quantity based on selection "Q" in data place 14	A50

Selection and ordering data (continued)

	Order code
No glands, metric thread with NPT thread adapters, stainless steel: quantity based on selection "Q" in data place 14	A51
Nickel plated brass glands: quantity based on selection "Q" in data place 14	A52
Plastic glands: quantity based on selection "Q" in data place 14	A54
Stainless steel glands: quantity based on selection "Q" in data place 14	A56
No glands, metric thread with NPT thread adapters, stainless steel: quantity based on selection "U" in data place 14	A60
No glands, metric thread with NPT thread adapters, nickel plated brass: quantity based on selection "U" in data place 14	A61
Nickel plated brass glands: quantity based on selection "U" in data place 14	A62
Plastic glands: quantity based on selection "U" in data place 14	A64
Stainless steel glands: quantity based on selection "U" in data place 14	A66
No glands, metric thread with NPT thread adapters, nickel plated brass: quantity based on selection "V" in data place 14	A70
No glands, metric thread with NPT thread adapters, stainless steel: quantity based on selection "V" in data place 14	A71
Nickel plated brass glands: quantity based on selection "V" in data place 14	A72
Plastic glands: quantity based on selection "V" in data place 14	A74
Stainless steel glands: quantity based on selection "V" in data place 14	A76
No glands, metric thread with NPT thread adapters, nickel plated brass: quantity based on selection "W" in data place 14	A80
No glands, metric thread with NPT thread adapters, stainless steel: quantity based on selection "W" in data place 14	A81
Nickel plated brass glands: quantity based on selection "W" in data place 14	A82
Plastic glands: quantity based on selection "W" in data place 14	A84
Stainless steel glands: quantity based on selection "W" in data place 14	A86
Software functions and CT approvals	
For standard industry applications (liquids, e.g. water)	B11
I/O configuration Ch1	
Non Ex, 4 ... 20 mA HART, menu selected passive/active	E02
Ex, 4 ... 20 mA HART, active	E06
Ex, 4 ... 20 mA HART, passive	E07
Modbus RTU 485	E14
I/O configuration Ch2, Ch3 and Ch4	
None	F00
Non Ex	
• Ch2: current/freq./pulse, Ch3: none, Ch4: none. Active/passive menu selected	F01
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: none. Active/passive menu selected	F02
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: current/freq./pulse. Active/passive menu selected	F03
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: relay. Active/passive menu selected	F04
• Ch2: current/freq./pulse, Ch3: relay, Ch4: relay. Active/passive menu selected	F05
• Ch2: current/freq./pulse, Ch3: relay, Ch4: none. Active/passive menu selected	F06
Ex Passive	
• Ch2: current/freq./pulse, Ch3: none, Ch4: none	F11
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: none	F12
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: current/freq./pulse	F13
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: relay	F14
• Ch2: current/freq./pulse, Ch3: relay, Ch4: relay	F15
• Ch2: current/freq./pulse, Ch3: relay, Ch4: none	F16
Ex Active	
• Ch2: current/freq./pulse, Ch3: none, Ch4: none	F21
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: none	F22
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: current/freq./pulse	F23
• Ch2: current/freq./pulse, Ch3: current/freq./pulse, Ch4: relay	F24
• Ch2: current/freq./pulse, Ch3: relay, Ch4: relay	F25
• Ch2: current/freq./pulse, Ch3: relay, Ch4: none	F26
Certificates	
Factory certification 2.2 to EN 10204:2004	C19
DSL strap kit (to strap DSL to pipe)	
• 60.3 mm (2 inch) pipe mount with U-bolts	G01
• Stainless steel strap to mount DSL to pipe DN 60 ... 150 pipe size (2 ... 6 inch)	G03
• Stainless steel strap to mount DSL to pipe DN 150 ... 300 (6 ... 12 inch)	G05
• Stainless steel strap to mount DSL to pipe DN 300 ... 400 (12 ... 16 inch)	G07
• Stainless steel strap to mount DSL to pipe DN 400 ... 600 (16 ... 24 inch)	G08
Temperature sensors and pockets	
1 000 Ω platinum standard clamp-on RTD	J61
1 000 Ω platinum submersible clamp-on RTD	J62
Cable, DSL to wallbox transmitter	
5 m (16.4 ft) standard DSL cable (2 mounted M12 plugs)	L51
5 m (16.4 ft) standard DSL cable (no plugs mounted)	L52
10 m (32.8 ft) standard DSL cable (2 mounted M12 plugs)	L55
10 m (32.8 ft) standard DSL cable (no plugs mounted)	L56
25 m (82 ft) standard DSL cable (2 mounted plugs)	L59
25 m (82 ft) standard DSL cable (no plugs mounted)	L60
50 m (164 ft) standard DSL cable (2 mounted plugs)	L63
50 m (164 ft) standard DSL cable (no plugs mounted)	L64
75 m (246.1 ft) standard DSL cable (2 mounted plugs)	L67
75 m (246.1 ft) standard DSL cable (no plugs mounted)	L68
150 m (492.1 ft) standard DSL cable (2 mounted plugs)	L71
150 m (492.1 ft) standard DSL cable (no plugs mounted)	L72
RTD cable (clamp temperature sensor to transmitter)	
6 m (20 ft) standard RTD cable	R50
15 m (50 ft) standard RTD cable	R51
30 m (100 ft) standard RTD cable	R52
46 m (150 ft) standard RTD cable	R53
61 m (200 ft) standard RTD cable	R54
91 m (300 ft) standard RTD cable	R55
6 m (20 ft) submersible RTD cable	R56
15 m (50 ft) submersible RTD cable	R57
30 m (100 ft) submersible RTD cable	R58
46 m (150 ft) submersible RTD cable	R59
61 m (200 ft) submersible RTD cable	R60
91 m (300 ft) submersible RTD cable	R61
Mass storage	
Enable mass storage function for SD card (not available for USA)	S30
Country specific approval	
KC-Approval for South Korea	W28
Tag plate	
Tag plate for external DSL, stainless steel	Y14
Tag plate for transmitter, stainless steel	Y15
Tag name plate, stainless steel	Y17

Selection and ordering data (continued)

	Article No.
System spare parts	
Tool kits and loose parts	
"F" connector tool kit, 2 per	A5E38145699
Bag of loose spare parts; for wallmount, including cable strain relief components, mounting tool, seals and gasket, assorted screws and washers, hex cap nut, blind plugs, and O-rings	A5E38288072
Electronics assemblies and modules	
Wall mount transmitter	
• Display and keypad assembly	A5E37697615
• Digital Sensor Link (DSL), internal, for wall box, standard process values	A5E38014726
• Digital Sensor Link (DSL), internal, for wall box, hydrocarbon process values	A5E42138542
• Digital Sensor Link (DSL), internal, for wall box, gas process values	A5E47202379
• SensorFlash (4 GB micro SD card) -40 °C ... +85 °C	A5E38288507
• Power supply, for wall box, (240 V AC, 47 ... 63 Hz), (24 ... 90 V DC)	A5E38263021
• Foam insert for wall box with connectors	A5E38287828
External DSL	
• Digital Sensor Link (DSL), external, module only, standard process values	A5E38014662
• Digital Sensor Link (DSL), external, module only, hydrocarbon process values	A5E37843869
• Digital Sensor Link (DSL), external, module only, gas process values	A5E47202369
• F connector board set: board A, board B and screws for mounting	A5E45882316
• Front end module cover plate with screws for mounting	A5E45882046
Cassettes, I/O configuration and communication	
• Ch1: I/O and comm (active) 4 ... 20 mA output and HART 7.2, Ex	A5E38012278
• Ch1: I/O and comm (passive) 4 ... 20 mA output and HART 7.2, Ex	A5E38013025
• Ch1: communication Modbus RTU 485, Ex	A5E38013054
• Ch1: I/O and comm (active/passive) 4 ... 20 mA output and HART 7.2, Non Ex	A5E38013040
• Ch1: communication Modbus RTU 485, Non Ex	A5E38013069
• F01, Non Ex Ch2: current/freq./pulse Ch3: none Ch4: none Menu select active/passive	A5E38006256
• F02, Non Ex Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: none Menu select active/passive	A5E38006558
• F03, Non Ex Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: current/freq./pulse Menu select active/passive	A5E38006598
• F04, Non Ex Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: relay Menu select active/passive	A5E38006896
• F05, Non Ex Ch2: current/freq./pulse Ch3: relay Ch4: relay Menu select active/passive	A5E38006900
• F06, Non Ex Ch2: current/freq./pulse Ch3: relay Ch4: none Menu select active/passive	A5E38011432
• F11, Ex Passive Ch2: current/freq./pulse Ch3: none Ch4: none	A5E38011478
• F12, Ex Passive Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: none	A5E38011509
• F13, Ex Passive Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: current/freq./pulse	A5E38011541
• F14, Ex Passive Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: relay	A5E38011600
• F15, Ex Passive Ch2: current/freq./pulse Ch3: relay Ch4: relay	A5E38011618
• F16, Ex Passive Ch2: current/freq./pulse Ch3: relay Ch4: none	A5E38011908
• F21, Ex Active Ch2: current/freq./pulse Ch3: none Ch4: none	A5E38012039
• F22, Ex Active Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: none	A5E38012056
• F23, Ex Active Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: current/freq./pulse	A5E38012121
• F24, Ex Active Ch2: current/freq./pulse Ch3: current/freq./pulse Ch4: relay	A5E38019235
• F25, Ex Active Ch2: current/freq./pulse Ch3: relay Ch4: relay	A5E38019263
• F26, Ex Active Ch2: current/freq./pulse Ch3: relay Ch4: none	A5E38019378
Miscellaneous parts	
General	
• Blind plug brass-nickel 10 pcs (Ex version)	A5E38145685

Selection and ordering data (continued)

	Article No.
• Blind plug stainless steel 10 pcs (Ex version)	A5E38145689
• Twist-on F connectors, 4 pcs	A5E38268608
• M12 adapter for DSL or wall mounted transmitter	A5E03906095
Wall mount transmitter	
• Wall bracket "pipe mounting"	A5E38288020
• Wall bracket "panel mounting"	A5E38288032
• Metal kit: PSU cover, back plane	A5E38415145
• Power input cover plate	A5E38415205
External DSL	
• Wall mount bracket and screws for mounting DSL on bracket	A5E45882610
• Lid with O-ring	A5E45818351
• Bag with parts: cable strain reliefs, screws and washers, lid lock screw, grounding parts	A5E38111577

	Article No.
• Acessory pipe mounting kit for FS DSL, max. 60.3 mm (2.4 inch) pipe	A5E36617118001
• Accessory pipe strap kit for FS DSL, DN 50 ... 150 (2 ... 6 inch) pipe	A5E36617118002
• Accessory pipe strap kit for FS DSL, DN 150 ... 300 (6 ... 12 inch) pipe	A5E36617118003
• Accessory pipe strap kit for FS DSL, DN 300 ... 400 (12 ... 16 inch) pipe	A5E36617118004
• Accessory pipe strap kit for FS DSL, DN 400 ... 600 (16 ... 24 inch) pipe	A5E36617118005
Cable glands	
Set of cable glands, plastic, black, metric	A5E03907414
Set of cable glands, Ex e/i, plastic, metric	A5E03907424
Set of cable glands, Ex e/i, stainless steel, metric	A5E03907429
Set of cable glands, Ex e/i, brass nickel-plated, metric	A5E03907430
Set of cable glands, plastic, black, NPT	A5E03907435
Set of cable glands, Ex e/i, plastic, NPT	A5E03907451
Set of cable glands, Ex e/i, stainless steel, NPT	A5E03907467
Set of cable glands, Ex e/i, brass nickel-plated, NPT	A5E03907473

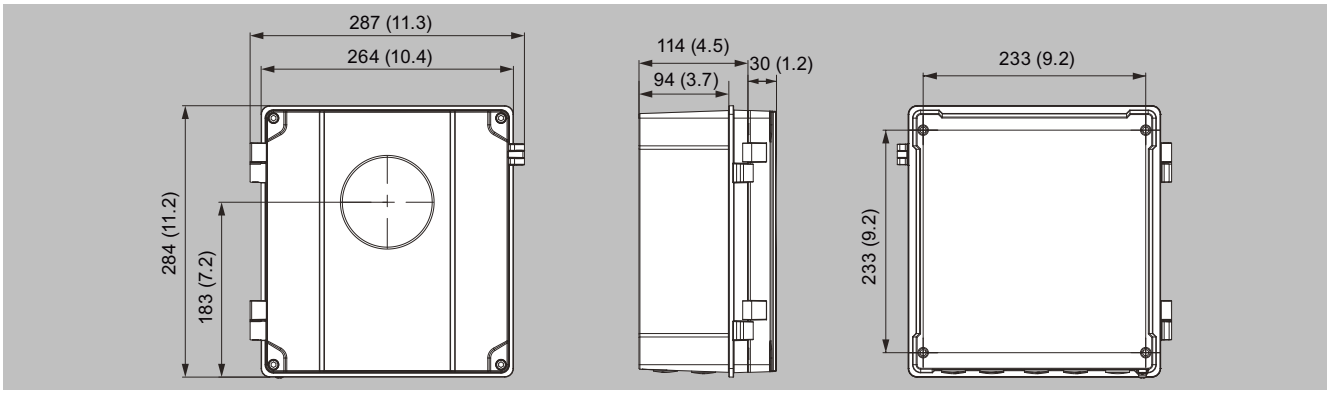
Technical specifications

SITRANS FS130	
Process media	• Suitable for virtually any sonically conductive fluid, including hazardous liquids • Aggregate state: Light slurry and liquid
Process variables	• Volume flow • Mass flow • Flow velocity • Sound velocity • Standard volume flow (hydrocarbon variant only) • Density • Kinematic viscosity • Pressure • Medium temperature • Specific gravity (hydrocarbon variant only) • Totalizer 1 • Totalizer 2 • Totalizer 3
Current output	
Current	0 ... 20 mA or 4 ... 20 mA (channel 1 only 4 ... 20 mA)
Load	< 500 Ω per channel
Time constant	0 ... 100 s adjustable
Digital output	
Pulse	41.6 µs ... 5 s pulse duration
Frequency	0 ... 10 kHz, 50% duty cycle, 120% overscale provision
Time constant	0 ... 100 s adjustable
Active	0 ... 22 V DC, 30 mA, short-circuit-protected
Passive	3 ... 30 V DC, max. 110 mA
Relay	
Type	SPDT dry contact relay
Load	30 V AC/100 mA
Functions	Alarm level, alarm number, limit, flow direction
Digital input	
Voltage	15 ... 30 V DC (2 ... 15 mA)
Current	4 ... 20 mA
Functionality	Reset totalizer 1, 2 and 3, force output, freeze process values, zero point adjustment
Galvanic isolation	All inputs and outputs are galvanically isolated, isolation voltage 500 V
Alarm and warning limit	Available for all process values
Totalizer	Three counters for forward, net and reverse flow
Display	• Background illumination with alphanumerical text to indicate flow rate, totalized values, settings and faults • Adjustable damping constant of 0 ... 100 s • Reverse flow indicated by negative sign
SD card functions	• Parameter change log • Configurable data logger • FW update log • Diagnostic log • Error and alarm log • Parameter backup
Ambient temperature	
Operation:	
• Transmitter	• -40 ... +60 °C (-40 ... +140 °F), humidity max. 95%

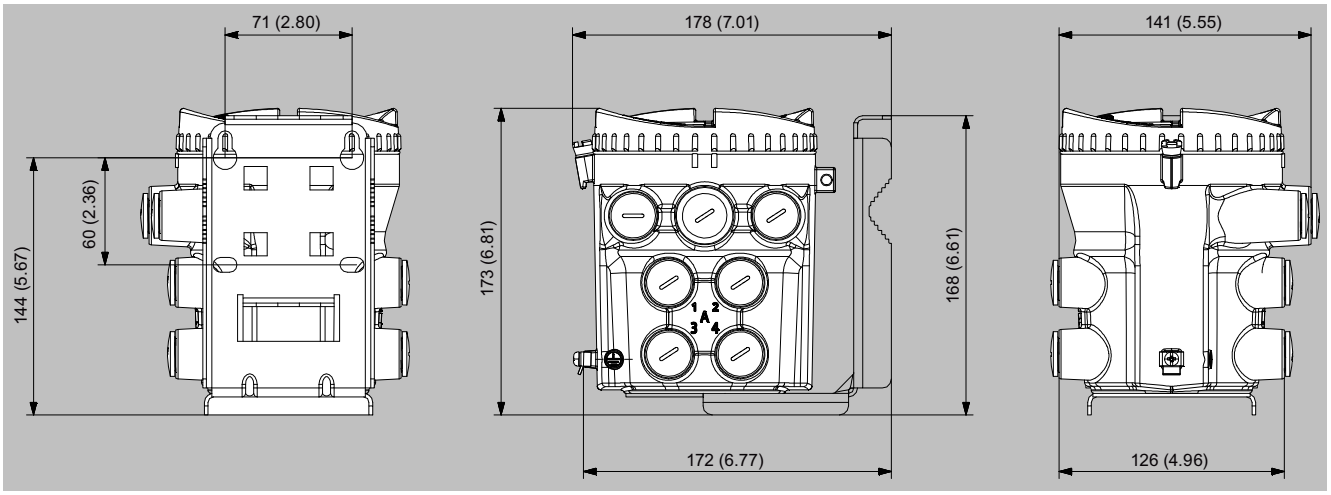
Technical specifications (continued)

SITRANS FS130	
• Display	• -20 ... +60 °C (-4 ... +140 °F)
Storage:	
• Transmitter	• -40 ... +70 °C (-40 ... +158 °F), humidity max. 95%
Communication	• HART 7.5 • Modbus RTU RS 485
Enclosure	
Material	Aluminum
Rating	IP66/67, NEMA 4X to IEC 529 and DIN 40050 (1 mH_2O for 30 min.)
Mechanical load	18 ... 400 Hz random, 3.17 g RMS, in all directions
Power supply	
Universal	20 ... 27 V DC, 100 ... 240 V AC, 47 ... 63 Hz
Fluctuation	No limit
Power consumption	20 W/22 VA
Minimum pressure for Gas	7 ... 10 bar (100 ... 145 psi), typical (gas composition and application dependent; plastic pipes support operation at atmospheric pressure)
Environment	
Environmental conditions according to IEC/EN/UL 61010-1	• Altitude up to 2 000 m • Pollution degree 2 • Overvoltage category II
Maintenance	The flowmeter has a built-in error log/pending menu which should be inspected on a regular basis
Cable glands	Cable glands are available in nylon, nickel plated brass or stainless steel (316L/W1.4404)
Approvals	
For non-hazardous area	No approval required
For hazardous area	Ex approvals required
Certificates	
CE conformity marking	• Low voltage directive • WEEE • RoHS
EMC performance	
Emission	CISPR 11:2009/A1:2010 and EN 55011:2009/A1:2010
Immunity	IEC/EN 61326-1:2013

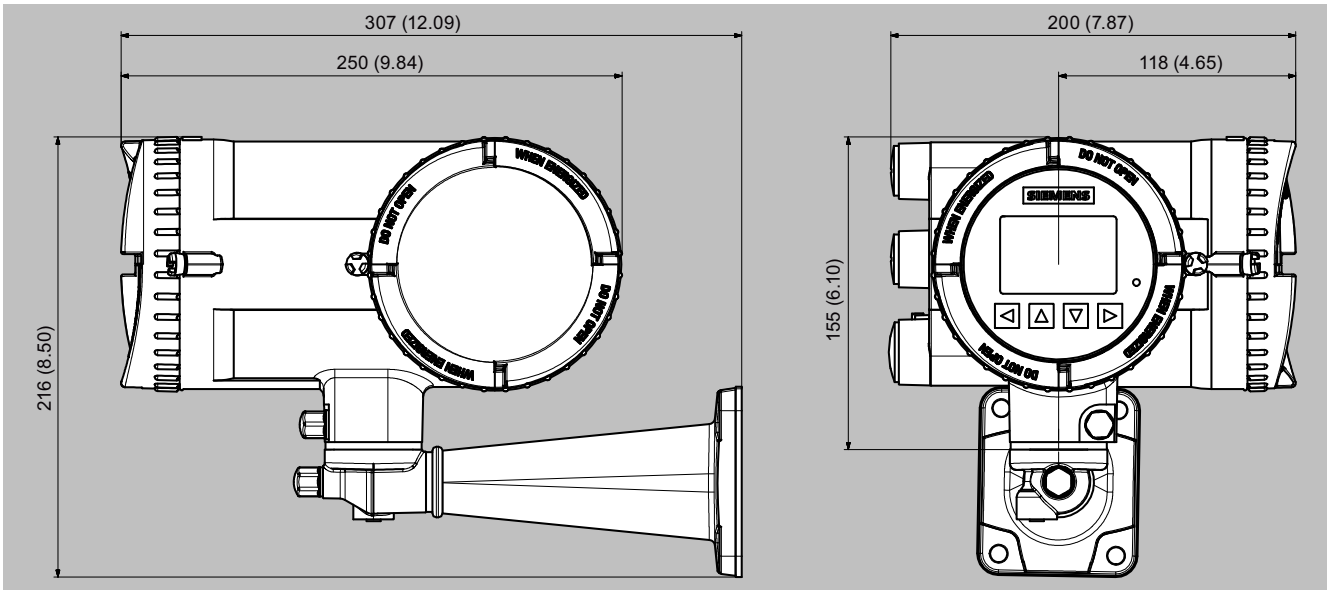
Dimensional drawings



SITRANS FST030, wall mount version, dimensions in mm (inch)

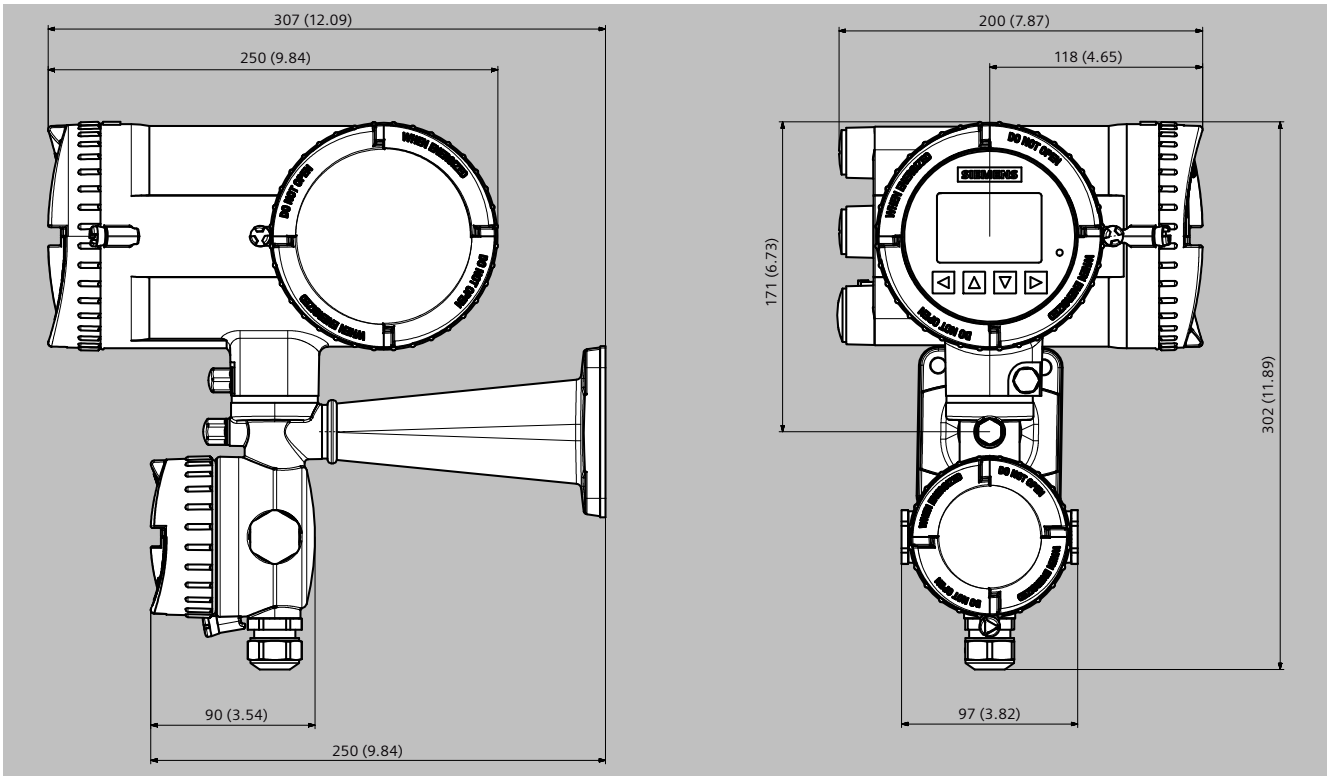


External DSL, dimensions in mm (inch)



SITRANS FST030 industrial transmitter with M12 connection, dimensions in mm (inch)

Dimensional drawings (continued)



SITRANS FST030 with terminal house, dimensions in mm (inch)