

Standard MLFB for quick delivery on SITRANS FUG1010 (Gas)

Selection and Ordering data

Order No.

Order code

SITRANS FUG1010 (Gas)

L) 7ME361 - 0 - K12 + K12 + R12

Design

IP65 (NEMA 4X) wall mount

0

Number of ultrasonic paths

Dual path

2

Flowmeter functions and I/O configurations

includes graphic or digital display

- Extended I/O option
 - additional 2 x 4 ... 20 mA
 - Mercury wetted relays
 - 4 x digital pulse outputs (2 x open collector and 2 x 0 ... 5 V TTL)

B

Meter power options

9 ... 36 V, DC (except compact NEMA 7)

B

Communication options

RS232 (standard)

0

MODBUS (dedicated only, excludes NEMA 7 compact)

1

RTD temperature sensor

(includes mounting hardware for pipes above 1.5" / 38 mm OD)

No RTDs

0

1 x standard clamp-on RTD

1

2 x standard clamp-on RTD

2

1 x submersible clamp-on RTD

3

2 x submersible clamp-on RTD

4

Notes:

1. Temperature input is required for FUH systems
2. Only the Interface detector set up as a dual channel can use 2 RTD's

Sensor for channel 1

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

no sensor

A

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")

P

D2H (high precision) Mounting frame and straps provided up to 1200 mm (48")

Q

Sensor for channel 2

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

no sensor

A

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")

P

D2H (high precision) Mounting frame and straps provided up to 1200 mm (48")

Q

Approvals

FM/CSA/CE (default)

1

ATEX, CE, C-TICK

2

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.

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

Selection and Ordering data

Order No. Ord. code

SITRANS FUG1010 (Gas)

- IP65 (NEMA 4X) wall mount L) **7ME3610-**
- IP65 (NEMA 7) compact explosionproof L) **7ME3611-**
- IP66 (NEMA 7) wall mount explosionproof L) **7ME3613-**

0 -

Number of channels/ultrasonic paths

- | | | | |
|---|---|--|--------------|
| Single path | 1 | | |
| Dual path | 2 | | |
| Special: Four path (NEMA 4X and NEMA 7 wall mount only) | 9 | | H 1 A |

Flowmeter functions and I/O configurations (includes graphic or digital display)

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

- Standard (all but NEMA 7 compact explosionproof) **A**
 - Graphic display
 - 4 x 4 ... 20 mA analog input
 - 2 x 0 ... 10 V
 - 2 x 4 ... 20 mA analog output
 - 2 x pulse output
 - 4 x relay C type
 - 2 x RTD input
- Extended I/O option **B**
 - additional 2 x 4 ... 20 mA
 - Mercury wetted relays
 - 4 x digital pulse outputs (2 x open collector and 2 x 0 ... 5 V TTL)

IP65 (NEMA 7) compact explosionproof units

- Standard **D**
 - Digital display
 - 2 x 4 ... 20 mA (loop)
 - 2 x 4 ... 20 mA analog input
 - 2 x status (open collector)
 - 1 x RTD input
- Digital pulse option **E**
 - 1 x digital pulse open collector output
- Mercury wetted relays for standard meter **Z**
- Dry contact form C relays for extended I/O meter **Z**

Meter power options

- | | | | |
|--|----------|--|--|
| 90 ... 240 V AC | A | | |
| 9 ... 36 V DC (except NEMA 7 compact explosionproof) | B | | |
| 9 ... 36 V DC negative GND (Compact only) | J | | |
| 9 ... 36 V DC positive GND (Compact only) | K | | |

Communication options

- | | | | |
|---|----------|--|--|
| RS232 (standard) | 0 | | |
| MODBUS (excludes NEMA 7 compact explosionproof) | 1 | | |

RTD temperature sensor

(includes mounting hardware for pipes above 1.5" outer diameter)

- | | | | |
|------------------------------|----------|--|--|
| No RTDs | 0 | | |
| 1 x standard clamp-on RTD | 1 | | |
| 2 x standard clamp-on RTD | 2 | | |
| 1 x submersible clamp-on RTD | 3 | | |
| 2 x submersible clamp-on RTD | 4 | | |

Selection and Ordering data

Order No. Ord. code

SITRANS FUG1010 (Gas)

- IP65 (NEMA 4X) wall mount L) **7ME3610-**
- IP65 (NEMA 7) compact explosionproof L) **7ME3611-**
- IP66 (NEMA 7) wall mount explosionproof L) **7ME3613-**

0 -

Sensor for channel 1

 (includes pipe mounting kit and spacer bar for indicated max. outer diameter listed)
 See "Sensor selection chart" for specifications.

no sensor

A

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):

- | | | |
|----------------------|--|----------|
| 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 |
| B3H (high precision) | Trackmount and straps provided up to 125 mm (5") | T |
| C1H (high precision) | Mounting frame and straps provided up to 1200 mm (48") ¹⁾ | M |
| C2H (high precision) | Mounting frame and straps provided up to 1200 mm (48") ¹⁾ | N |
| D1H (high precision) | Mounting frame and straps provided up to 1200 mm (48") ¹⁾ | P |
| D2H (high precision) | Mounting frame and straps provided up to 1200 mm (48") ¹⁾ | Q |
| D3H (high precision) | Mounting frame and straps provided up to 1200 mm (48") ¹⁾ | U |
| D4H (high precision) | Mounting frame and straps provided up to 1200 mm (48") ¹⁾ | R |

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 |
| B3H (high temperature range HP) | Z | P 1 T |
| C1H (high temperature range HP) | Z | P 1 M |
| C2H (high temperature range HP) | Z | P 1 N |
| D1H (high temperature range HP) ¹⁾ | Z | P 1 P |
| D2H (high temperature range HP) ¹⁾ | Z | P 1 Q |
| D3H (high temperature range HP) ¹⁾ | Z | P 1 U |
| D4H (high temperature range HP) ¹⁾ | Z | P 1 R |

¹⁾ 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: 3A991X.

Selection and Ordering data	Order No.	Ord. code
SITRANS FUG1010 (Gas)		
• IP65 (NEMA 4X) wall mount	L) 7ME3610-	
• IP65 (NEMA 7) compact explosionproof	L) 7ME3611-	
• IP66 (NEMA 7) wall mount explosionproof	L) 7ME3613-	
	0 -	
Sensor for channel 2 (includes pipe mounting kit and spacer bar for indicated max. outer diameter listed) See "Sensor selection chart" for specifications.		
no sensor		A
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):		
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
B3H (high precision) Trackmount and straps provided up to 125 mm (5")		T
C1H (high precision) Mounting frame and straps provided up to 1200 mm (48") ¹⁾		M
C2H (high precision) Mounting frame and straps provided up to 1200 mm (48") ¹⁾		N
D1H (high precision) Mounting frame and straps provided up to 1200 mm (48") ¹⁾		P
D2H (high precision) Mounting frame and straps provided up to 1200 mm (48") ¹⁾		Q
D3H (high precision) Mounting frame and straps provided up to 1200 mm (48") ¹⁾		U
D4H (high precision) Mounting frame and straps provided up to 1200 mm (48") ¹⁾		R
Other versions (different size, mount, type or pipe larger than DN 1200 (48") or corrosion resistant), add Order code and plain text.		Z
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
B3H (high temperature range HP)	Z	Q 1 T
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
D3H (high temperature range HP)	Z	Q 1 U
D4H (high temperature range HP)	Z	Q 1 R
Approvals		
FM/CSA/CE/C-TICK (default)		1
ATEX, CE, C-TICK		2
INMETRO (Brazil)		3

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

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 # of paths) See "Sensor cable selection chart"	K..
Cable assembly for RTDs (add for # 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)	
• German	B10
• French	B12
• Spanish	B13
• Italian	B14
Tag name plate	
• Stainless steel tags with 3.2 mm (0.13 inch) characters (68 characters max.)	Y19

MLFB example

Application example

A clamp-on meter is required for a 300 mm (12") carbon steel gas 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. Pulse output will be primary flow data source.

MLFB Order No.: **7ME3610-2BB00-0QQ1-Z
K03 + K03**

Selection and Ordering data	Order No.	Ord. code
SITRANS FUG1010 meter family	7ME3610-	
IP65 (NEMA 4X) wall mount	0	
Dual path	2	
Custody Transfer option with digital pulse	B	
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 cab. for path 1		K 0 3
30 m (100 ft) sensor cab. for path 2		K 0 3

Selection and Ordering data	Order No.
Operating Instructions for SITRANS FUG1010	
English NEMA 4X wall mount & NEMA 7 wall mount explosionproof	A5E02951519
German NEMA 4X wall mount & NEMA 7 wall mount explosionproof	A5E02951531
English NEMA 7 compact explosionproof	D) CQO:1010GCXFM-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/flowdocumentation>

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

High precision sensor selection chart

Based on pipe wall thickness (steel pipes only)					
Sensor Pipe wall	Order Code	Pipe wall (mm)		Pipe wall (inches)	
		min.	max.	min.	max.
B1H	K	2.0	3.0	0.08	0.12
B2H	L	3.0	4.1	0.12	0.16
B3H	T	2.7	3.3	0.106	0.128
C1H	M	4.1	5.8	0.16	0.23
C2H	N	5.8	8.1	0.23	0.32
D1H	P	8.1	11.2	0.32	0.44
D2H	Q	11.2	15.7	0.44	0.62
D3H	U	7.4	9.0	0.293	0.354
D4H	R	15.7	31.8	0.62	1.25

Sensor Cable Selection Chart

Sensor cable codes for length and type options				
Cable length m (ft)	Standard (PVC jacket)	Submersible (polyethylene jacket)	Plenum Rated (teflon jacket)	Armored
	-40...+80 °C (-40...+176 °F)	-40...+80 °C (-40...+176 °F)	-40...+200 °C (-40...+392 °F)	-40...+80 °C (-40...+176 °F)
Order code				
6 (20)	K01¹⁾	K11	K21	K31
15 (50)	K02	K12¹⁾	K22	K32¹⁾
30 (100)	K03¹⁾	K13¹⁾	K23	K33
46 (150)	K04¹⁾	K14	K24	K34
61 (200)	K05	K15	K25	K35
91 (300)	K06¹⁾	K16	K26	K36

RTD Cable Selection Chart

RTD cable codes for length and type		
Cable length m (ft)	Standard (teflon wrapped)	Submersible (extruded jacket)
	-40 ... +200 °C (-40 ... +392 °F)	-40 ... +200 °C (-40 ... +392 °F)
Order code		
6 (20)	R01¹⁾	R11
15 (50)	R02¹⁾	R12
30 (100)	R03¹⁾	R13
46 (150)	R04	R14
61 (200)	R05	R15
91 (300)	R06	R16

¹⁾ Standard MLFB for quick deliver