Standard MLFB for quick delivery on SITRANS FUE1010 (Energy system)

	adada a data	Ourlan Na	Oudanaada			
Selection and O		Order No.	Order code			
SITRANS FUE10	010 (Energy)	L) 7ME350 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	+ + +			
Design						
<u>Dedicated</u>						
IP65 (NEMA 4X)	wall mount	0	K02 + K02 + R02			
<u>Portable</u>						
IP40 (NEMA 1) B	attery powered	2	K01 + K01 + R01			
	nels/ultrasonic paths					
Dedicated meter	<u>S</u>					
Single channel		1				
Portable meters Dual channel/Dual	ol noth	4				
	· · · · · · · · · · · · · · · · · · ·	4				
Flowmeter funct	tions and I/O configurations ard I/O	С				
	ncy COP/EER output	G I				
- 2x 4-20mA ar	· ·					
Dedicated Star	9 1	F				
- Reflexor Capa	•	•				
	ncy COP/EER output					
- 2x 4-20mA ar						
Meter power opt	5 1					
90 240 V AC (I		A				
Charger Type A f	or Europe (CEE7/7)	C				
Charger Type K f	or U.S. (NEMA 5-15P)	G				
No charger		J				
Communication RS232 (standard	options	0				
RTD temperatur	e sensor pair Temperature input is required for Energy systems)	0				
,	o-on RTD (NEMA 4X only) ³⁾	1				
	o-on RTD (For Dual Channel NEMA 4X only) ³⁾	2				
	o-on RTD (For NEMA 12 Portable) ³⁾	3				
	o-on RTD (For Dual Channel NEMA 1 Portable) ³⁾	4				
	with Thermowell and Lagging	L.	M 1 A			
	with Thermowell and Lagging		M 1 B			
Sensor for chan	00 0					
	ounting kit and spacer bar for indicated max. OD listed)					
See "Sensor sele	ction charts" for specifications.					
no sensor		Α				
A2 universal	Trackmount and straps provided up to 75 mm (3")	В				
B3 universal	Trackmount and straps provided up to 125 mm (5")	С				
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⁾⁴⁾	F				
\ U	ion) Mounting frame and straps provided up to 1200 mm (48") ⁴⁾	M				
` • .	ion) Mounting frame and straps provided up to 1200 mm (48") ⁴⁾	N				
, , ,	ion) Mounting frame and straps provided up to 1200 mm (48") ⁴⁾	P				
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ion) Mounting frame and straps provided up to 1200 mm (48") ⁴⁾	Q				

S

z

P 1 P

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

to 12" with strap kit (not for IP65 (NEMA7))

High temperature range 104 °C/220 °F HP²⁾

Doppler

D1H

Selection and O	rdering data		Order No.	Order code
SITRANS FUE10	010 (Energy)	L)	7 M E 3 5 0 0 - 0 -	+ +
See "Sensor sele	inel 2 counting kit and spacer bar for indicated max. OD listed) ction charts" for specifications.			
no sensor	To always and about a growth and on the 75 area (OII)		A	
A2 universal B3 universal	Trackmount and straps provided up to 75 mm (3") 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⁾⁴⁾		F	
C1H (high precis	sion) Mounting frame and straps provided up to 1200 mm (48") ⁴⁾		M	
C2H (high precis	sion) Mounting frame and straps provided up to 1200 mm (48") ⁴⁾		N	
D1H (high precis	sion) Mounting frame and straps provided up to 1200 mm (48") ⁴⁾		P	
D4H (high precis	sion) Mounting frame and straps provided up to 1200 mm (48") ⁴⁾		R	
Doppler	to 12" with strap kit (not for IP65 (NEMA7))		S	
D1H	High temperature range 104 °C/220 °F HP ²⁾		Z	Q 1 P
Approvals	UL/Portable FM, CSA, CE, Dedicated		0	

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

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

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)

³⁾ Requires two R** cables per one RTD pair

^{4) 600} mm (24") for portable systems only

Selection and Ordering data	Order No.	Ord. code	Selection and Orde	ering data	Order No.	Ord. code	
SITRANS FUE1010 (Energy)			SITRANS FUE1010	(Energy)			
Dedicated IP65 (NEMA 4X) wall mount L)	7ME3500-		Dedicated IP65 (NEMA 4X) wall mount L)		7ME3500-		
Portable IP40 (NEMA 1) Battery powered L)	71450500		Portable IP40 (NEMA 1) Battery powered L)		7ME3502-		
1F40 (NEMA 1) battery powered L)	7ME3502-		1P40 (NEIVIA 1) Da	illery powered L	7ME3502-		
Number of channels/ultrasonic paths			RTD temperature s	sensor			
Dedicated meter			(includes mounting	hardware for pipes above			
Dedicated meter			1.5" outer diameter)	perature input is required	0		
Single channel Dual channel/Dual path	1 2		for energy system)		U		
Portables			1 x pair standard clands	amp-on RTD (NEMA 4X	1		
Dual channel/Dual path	4		2 x pair standard cl	amp-on RTD (for dual	2		
Flowmeter functions and I/O configurations			channel NEMA 4X of 1 x pair standard cl	amp-on RTD (NEMA 1	3		
Portable Standard I/O	С		Portable)3)				
Reflexor capabilityGraphic display			channel NEMA 1 Po		4		
- 2 x 0 10 V			1 x Insertion style R lagging ³⁾	TD with thermowell and	9	M 1 A	
- 2 x 4 20 mA - 2 x pulse output			2 x Insertion style R	TD with thermowell and	9	M 1 B	
4 x status logicEnergy efficiency COP/EER output			lagging ³⁾				
- 2 x 4 20 mA analog input				nting tracks for sizes			
Dedicated Standard I/O Reflexor capability	F		A & B sensors inder less than 125 mm (5	nted for pipe with a OD			
- Graphic display			frame/spacer bars f	or sizes C, D & E sensors.			
- 2 x 0 10 V - 2 x 4 20 mA			mum OD listed belo	for the indicated maxi- w. Strap kits are available			
2 x pulse output4 x relay C type			to accommodate la	rger pipes (refer to spare Sensor Selection Charts"			
 Energy efficiency COP/EER output 			for the sensor suital	pility of pipe size and wall			
- 2 x 4 20 mA analog input			thickness.			,	
Standard I/O with Mercury wetted relays Standard sustant adder the standard inputs	Z Z	J 1 A J 1 B	No sensor A2 universal	Trackmount and straps		A B	
 Extended output adder plus standard inputs (4 additional 4 20 mA outputs) and form C 	2	JIB		provided up to 75 mm (3")			
relay			B3 universal	Trackmount and straps		С	
 Extended output adder plus standard inputs (4 additional 4 20 mA outputs) and Mercu- 	Z	J 1 C		provided up to 125 mm (5")			
ry wetted relays			C3 universal	Mounting frame and straps provided up to		D	
Meter power options				300 mm (13")			
90 240 V AC (Dedicated only) 9 36 V DC (Dedicated only)	A B		D3 universal	Mounting frame and straps provided up to		E	
Charger Type A for Europe (CEE7/7)	C		EQ universel	600 mm (24")		F	
Charger Type C for Australia (AS3112)	D		E2 universal	Mounting frame and straps provided up to		r	
Charger Type D for U.K. (BS1363) Charger Type J for Japan (JIS8303)	E F		- II (II) Ad	1200 mm (48") ¹⁾⁴⁾			
Charger Type K for U.S. (NEMA 5-15P)	G		For the following A1 temperature range i				
Charger Type L for Switzerland (SEV1011) No Charger	H J		(-41 °F 150 °F), n	ominal 21 °C (70 °F):			
External 4 hours battery with US plug for Por-	Z	K 1 A	AZH (HIGH Precision	Trackmount and straps provided up to		Н	
table	-	N I A	A3H (high precision	75 mm (3") 1) Trackmount and straps		J	
External 4 hours battery with European plug for Portable	z	K 1 B	7.011 (High precision	provided up to 75 mm (3")			
Communication options			B1H (high precision) Trackmount and straps		К	
RS232 (standard)	0			provided up to 125 mm (5")			
MODBUS (dedicated only)	1		1) Supplied spacer b	ar supports pipes up to 1050 r	mm (42 inches	s). For pipes	
			larger than 1050 m 7ME3960-0MS40 (nm (42 inches) purchase also, (1012BN-4).	spare part		
			2) Supplied spacer b	par supports pipes up to 750 m	nm (30 inches). For pipes	

larger than 750 mm (30 inches) purchase also, spare part 7ME3960-0MS40 (1012BN-4).

 $^{^{3)}}$ Requires two R** cables per one RTD pair

^{4) 600} mm (24") for portable systems only

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

SITRANS FUE1010) (Energy)			SITRANS FUE1010 (Energy)			
Dedicated	· • • • • • • • • • • • • • • • • • • •			Dedicated	<i>017</i>			
IP65 (NEMA 4X) wall mount L)		7ME3500 - IP65 (NEMA 4X) wall mount		7ME3500-				
 Portable IP40 (NEMA 1) Battery powered L) 		• Portable IP40 (NEMA 1) Battery powered		ery powered L	7ME3502-			
		- 0	- 1111			- 0		
Sensor for channe	el 1 (continued)			Sensor for channel 2	2 (continued)			
B2H (high precision	n) Trackmount and straps	L		For the following A1H	to D4H sensors, tem-			
C1H (high procision	provided up to 125 mm (5")			perature range is -40 150 °F), nominal 21 °C	°C to 65 °C (-41 °F to			
C1H (high precision	n) Mounting frame and straps provided up to 1200 mm (48") ³⁾	M		, ,	Trackmount and straps provided up to 75 mm (3")		Н	
C2H (high precision	n) Mounting frame and straps provided up to	N		A3H (high precision)	provided up to 75 mm (3")		J	
D1H (high precision		P		B1H (high precision)	Trackmount and straps provided up to 125 mm (5")		K	
D2H (high precision	straps provided up to 1200 mm (48") ²⁾³⁾ Trackmount and straps	Q		B2H (high precision)	Trackmount and straps provided up to 125 mm		L	
BELL (High prodiction	provided up to 1200 mm (48") ²⁾³⁾			C1H (high precision)	(5") Mounting frame and		M	
D4H (high precision	n) Trackmount and straps provided up to 1200 mm (48") ²⁾³⁾	R		C2H (high precision)	straps provided up to 1200 mm (48") ³⁾ Mounting frame and		N	
Doppler	to 12" with strap kit	s		OZIT (High procision)	straps provided up to 1200 mm (48") ³⁾			
High temperature se °C (446 °F) (30 to 20 (1.18 to 7.67 inch di		Z	P 1 A	D1H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾³⁾		P	
High temperature se °C (446 °F) (150 to 6	ensor size 3 for up to 230 610 mm diam.	Z	P 1 B	D2H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾³⁾		Q	
	ensor size 4 for up to 230	z	P 1 C	D4H (high precision)	Mounting frame and straps provided up to 1200 mm (48") ²⁾³⁾		R	
47.25 inch diam.))	1200 mm diam. (15.75 to			Doppler	to 12" with strap kit		s	
perature range is -1 to 220 °F), nominal	, ,			High temperature sen 230 °C (446 °F) (30 to (1.18 to 7.67 inch dia	200 mm diam.		Z	Q1A
B1H (high temperat B2H (high temperat	ture range HP)	Z Z Z	P1K P1L	High temperature sen	to 610 mm diam.		Z	Q 1 B
C1H (high temperat C2H (high temperat	• ,	Z	P1M P1N	(5.90 to 24 inch diam.	.))			
D1H (high temperat		Z	P 1 P	High temperature sen 230 °C (446 °F) (400 °C)			Z	Q1C
D2H (high temperat	ture range HP) ²⁾	Z	P 1 Q	(15.75 to 47.25 inch c				
D4H (high temperat	1 2	Z	P1R	perature range is -1 °(to D4H sensors, tem- C up to 104 °C (30 °F up			
	nting kit for indicated max. d) See "Sensor selection ations.			to 220 °F), nominal 65 B1H (high temperatur	re range HP)		Z	Q1K
no sensor		A		B2H (high temperatur C1H (high temperatur	0 /		Z	Q1L Q1M
A2 universal	Trackmount and straps	B		C1H (high temperatur	• ,		z	Q1N
	provided up to			D1H (high temperatur			z	Q1P
B3 universal	75 mm (3") Trackmount and straps	С		D2H (high temperatur			Z	Q1Q
D3 universal	provided up to 125 mm (5")	C		D4H (high temperature Approvals	re range HP) ²⁾	_	Z	Q1R
C3 universal	Mounting frame and straps provided up to	D		FM/CSA/CE Dedicate	ed		1	
DO contrar d	300 mm (13")				, , , , , , , , , , , , , , , , , , , ,	(40: : :		
D3 universal	Mounting frame and straps provided up to 600 mm (24")	E		larger than 1050 mm 7ME3960-0MS40 (10	•	, spare part		
E2 universal Mounting frame and straps provided up to 1200 mm (48") 131		F		Supplied spacer bar supports pipes up to 750 mm (30 inches). larger than 750 mm (30 inches) purchase also, spare part 7ME3960-0MS40 (1012BN-4).		. Fo	r pipes	
				³⁾ 600 mm (24") for por	rtable systems only			

Order No.

Ord. code

Selection and Ordering data

Order No.

Ord. code

Selection and Ordering data

 ^{3) 600} mm (24") for portable systems only
 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 channels) 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) dedicated only	
Termination for standard, plenum and armored sensor cable	T01
 Termination for submersible sensor cable 	T11
 RTD cable termination kit for standard RTD RTD cable termination kit for submersible RTD Insert RTD cable termination kit 	T21 T31 T41
Wet flow transfer calibration (priced on request)	
6 point calibration 2/water (Price per channel)	
2SS40 pipe3CS40 pipe4CS40 pipe4SS40 pipe	D01 D02 D03 D04
6CS40 pipe6SS40 pipe6CS120 pipe8CS40 pipe	D05 D06 D07 D08
8SS40 pipe8CS120 pipe10CS Standard pipe10CS40 pipe	D09 D10 D11 D12
10SS40 pipe12CS Standard pipe12CS40 pipe14CS30 pipe	D13 D14 D15 D16
14CS40 pipe16CS Standard pipe16CS40 pipe18CS Standard pipe	D17 D18 D19 D20
20CS20 pipe20CS30 pipe24CS Standard pipe24CS20 pipe	D21 D22 D23 D24
24CS30 pipe30CS Standard pipe36CS Standard pipe	D25 D26 D27

• Other pipe, other liquid, additional points, witness

• Stainless steel tag with 3.2 mm (0.13 inch) character

Tag name plate

size (68 characters max.)

Y28

Y19

MLFB example

Application example

A dedicated clamp-on energy meter is required for two separate return lines. Both will use clamp-on RTDs for the supply and return lines. AC power is available and data access will be via MODBUS communication.

Pipe 1 is a DN150 (6") schedule 40 carbon steel line Pipe 2 is a DN 300 (12") ductile iron line

MLFB Order No.: **7ME3500-2DA10-2NE0-Z**

K03 + K05 + R03 + R05 + R02 + R03

Selection and Ordering data	Order No. Ord. code
SITRANS FUE1010 meter family	7 ME 3 5 0 0 - 0 0 0 0 0 0 0 -
IP65 (NEMA 4X) enclosure	0
Dual channel	2
Dedicated Type 1 I/O option	D
90 230 V AC power option	A
MODBUS option	1
2 pairs of clamp-on RTDs	2
Sensor code for 6" pipe	N
Sensor code for 12" pipe	E
No approval required	0
30 m (100 ft) sensor cable for channel 1	K 0 3
61 m (200 ft) sensor cable for channel 1	K 0 5
30 m (100 ft) cable for RTD 1	R 0 3
61 m (200 ft) cable for RTD 2	R 0 5
15 m (50 ft) cable for RTD 3	R 0 2
30 m (100 ft) cable for RTD 4	R 0 3

Selection and Ordering data		Order code
Operating Instructions for SITRANS FUE1010		
English NEMA 4X Wall mount	D)	A5E03086491
German NEMA 4X Wall mount	D)	A5E03086492
English IP40 NEMA 1 Battery powered		A5E02951524
German IP40 NEMA 1 Battery powered		A5E02951536

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.