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

Selection and Ordering data		Order No.	Order Code
SITRANS FUP1010 (Portable)			
• IP67 weatherproof battery powered	L)	**7ME3510-**	
		▉▉▉▉▉ - 0 ▉▉ 0 ▉▉▉	

Number of channels/ultrasonic paths
Single channel	**1**
Dual channel/Dual path	**2**

Standard flowmeter types and I/O configurations
• Standard I/O - 2 x 4 ... 20 mA analog in - 2 x RTD input	**C**

Sensor cables
No sensor cable	**A**
1 x PVC Jacket cable, length 6 m/20 ft	**B**
2 x PVC Jacket cable, length 6 m/20 ft	**C**
1 x PVC Jacket cable, length 15 m/50 ft	**D**
2 x PVC Jacket cable, length 15 m/50 ft	**E**

RTD temperature Sensor
(Mounting hardware & cable included)
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**

Battery charger options
No battery charger	**0**
Charger Type A for Europe (CEE7/7)	**1**
Charger Type G for U.S. (NEMA 5-15P)	**5**

Sensor for channel 1
(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[2]	**Z P 1 P**

Selection and Ordering data		Order No.	Order Code
SITRANS FUP1010 (Portable)			
• IP67 weatherproof battery powered	L)	**7ME3510-**	
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Sensor for channel 2
(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**
D2H (high precision)	Mounting frame and straps provided up to 600 mm (24")	**Q**
Doppler	to 12" with strap kit (not for IP65 (NEMA 7))	**S**
D1H	High temperature range 104 °C / 220 °F HP[2]	**Z Q 1 P**

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

Standard MLFB product offering represents 4 to 6 weeks delivery time

L) Subject to export regulations AL: N, ECCN: 3A991X

SITRANS FUP1010 (Portable)

• IP67 weatherproof battery powered	L)	**7ME3510-**
		■■■■■ - 0 ■■ 0 ■■■

Number of channels/ultrasonic paths
Single channel	**1**
Dual channel/Dual path	**2**

Standard flowmeter types and I/O configurations

• Standard I/O **C**
- Reflexor capable
- Graphic display
- 2 x 0 ... 10 V
- 2 x 4 ... 20 mA
- 2 x pulse outputs
- 4 x status logic
- 2 x 4 ... 20 mA analog in
- 1 x RTD per channel

Sensor cables
(select proper quantity of active channels)

No sensor cable	**A**
IP67 (weatherproof) only	
1 x PVC-jacket, length 6 m (20 ft) (for IP67 NEMA 6)[2]	**B**
2 x PVC-jacket, length 6 m (20 ft) (for IP67 NEMA 6)[2]	**C**
1 x PVC-jacket, length 15 m (50 ft) (for IP67 NEMA 6)[2]	**D**
2 x PVC-jacket, length 15 m (50 ft) (for IP67 NEMA 6)[2]	**E**

RTD temperature sensor
(for type 3 meter only, mounting hardware and cable included)

No RTDs	**0**
IP67 (weatherproof) only	
1 x standard clamp-on RTD (NEMA 6) with 6 m (20 ft) cable[1]	**5**
2 x standard clamp-on RTD (NEMA 6) with 6 m (20 ft) cable[1]	**6**
1 x standard clamp-on RTD (NEMA 6) with 15 m (50 ft) cable[1]	**7**
2 x standard clamp-on RTD (NEMA 6) with 15 m (50 ft) cable[1]	**8**

Battery charger options

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**

SITRANS FUP1010 (Portable)

• IP67 weatherproof battery powered	L)	**7ME3510-**
		■■■■■ - 0 ■■ 0 ■■■

Sensor for 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.

			Ord. code
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 to 65 °C (-41 °F to 150 °F), nominal 21 °C (70 °F):

			Ord. code
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**	
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**
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**
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**

L) Subject to export regulations AL: N, ECCN: 3A991X

Selection and Ordering data	Order No.	Ord. code
SITRANS FUP1010 (Portable)		
• IP67 weatherproof battery powered L)	**7ME3510-**	
	▦▦▦▦▦ - 0▦▦0 ▦▦▦	

Sensor for channel 1 (continued)

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

Sensor for channel 2
(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 to 65 °C (-41 °F to 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	Order No.	Ord. code
SITRANS FUP1010 (Portable)		
• IP67 weatherproof battery powered L)	**7ME3510-**	
	▦▦▦▦▦ - 0▦▦0 ▦▦▦	

Sensor for channel 2 (continued)

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

Approvals: No options (UL, ULc, CE by default)
1) -40 ... +200 °C (-40 ... +392 °F)
2) -40 ... +80 °C (-40 ... +176 °F)

L) Subject to export regulations AL: N, ECCN: 3A991X.

Selection and Ordering data	Order No.
Operating Instructions for SITRANS FUP1010	
English IP67 Weatherproof D)	**A5E02951522**
German IP67 Weatherproof D)	**A5E02951534**

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:
http://www.siemens.com/flowdocumentation

D) Subject to export regulations AL: N, ECCN: EAR99H.

Selection and Ordering data	Order code
Further designs	
Please add "**-Z**" to Order No. and specify Order code(s).	
Languages (Meter and Documentation), English (default). All languages now come standard in all flow-meters	
Wet flow transfer calibration (priced on request)	
6 point calibration 2/water (Price per channel)	
• 2SS40 pipe	**D01**
• 3CS40 pipe	**D02**
• 4CS40 pipe	**D03**
• 4SS40 pipe	**D04**
• 6CS40 pipe	**D05**
• 6SS40 pipe	**D06**
• 6CS120 pipe	**D07**
• 8CS40 pipe	**D08**
• 8SS40 pipe	**D09**
• 8CS120 pipe	**D10**
• 10CS Standard pipe	**D11**
• 10CS40 pipe	**D12**
• 10SS40 pipe	**D13**
• 12CS Standard pipe	**D14**
• 12CS40 pipe	**D15**
• 14CS30 pipe	**D16**
• 14CS40 pipe	**D17**
• 16CS Standard pipe	**D18**
• 16CS40 pipe	**D19**
• 18CS Standard pipe	**D20**
• 20CS20 pipe	**D21**
• 20CS30 pipe	**D22**
• 24CS Standard pipe	**D23**
• 24CS20 pipe	**D24**
• 24CS30 pipe	**D25**
• 30CS Standard pipe	**D26**
• 36CS Standard pipe	**D27**
• Other pipe, other liquid, additional points, witness	**Y28**
1x Insertion RTD with thermowell and lagging	**M1A**
2x Insertion RTD with thermowell and lagging	**M1B**
Tag name plate	
• Stainless steel tag with 3.2 mm (0.13 inch) character size (68 characters max.)	**Y19**

[1] Supplied spacer bar supports pipes up to 1050 mm (42 inches). For pipes larger than 1050 mm (42 inches) purchase also, spare part 7ME3960-0MS40 (1012BN-4).

[2] Supplied spacer bar supports pipes up to 750 mm (30 inches). For pipes larger than 750 mm (30 inches) purchase also, spare part 7ME3960-0MS40 (1012BN-4).

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

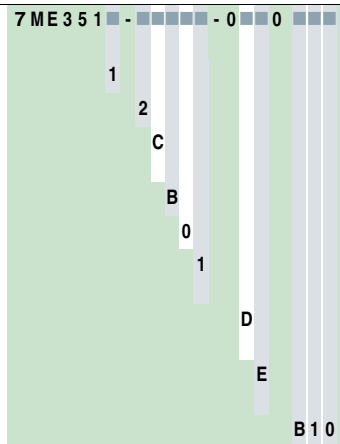| Selection and Ordering data	Order No.	Ord. code
SITRANS FUP1010 meter family	7 M E 3 5 1 ■ - ■■■■■ - 0 ■■ 0	■■■
IP67 weatherproof	1	
Dual channel	2	
Portable Type 3 I/O with Doppler capable, temperature	C	
1 x PVC-Jacket, length 6 m (20 ft)	B	
No RTDs required	0	
Charger Type A for Europe (CEE7/7)	1	
Sensor for DN 50 ... DN 300 (2" ... 12") pipes	D	
Sensor for DN 200 ... DN 600 (8" ... 24") pipes	E	
German language support		B1 0

Universal sensor selection chart

Based on pipe size (pipes other than steel)					
Pipe size	Order Code	Outer diameter range (mm)		Outer diameter range (inches)	
		min.	max.	min.	max.
A2	**B**	12,7	50,8	0.5	2
B3	**C**	19	127	0.75	5
C3	**D**	51	305	2	12
D3	**E**	203	610	8	24
E2	**F**	254	6096	10	249

High precision sensor selection chart

Based on pipe wall thickness (steel pipes only)					
Pipe Wall	Order Code	Pipe Wall [mm]		Pipe Wall [inches]	
		min.	max.	min.	max.
A1H	**G**	0,64	1,02	0.025	0.04
A2H	**H**	1,02	1,52	0.04	0.06
A3H	**J**	1,52	2,03	0.06	0.08
B1H	**K**	2,03	3,05	0.08	0.12
B2H	**L**	3,05	4,06	0.12	0.16
C1H	**M**	4,06	5,84	0.16	0.23
C2H	**N**	5,84	8,13	0.23	0.32
D1H	**P**	8,13	11,18	0.32	0.44
D2H	**Q**	11,18	15,75	0.44	0.62
D4H	**R**	15,75	31,75	0.62	1.25