

# Flow Measurement SITRANS F US Clamp-on

## SITRANS FUP1010 (Portable)

**Standard MLFB for quick delivery on SITRANS FUP1010 Portable (excluding energy)**

Selection and Ordering data	Article No.	Order Code	Selection and Ordering data	Article No.	Order Code
<b>SITRANS FUP1010 (Portable)</b>	<b>7ME3510-</b>		<b>SITRANS FUP1010 (Portable)</b>	<b>7ME3510-</b>	
• IP67 weatherproof battery powered	- 0 0		• IP67 weatherproof battery powered	- 0 0	
<b>Number of channels/ultrasonic paths</b>	1		<b>Sensor for channel 2</b>		
Single channel	2		(includes pipe mounting kit and spacer bar for indicated max. outer diameter listed)		
Dual channel/Dual path			See "Sensor selection charts" for specifications.		
<b>Standard flowmeter types and I/O configurations</b>			no sensor	A	
• Standard I/O	C		A2 universal	B	
- 2 x 4 ... 20 mA analog in			B3 universal	C	
- 2 x RTD input			C3 universal	D	
<b>Sensor cables</b>			D3 universal	E	
No sensor cable	A		E2 universal	F	
1 x PVC Jacket cable, length 6 m/20 ft	B		C1H (high precision)	M	
2 x PVC Jacket cable, length 6 m/20 ft	C		C2H (high precision)	N	
1 x PVC Jacket cable, length 15 m/50 ft	D		D1H (high precision)	P	
2 x PVC Jacket cable, length 15 m/50 ft	E		D2H (high precision)	Q	
<b>RTD temperature Sensor</b>			Doppler	S	
(Mounting hardware & cable included)			D1H	Z	Q1 P
No RTDs	0				
1 x standard clamp-on RTD, 6 m/20 ft cable	5				
2 x standard clamp-on RTD with 6 m/20 ft cable	6				
1 x standard clamp-on RTD with 15 m/50 ft cable	7				
2 x standard clamp-on RTD with 15 m/50 ft cable	8				
<b>Battery charger options</b>					
No battery charger	0				
Charger Type A for Europe (CEE7/7)	1				
Charger Type G for U.S. (NEMA 5-15P)	5				
<b>Sensor for channel 1</b>					
(includes pipe mounting kit and spacer bar for indicated max. outer diameter listed)					
See "Sensor selection charts" for specifications.					
no sensor		A			
A2 universal	Trackmount and straps provided up to 75 mm (3")	B			
B3 universal	Trackmount and straps provided up to 125 mm (5")	C			
C3 universal	Mounting frame and straps provided up to 300 mm (13")	D			
D3 universal	Mounting frame and straps provided up to 600 mm (24")	E			
E2 universal	Mounting frame and straps provided up to 600 mm (24")	F			
C1H (high precision)	Mounting frame and straps provided up to 600 mm (24")	M			
C2H (high precision)	Mounting frame and straps provided up to 600 mm (24")	N			
D1H (high precision)	Mounting frame and straps provided up to 600 mm (24")	P			
D4H (high precision)	Mounting frame and straps provided up to 600 mm (24")	R			
Doppler	to 12" with strap kit (not for IP65 (NEMA 7))	S			
D1H	High temperature range 104 °C/220 °F HP <sup>2)</sup>	Z	P	1	P

**Approvals:** No options (UL, ULc, CE by default)

Standard MLFB product offering represents 4 to 6 weeks delivery time

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• IP67 weatherproof battery powered	- 0 0		• IP67 weatherproof battery powered	- 0 0	
<b>Number of channels/ultrasonic paths</b>			<b>Sensor for channel 1</b>		
Single channel	1		Including pipe mounting tracks for sizes A & B sensors indented for pipe with a OD less than 125 mm (5") and mounting frame/spacer bars for sizes C, D & E sensors. Straps provided are for the indicated maximum OD listed below. Strap kits are available to accommodate larger pipes (refer to spare part list). Refer to "Sensor Selection Charts" for the sensor suitability of pipe size and wall thickness.		
Dual channel/Dual path	2		no sensor	A	
<b>Standard flowmeter types and I/O configurations</b>			A2 universal Trackmount and straps provided up to 75 mm (3")	B	
• Standard I/O	C		B3 universal Trackmount and straps provided up to 125 mm (5")	C	
- Reflexor capable			C3 universal Mounting frame and straps provided up to 300 mm (13")	D	
- Graphic display			D3 universal Mounting frame and straps provided up to 600 mm (24")	E	
- 2 x 0 ... 10 V			E2 universal Mounting frame and straps provided up to 600 mm (24")	F	
- 2 x 4 ... 20 mA			For the following A1H to D4H sensors, temperature range is -40 °C to 65 °C (-41 °F to 150 °F), nominal 21 °C (70 °F):		
- 2 x pulse outputs			A2H (high precision) Trackmount and straps provided up to 75 mm (3")	H	
- 4 x status logic			A3H (high precision) Trackmount and straps provided up to 75 mm (3")	J	
- 2 x 4 ... 20 mA analog in			B1H (high precision) Trackmount and straps provided up to 125 mm (5")	K	
- 1 x RTD per channel			B2H (high precision) Trackmount and straps provided up to 125 mm (5")	L	
<b>Sensor cables</b>			C1H (high precision) Mounting frame and straps provided up to 600 mm (24")	M	
(select proper quantity of active channels)			C2H (high precision) Mounting frame and straps provided up to 600 mm (24")	N	
No sensor cable	A		D1H (high precision) Mounting frame and straps provided up to 600 mm (24")	P	
<u>IP67 (weatherproof) only</u>	B		D2H (high precision) Mounting frame and straps provided up to 600 mm (24")	Q	
1 x PVC-jacket, length 6 m (20 ft) (for IP67 NEMA 6) <sup>2)</sup>	C		D4H (high precision) Mounting frame and straps provided up to 600 mm (24")	R	
2 x PVC-jacket, length 6 m (20 ft) (for IP67 NEMA 6) <sup>2)</sup>	D		Doppler to 12" with chain kit	S	
1 x PVC-jacket, length 15 m (50 ft) (for IP67 NEMA 6) <sup>2)</sup>	E		High temperature sensor 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
2 x PVC-jacket, length 15 m (50 ft) (for IP67 NEMA 6) <sup>2)</sup>			High temperature sensor size 3 for up to 230 °C (446 °F) (150 to 610 mm diam. (5.90 to 24 inch diam.))	Z	P 1 B
<b>RTD temperature sensor</b>			High temperature sensor 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
(for type 3 meter only, mounting hardware and cable included)					
No RTDs	0				
<u>IP67 (weatherproof) only</u>					
1 x standard clamp-on RTD (NEMA 6) with 6 m (20 ft) cable <sup>1)</sup>	5				
2 x standard clamp-on RTD (NEMA 6) with 6 m (20 ft) cable <sup>1)</sup>	6				
1 x standard clamp-on RTD (NEMA 6) with 15 m (50 ft) cable <sup>1)</sup>	7				
2 x standard clamp-on RTD (NEMA 6) with 15 m (50 ft) cable <sup>1)</sup>	8				
<b>Battery charger options</b>					
no battery charger	0				
Charger Type A for Europe (CEE7/7)	1				
Charger Type C for Australia (AS3112)	2				
Charger Type D for U.K. (BS1363)	3				
Charger Type J for Japan (JIS8303)	4				
Charger Type G for U.S. (NEMA 5-15P)	5				
Charger Type L for Switzerland (SEV1011)	6				

# Flow Measurement

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Selection and Ordering data		Article No.	Ord. code
<b>SITRANS FUP1010 (Portable)</b>		<b>7ME3510-</b>	
• IP67 weatherproof battery powered			
<b>Sensor for channel 1 (continued)</b>			
For the following B1H to D4H sensors, temperature range is -1 °C up to 104 °C (30 °F up to 220 °F), nominal 65 °C (150 °F):			
B1H (high temperature range HP)		Z	P 1 K
B2H (high temperature range HP)		Z	P 1 L
C1H (high temperature range HP)		Z	P 1 M
C2H (high temperature range HP)		Z	P 1 N
D1H (high temperature range HP)		Z	P 1 P
D2H (high temperature range HP)		Z	P 1 Q
D4H (high temperature range HP)		Z	P 1 R
<b>Sensor for channel 2</b>			
(includes pipe mounting kit and spacer bar for indicated max. outer diameter listed)			
See "Sensor selection charts" for specifications.			
no sensor		A	
A2 universal	Trackmount and straps provided up to 75 mm (3")	B	
B3 universal	Trackmount and straps provided up to 125 mm (5")	C	
C3 universal	Mounting frame and straps provided up to 300 mm (13")	D	
D3 universal	Mounting frame and straps provided up to 600 mm (24")	E	
E2 universal	Mounting frame and straps provided up to 600 mm (24")	F	
For the following A1H to D4H sensors, temperature range is -40 °C ... 65 °C (-41 °F ... 150 °F), nominal 21 °C (70 °F):			
A2H (high precision)	Trackmount and straps provided up to 75 mm (3")	H	
A3H (high precision)	Trackmount and straps provided up to 75 mm (3")	J	
B1H (high precision)	Trackmount and straps provided up to 125 mm (5")	K	
B2H (high precision)	Trackmount and straps provided up to 125 mm (5")	L	
C1H (high precision)	Mounting frame and straps provided up to 600 mm (24")	M	
C2H (high precision)	Mounting frame and straps provided up to 600 mm (24")	N	
D1H (high precision)	Mounting frame and straps provided up to 600 mm (24")	P	
D2H (high precision)	Mounting frame and straps provided up to 600 mm (24")	Q	
D4H (high precision)	Mounting frame and straps provided up to 600 mm (24")	R	
Doppler	to 12" with chain kit	S	

Selection and Ordering data		Article No.	Ord. code
<b>SITRANS FUP1010 (Portable)</b>		<b>7ME3510-</b>	
• IP67 weatherproof battery powered			
<b>Sensor for channel 2 (continued)</b>			
High temperature sensor 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 sensor 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 sensor 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
For the following B1H to D4H sensors, temperature range is -1 °C up to 104 °C (30 °F up to 220 °F), nominal 65 °C (150 °F):			
B1H (high temperature range HP)		Z	Q 1 K
B2H (high temperature range HP)		Z	Q 1 L
C1H (high temperature range HP)		Z	Q 1 M
C2H (high temperature range HP)		Z	Q 1 N
D1H (high temperature range HP)		Z	Q 1 P
D2H (high temperature range HP)		Z	Q 1 Q
D4H (high temperature range HP)		Z	Q 1 R
<b>Approvals:</b> No options (UL, ULc, CE by default)			
1) -40 ... +200 °C (-40 ... +392 °F)			
2) -40 ... +80 °C (-40 ... +176 °F)			

Selection and Ordering data	Article No.
<b>Operating Instructions for SITRANS FUP1010</b>	
English IP67 Weatherproof	<b>A5E02951522</b>
German IP67 Weatherproof	<b>A5E02951534</b>
This device is shipped with a Quick Start Guide and a CD containing further SITRANS F literature.	
All literature is also available for free at: <a href="http://www.siemens.com/flowdocumentation">http://www.siemens.com/flowdocumentation</a>	

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Selection and Ordering data	Order code
<b>Further designs</b>	
Please add <b>"-Z"</b> to Article No. and specify Order code(s).	
Languages (Meter and Documentation), English (default). All languages now come standard in all flowmeters	
Wet flow transfer calibration (priced on request)	
6 point calibration 2/water (Price per channel)	
<ul style="list-style-type: none"> <li>• 2SS40 pipe</li> <li>• 3CS40 pipe</li> <li>• 4CS40 pipe</li> <li>• 4SS40 pipe</li> <li>• 6CS40 pipe</li> <li>• 6SS40 pipe</li> <li>• 6CS120 pipe</li> <li>• 8CS40 pipe</li> <li>• 8SS40 pipe</li> <li>• 8CS120 pipe</li> <li>• 10CS Standard pipe</li> <li>• 10CS40 pipe</li> <li>• 10SS40 pipe</li> <li>• 12CS Standard pipe</li> <li>• 12CS40 pipe</li> <li>• 14CS30 pipe</li> <li>• 14CS40 pipe</li> <li>• 16CS Standard pipe</li> <li>• 16CS40 pipe</li> <li>• 18CS Standard pipe</li> <li>• 20CS20 pipe</li> <li>• 20CS30 pipe</li> <li>• 24CS Standard pipe</li> <li>• 24CS20 pipe</li> <li>• 24CS30 pipe</li> <li>• 30CS Standard pipe</li> <li>• 36CS Standard pipe</li> <li>• Other pipe, other liquid, additional points, witness</li> </ul>	<b>D01</b> <b>D02</b> <b>D03</b> <b>D04</b> <b>D05</b> <b>D06</b> <b>D07</b> <b>D08</b> <b>D09</b> <b>D10</b> <b>D11</b> <b>D12</b> <b>D13</b> <b>D14</b> <b>D15</b> <b>D16</b> <b>D17</b> <b>D18</b> <b>D19</b> <b>D20</b> <b>D21</b> <b>D22</b> <b>D23</b> <b>D24</b> <b>D25</b> <b>D26</b> <b>D27</b> <b>Y28</b>
1x Insertion RTD with thermowell and lagging	<b>M1A</b>
2x Insertion RTD with thermowell and lagging	<b>M1B</b>
Tag name plate	
<ul style="list-style-type: none"> <li>• Stainless steel tag with 3.2 mm (0.13 inch) character size (68 characters max.)</li> </ul>	<b>Y19</b>

### MLFB example

#### Application example

A general survey portable flowmeter is required for pipes sizes ranging from 76 ... 500 mm (3" ... 20") with both cast iron and steel material. Doppler may be required as liquid may be moderately aerated.

Requires language support for German.

MLFB Article No.: **7ME3511-2AB01-0DE0-Z B10**

Selection and Ordering data	Article No.	Ord. code
<b>SITRANS FUP1010 meter family</b>	<b>7ME3511-2AB01-0DE0-Z B10</b>	
IP67 weatherproof	0	
Dual channel	2	
Portable I/O with Doppler capable, temperature	C	
1 x PVC-Jacket, length 6 m (20 ft)	B	
No RTDs required	0	
Charger Type A for Europe (CEE7/7)	1	
Sensor for DN 50 ... DN 300 (2" ... 12") pipes	D	
Sensor for DN 200 ... DN 600 (8" ... 24") pipes	E	

#### Universal sensor selection chart IP68

Based on pipe size (all pipe materials)					
Pipe size	Order Code	Outer diameter range (mm)		Outer diameter range (inch)	
		min.	max.	min.	max.
A2	<b>B</b>	12,7	50,8	0,5	2
B3	<b>C</b>	19	127	0,75	5
C3	<b>D</b>	51	305	2	12
D3	<b>E</b>	203	610	8	24
E2	<b>F</b>	254	6096	10	249

#### High precision sensor selection chart IP68

Based on pipe wall thickness (steel pipes only)					
Pipe Wall	Order Code	Pipe Wall [mm]		Pipe Wall [inch]	
		min.	max.	min.	max.
A1H	<b>G</b>	0,64	1,02	0,025	0,04
A2H	<b>H</b>	1,02	1,52	0,04	0,06
A3H	<b>J</b>	1,52	2,03	0,06	0,08
B1H	<b>K</b>	2,03	3,05	0,08	0,12
B2H	<b>L</b>	3,05	4,06	0,12	0,16
C1H	<b>M</b>	4,06	5,84	0,16	0,23
C2H	<b>N</b>	5,84	8,13	0,23	0,32
D1H	<b>P</b>	8,13	11,18	0,32	0,44
D2H	<b>Q</b>	11,18	15,75	0,44	0,62
D4H	<b>R</b>	15,75	31,75	0,62	1,25

# Flow Measurement

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### SITRANS FUP1010 Water and Liquid check metering kits

Selection and Ordering data	Article No.
<b>SITRANS FUP1010 Water Check Metering Kit</b>	<b>CQO:FUPW-WWKIT</b>
<i>Content of delivery</i>	
1 Single channel portable submersible flow transmitter	
1 pair Universal sensor C3	
1 pair Universal sensor E2	
1 pair Doppler sensors	
1 pair Mounting Ezclamp (2 mounting Ezclamp chains)	
1 Ladder chain	
1 Battery charger	
1 pair 20 ft sensor cable	
1 Cable - 1010WP/WDP to PC	
1 PinStop spacer bar (universal)	
1 Flow case	
1 Flowmeter manual	
1 Laminated card set	
1 Certificate of intrinsic calibration	

Selection and Ordering data	Article No.
<b>SITRANS FUP1010 Liquid Check Metering Kit</b>	<b>CQO:FUS-LIQKIT</b>
<i>Content of delivery</i>	
1 Single channel portable submersible transmitter	
1 pair Universal sensor B3	
1 pair Universal sensor C3	
1 pair Universal sensor D3	
1 pair Universal sensor E2	
1 pair Doppler sensors	
1 pair Sensor cables 6m (20 ft)	
1 pair Mounting track	
1 pair Mounting Ezclamp	
1 Spacer bar (portable)	
1 Ladder chain	
1 Battery charger	
1 RS 232 cable for PC connection	
1 Flow case	
1 Clamp-on flowmeter manual CD	
1 Flowmeter manual	
1 Laminated card set	
1 Certificate of intrinsic calibration	