

Standard MLFB for quick delivery on SITRANS FUS1010 (Dedicated standard)

Selection and Ordering data	Order No.	Order code
SITRANS FUS1010 (Standard)	L) 7ME353 - - 0	+ K02 + K02 + R02
Design IP65 (NEMA 4X) wall mount	0	
Number of channels/ultrasonic paths Single channel Dual channel/Dual path	1 2	
Flowmeter functions and I/O configurations includes graphic display and Reflexor capability Standard outputs <ul style="list-style-type: none">• 2 x 0 ... 10 V• 2 x 4 ... 20 mA• 2 x pulse output• 4 x relay C type	A	
Meter power options 90 ... 240 V AC 9-36 V DC (except NEMA 7 compact)	A B	
Communication options RS232 (standard)	0	
RTD temperature sensor (include mounting hardware for pipes between 1.5" and 24" outer diameter) No RTDs 1x standard clamp-on 2x standard clamp-on 1x submersible 2x submersible	0 1 2 3 4	
Sensor for channel 1 (includes pipe mounting kit and spacer bar for indicated max. OD listed) See "Sensor selection charts" for specifications. no sensor A2 universal Trackmount and straps provided up to 75 mm (3") B3 universal Trackmount and straps provided up to 125 mm (5") C3 universal Mounting frame and straps provided up to 300 mm (13") D3 universal Mounting frame and straps provided up to 600 mm (24") E2 universal Mounting frame and straps provided up to 1200 mm (48") ¹ C1H (high precision) Mounting frame and straps provided up to 1200 mm (48") ² C2H (high precision) Mounting frame and straps provided up to 1200 mm (48") ² D1H (high precision) Mounting frame and straps provided up to 1200 mm (48") ² D4H (high precision) Mounting frame and straps provided up to 1200 mm (48") ² Doppler to 12" with strap kit (not for IP65 (NEMA7)) D1H High temperature range 104 °C / 220 °F HP ²	A B C D E F M N P R S Z	P 1 P

Selection and Ordering data

Order No.

Order code

SITRANS FUS1010 (Standard)

L) **7ME353 - 0 + K02 + K02 + R02**

Sensor for channel 2

(includes pipe mounting kit for indicated max. OD listed)

See "Sensor selection charts" for specifications.

No sensor	
A2 universal	Trackmount and straps provided up to 75 mm (3")
B3 universal	Trackmount and straps provided up to 125 mm (5")
C3 universal	Mounting frame and straps provided up to 300 mm (13")
D3 universal	Mounting frame and straps provided up to 600 mm (24")
E2 universal	Mounting frame and straps provided up to 1200 mm (48") ¹⁾
C1H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾
C2H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾
D1H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾
D4H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾
Doppler	to 12" with strap kit (not for IP65 (NEMA7))
D1H	High temperature range 104 °C / 220 °F HP ²⁾

A
B
C
D
E
F

M
N

P

R

S
Z **Q1P**

Approvals

FM/CSA, CE (default)

ATEX, CE, C-TICK

1
2

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)

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

Standard MLFB product offering represents 4 to 6 weeks delivery time.

For sensor and RTD cables for quick delivery see tables at end of section.

Selection and Ordering data	Order No.	Ord. code
SITRANS FUS1010 (Standard)		
• IP65 (NEMA 4X) wall mount	L) 7ME3530-	
• IP65 (NEMA 7) compact explosionproof	L) 7ME3531-	
• IP66 (NEMA 7) wall mount explosionproof	L) 7ME3533-	
■■■■■ 0 - ■■■■ ■■■■ ■■■■		

Number of channels/ultrasonic paths		
Single channel	1	
Dual channel / Dual path	2	
Special: Four channel / Four path (NEMA 4X wall mount and NEMA 7 wall mount explosionproof only)	9	H 1 A

Flowmeter functions and I/O configurations
includes graphic or digital display and Reflexor capability for all except IP65 (NEMA 7) compact units

IP65 (NEMA 4X) wall mount and IP66 (NEMA 7 wall mount explosionproof) units

- Standard outputs
 - 2 x 0 ... 10 V
 - 2 x 4 ... 20 mA
 - 2 x pulse output
 - 4 x relay C type
- Standard outputs with optional input adder
 - UniMass capability with 2 x RTD input and
 - 4 x 4 ... 20 mA analog input

IP65 (NEMA 7) compact explosionproof units

- Standard outputs
 - 1 x 4 ... 20 mA (Loop) and 1 x status (open collector) **per channel**
 - 1 x pulse output for single channel units only
- Standard outputs with optional input adder
 - UniMass capability with 1 RTD input and
 - 1 x analog input **per channel**
- Standard outputs with Mercury wetted relays and optional input adder
- Extended outputs adder with optional input adder (4 additional 4 ... 20 mA outputs) and form C relay
- Extended outputs adder with optional input adder (4 additional 4 ... 20mA outputs) and Mercury wetted relays
- Standard outputs with Mercury wetted relays

Meter power options

- 90 ... 240 V AC
- 9 ... 36 V DC (except compact NEMA 7)
- 9 ... 36 V DC negative GND (compact only)
- 9 ... 36 V DC positive GND (compact only)

Communication options

- RS232 (standard)
- MODBUS (dedicated only, excludes NEMA 7 compact)

RTD temperature sensor
(includes mounting hardware for pipes between 1.5" and 24" outer diameter)

- No RTDs
- 1 x Standard clamp-on RTD
- 2 x Standard clamp-on RTD
- 1 x Submersible clamp-on RTD
- 2 x Submersible clamp-on RTD
- 1 x Insertion style RTD with thermowell and lagging
- 2 x Insertion style RTD with thermowell and lagging

Selection and Ordering data	Order No.	Ord. code
SITRANS FUS1010 (Standard)		
• IP65 (NEMA 4X) wall mount	L) 7ME3530-	
• IP65 (NEMA 7) compact explosionproof	L) 7ME3531-	
• IP66 (NEMA 7) wall mount explosionproof	L) 7ME3533-	
■■■■■ 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".

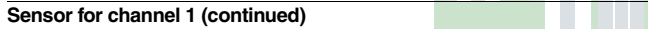
no sensor		A
A2 universal	Trackmount and straps provided up to 75 mm (3")	B
B3 universal	Trackmount and straps provided up to 125 mm (5")	C
C3 universal	Mounting frame and straps provided up to 300 mm (13")	D
D3 universal	Mounting frame and straps provided up to 600 mm (24")	E
E2 universal	Mounting frame and straps provided up to 1200 mm (48") ¹⁾	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 1200 mm (48")	M
C2H (high precision)	Mounting frame and straps provided up to 1200 mm (48")	N
D1H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾	P
D2H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾	Q
D4H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾	R
Doppler	to 12" with strap kit (not for IP65 (NEMA 7))	S

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-OMS40 (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-OMS40 (1012BN-4)
L) Subject to export regulations AL: N, ECCN: 5A991X.

Selection and Ordering data Order No. Ord. code

SITRANS FUS1010 (Standard)

- IP65 (NEMA 4X) wall mount L) **7ME3530-**
- IP65 (NEMA 7) compact explosionproof L) **7ME3531-**
- IP66 (NEMA 7) wall mount explosionproof L) **7ME3533-**



Sensor for channel 1 (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	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
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) ²⁾	Z	P 1 P
D2H (high temperature range HP) ²⁾	Z	P 1 Q
D4H (high temperature range HP) ²⁾	Z	P 1 R

Sensor for channel 2

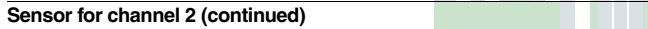
(includes pipe mounting kit for indicated max. OD listed)
See "Sensor selection charts" for specifications.

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 1200 mm (48") ¹⁾	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 1200 mm (48")	M

Selection and Ordering data Order No. Ord. code

SITRANS FUS1010 (Standard)

- IP65 (NEMA 4X) wall mount L) **7ME3530-**
- IP65 (NEMA 7) compact explosionproof L) **7ME3531-**
- IP66 (NEMA 7) wall mount explosionproof L) **7ME3533-**



Sensor for channel 2 (continued)

C2H (high precision) Mounting frame and straps provided up to 1200 mm (48")	N
D1H (high precision) Mounting frame and straps provided up to 1200 mm (48") ^{e2)}	P
D2H (high precision) Mounting frame and straps provided up to 1200 mm (48") ²⁾	Q
D4H (high precision) Mounting frame and straps provided up to 1200 mm (48") ²⁾	R
Doppler to 12" with strap kit (not for IP65 (NEMA 7))	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 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) ²⁾	Z Q 1 P
D2H (high temperature range HP) ²⁾	Z Q 1 Q
D4H (high temperature range HP) ²⁾	Z Q 1 R

Approvals

FM/CSA, CE	1
ATEX, CE, C-TICK	2
INMETRO (Brazil)	3

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-OMS40 (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-OMS40 (1012BN-4).
 L) Subject to export regulations AL: N, ECCN: 5A991X.

Selection and Ordering data

Order code

Further designs

Please add "-Z" to Order No. and specify Order code(s).

Cable assembly for sensors (add for No. of channels)

See "Sensor cable selection chart"

K..

Cable assembly for RTDs (add for No. of RTDs)

See "RTD cable selection chart"

R..

Cable termination kit (for one cable pair)

- Termination for standard, plenum and armored sensor cable

T01

- Termination for submersible sensor cable

T11

- RTD cable termination kit for standard RTD

T21

- RTD cable termination kit for submersible RTD

T31

- Insert RTD cable termination kit

T41

Languages (Meter and Documentation), English (default)

- German

B10

- French

B12

- Spanish

B13

- Italian

B14

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

Tag name plate

- Stainless steel tag with 3.2 mm (0.13 inch) character size (68 characters max.)

Y19

Operating Instructions for SITRANS FUS1010

Order No.

English NEMA 4X wall mount & NEMA 7 wall mount explosionproof

A5E02951520

German NEMA 4X & wall mount NEMA 7 wall mount explosionproof

A5E02951532

NEMA 7 compact explosionproof

CQ0:1010XF-M-3

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/flowdocumtenion>

MLFB example

Application example

A clamp-on meter is required for a 12" carbon steel jet fuel line, with a wall thickness of 12.7 mm (0.5"). Meter electronics are to be located in a Class I Div 2 area only 18 m (60 ft) from the pipeline. 12 V DC power is available at the site.

Dual path operation is desired for improved accuracy and redundant measurement.

MLFB Order No.: **7ME3530-2AB00-0QQ1-Z
K03 + K03**

Selection and Ordering data

Order No.

Ord. code

SITRANS FUS1010 meter family

7 ME 3 5 3 - - - - - 0 - - - - -

IP65 (NEMA 4X) enclosure

0

Dual Path

2

Standard I/O option

A

9 ... 36 V DC power option

B

RS232 Standard

0

No RTD required

0

Sensor code for path 1

Q

Sensor code for path 2

Q

FM approval required

1

30 m (100 ft) sensor cable for path 1

K 0 3

30 m (100 ft) sensor cable for path 2

K 0 3

Universal sensor selection chart

Based on pipe size (pipes other than steel)

Sensor	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	6 096	10	240

High precision sensor selection chart

Based on pipe wall thickness (steel pipes only)

Sensor	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