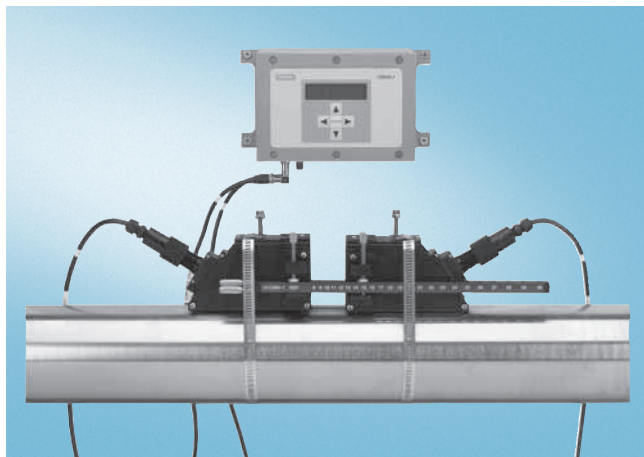


SITRANS F flowmeters

SITRANS F US

SITRANS FUS1020 Basic clamp-on

Overview



SITRANS FUS1020 offers reliable flow-measurement at a much lower cost than other clamp-on ultrasonic flowmeters, with flow rate accuracy of 1% or better for most applications.

Benefits

- Easy installation; no need to cut pipe or stop flow
- Minimal maintenance; external transducers do not require periodic cleaning
- No moving parts to wear or foul
- No pressure drop or energy loss
- Compact, integral design reduces installation cost
- Wide turn-down ratio
- Choice of single or dual channel operation
- Transducers are matched to the pipe material and have menu-driven location
- Wide-Beam technology ensures high performance
- Zeromatic Path automatically sets zero without stopping flow and eliminates zero drift

Application

FUS1020 is suitable for most clean liquid applications, including the following:

- Water & wastewater industry
 - Potable water
 - Wastewater, influent & effluent
 - Processed sewage, sludge
- Chemical feed industry
 - Sodium hypochlorite
 - Sodium hydroxide
- HVAC & power industries
 - Coolant flow
 - Fuel flow
- Process control
 - Chemicals
 - Pharmaceuticals
- The FUS1020 flowmeter is not available with hazardous areas approval

Design

- IP65 (NEMA 4) wall mount flow display computer with separate transducers and cables
- Single and dual channel versions are available

Function

- 2x16 integral alphanumeric display and 5 key keypad for installation menu and data display
- Assignable 4 ... 20 mA isolated loop-powered output
- TTL flow pulse rate output
- RS232 digital communication port
- DB9 connector for PC communication
- Assignable open collector alarm output (40 V DC max)
- Batch totalizer start-stop control line
- Internal calibration security switch
- Remote PC installation menu
- Zeromatic Path automatically sets zero
- Bidirectional flow operation
- 1 MByte data logger with both site & data logger storage

Technical specifications

SITRANS FUS1020

Input

Flow Range	± 12 m/s (± 40 ft/s), bi-directional
Flow Sensitivity	0.0003 m/s (0.001 ft/s) flow rate independent

Outputs

Outputs	<ul style="list-style-type: none"> • Current: 4 ... 20 mA <ul style="list-style-type: none"> 1x for single channel 2x for dual channel • 1x 0 ... 5 kHz pulse rate, digital isolated, single channel only • RS232 serial port
Optional output	<ul style="list-style-type: none"> • Current: <ul style="list-style-type: none"> 1x 4 ... 20 mA, programmable, single channel only
Status/Alarm I/O	<ul style="list-style-type: none"> • Programmable form a relays (optional) <ul style="list-style-type: none"> 1x for single channel 2x for dual channel • Optically coupled totalizer hold switch inputs <ul style="list-style-type: none"> 1x for single channel 2x for dual channel • Optically isolated totalizer reset switch, single channel only

Accuracy

Accuracy	± 0.5% ... 1.0% of flow
Batch repeatability	± 0.15%
Zero Drift	0.1% of rate; 0.0003 m/s (0.001 ft/s), with zeromatic path active
Data refresh rate	5 Hz

Rated operation conditions

Degree of protection	IP65 (NEMA 4)
----------------------	---------------

Design

Weight	1.4 kg (3.0 lbs)
Dimensions (W x H x D)	197 x 103 x 109 mm (7.77 x 4.06 x 4.3 inches)

Power supply

100 ... 240 V AC @ 15 VA or 9 ... 36 V DC @ 10 W

Certificates and approvals

Unclassified locations only	<ul style="list-style-type: none"> • UL Listing • ULc Listing • CE: <ul style="list-style-type: none"> • LVD IEC 61010-1 • EMC EN 61000-6-2, -4
-----------------------------	---

Selection and Ordering data	Order-No.	Ord. code
SITRANS FUS1020 Basic clamp-on, IP65 (NEMA 4)	A) 7ME3570-	00-0
Number of channels/ultrasonic beams		
Single channel	◆ 1	
Dual channel / Dual beam	2	
Flowmeter functions and I/O configurations		
• Blind system - 1x 4 ... 20 mA per channel - 1x pulse out (for single channel only)	A	
• With display	◆ E	
• With display and 1x additional analog output (single channel only)	F	
• With display and with SPST relay	G	
• With display and 1x additional analog output and SPST relay (single channel only)	H	
Meter power options		
90 ... 240 V AC	A	
9 ... 36 V DC	B	
Transducer for channel 1 (includes pipe mounting kit for indicated max. outer diameter listed) See „Transducer selection charts“ for specifications.		
no transducer	A	
A2 universal to 3"/track mounting	B	
B3 universal to 5"/track mounting	◆ C	
C3 universal to 13"/mounting frame	◆ D	
D3 universal to 24"/mounting frame	◆ E	
E2 universal to 48"/mounting frame	◆ F	
A1H (high precision) to 3"/trackless mount.	G	
A2H (high precision) to 3"/trackless mount.	H	
A3H (high precision) to 3"/trackless mount.	J	
B1H (high precision) to 5"/trackless mount.	K	
B2H (high precision) to 5"/trackless mount.	◆ L	
C1H (high precision) to 24"/trackless mount.	M	
C2H (high precision) to 24"/trackless mount.	◆ N	
D1H (high precision) to 48"/trackless mount.	◆ P	
D2H (high precision) to 48"/trackless mount.	Q	
Other versions (different size, mount, type or pipe larger than DN 1200 (48"), or corrosion resistant), add Order Code and plain text.	Z	P 1 Y
High temperature transducer size 2 for up to 230 °C (446 °F) (30 to 200 mm diam. (1.18 to 7.67 inch diam.))	Z	P 1 A
High temperature transducer size 3 for up to 230 °C (446 °F) (150 to 610 mm diam. (5.90 to 24 inch diam.))	Z	P 1 B
High temperature transducer size 4 for up to 230 °C (446 °F) (400 to 1200 mm diam. (15.75 to 47.25 inch diam.))	Z	P 1 C

Selection and Ordering data	Order-No.	Ord. code
SITRANS FUS1020 Basic clamp-on, IP65 (NEMA 4)	A) 7ME3570-	00-0
Transducer for channel 2 (includes pipe mounting kit for indicated max. outer diameter listed) See „Transducer selection charts“ for specifications.		
no transducer		A
A2 universal to 3"/track mounting		B
B3 universal to 5"/track mounting	◆	C
C3 universal to 13"/mounting frame	◆	D
D3 universal to 24"/mounting frame	◆	E
E2 universal to 48"/mounting frame	◆	F
A1H (high precision) to 3"/trackless mount.		G
A2H (high precision) to 3"/trackless mount.		H
A3H (high precision) to 3"/trackless mount.		J
B1H (high precision) to 5"/trackless mount.		K
B2H (high precision) to 5"/trackless mount.	◆	L
C1H (high precision) to 24"/trackless mount.		M
C2H (high precision) to 24"/trackless mount.	◆	N
D1H (high precision) to 48"/trackless mount.	◆	P
D2H (high precision) to 48"/trackless mount.		Q
Other versions (different size, mount, type or pipe larger than DN 1200 (48"), or corrosion resistant), add Order Code and plain text.		Z Q 1 Y
High temperature transducer size 2 for up to 230 °C (446 °F) (30 to 200 mm diam. (1.18 to 7.67 inch diam.))		Z Q 1 A
High temperature transducer size 3 for up to 230 °C (446 °F) (150 to 610 mm diam. (5.90 to 24 inch diam.))		Z Q 1 B
High temperature transducer size 4 for up to 230 °C (446 °F) (400 to 1200 mm diam. (15.75 to 47.25 inch diam.))		Z Q 1 C
Approvals		
no approval options (UL, ULc, CE by default)		0

Selection and Ordering data	Order code
Further designs Please add „-Z“ to Order No. and specify Order code(s).	
Cable assembly for transducers (add for # of channels) See „Transducer cable selection chart“	K..
Cable termination kit (for one cable pair) • Transducer cable termination for standard and plenum cable	T01
Languages (Meter, Labels and Documentation), English (default) • German • French • Spanish • Italian	B10 B12 B13 B14
Wet flow transfer calibration • Standard In-house 6 point calibration (up to DN 150 (6")) available	D10
Tag name plate • Stainless steel tags with 3.2 mm (0.13 inch) character size (26 characters max.) • Stainless steel tags with 3.2 mm (0.13 inch) character size (68 characters max.)	Y17 Y19

◆ Mainstream products (delivery time 4 to 6 weeks)

A) Subject to export regulations AL: 91999, ECCN: EAR99H.

