

Overview



SITRANS FUH1010 clamp-on non-intrusive ultrasonic flowmeter is ideal for applications carrying crude oil, refined petroleum or liquefied gas.

SITRANS FUH1010 has three application areas: Interface detectors, precision volume or standard volume flowmeters.

Benefits

For all SITRANS FUH1010 products

- Easy installation; no need to cut pipe or stop flow
- Minimal maintenance; external sensors do not require periodic cleaning
- No moving parts to foul or wear
- No pressure drop or energy loss
- Wide turn-down ratio, 30:1
- Choice of single, dual, or optional, three or four path versions.
 - Single path version reduces initial investment
 - Two or optional three and four path versions provide higher accuracy, especially where limited straight run or poor flow profile exists
- WideBeam technology
 - Helps provide improved accuracy over a wide range of liquid conditions and flow rates
 - Accommodates pipelines transporting multiple liquid products
- ZeroMatic Path automatically corrects for zero drift without stopping flow

Interface detection

- Outputs liquid density and API as a direct replacement for intrusive densitometers
- Exceptional repeatability is maintained, independent of changes in temperature, pressure or viscosity
- No need for straight run

Precision volume

- Moderate cost
- Precise measurement is maintained with automatic "Reynolds Number" compensation for temperature and viscosity changes.

Standard volume

- Exceptional repeatability is maintained, independent of changes in temperature, density or viscosity
- Batch interface and product quality diagnostics provided
- Density and API outputs provided
- Scraper („pig“) detection provided

Application

Interface detection

- Precise identification of interfaces on multi-liquid pipelines
- Rapid and precise scraper "pig" indication
- Product identification
- Density indication

Precision volume

- Applications with multiple liquids having a wide viscosity range
- Automatic gross volume compensation due to viscosity changes

Standard volume

- Standard (net) volume flow measurement
- Suitable for use in leak detection systems
- Mass flow output measurement
- Interface detection
- "Pig" detection
- Chemical and petrochemical processing

Design

SITRANS FUH1010 is available in three enclosures:

- IP65 (NEMA 4X) wall mount enclosure constructed of fiberglass reinforced polyester with stainless steel hardware and polyester keypad
 - Single path
 - Dual path
 - Optional four path
- IP65 (NEMA 7) compact explosionproof enclosure constructed of cast aluminum with glass window, stainless steel hardware
 - Single path
 - Dual path (option)
- IP66 (NEMA 7) wall mount explosionproof enclosure constructed of cast aluminum, stainless steel hardware, with glass window
 - Single path
 - Dual path
 - Four path (optional)
- There are 2 types of mounting assemblies
 - Aluminum mounting frames (default)
 - Stainless steel weld seal (optional)

Function

- IP65 (NEMA 4X) and IP66 (NEMA 7) flowmeters have integral 33 button keypads and large (128 x 240 pixel) graphic displays visible up to 12 m (40 ft) away
- IP65 (NEMA 7) compact explosionproof flowmeter has a 2 x 16 alpha-numeric LCD display
- Current, voltage, status alarm, frequency and RS 232 outputs (see specification section for details)
- Analog inputs (see specification section for details)
- ZeroMatic Path automatically corrects for zero drift
- Bidirectional flow operation
- 1 MByte data logger with both site and data logger storage
- English, Spanish, German, Italian and French language options

Flow Measurement

SITRANS F US Clamp-on

SITRANS FUH1010 (Oil)

Technical specifications

Specifications for interface detectors

Accuracy

Accuracy	± 0.05 of API No.
Repeatability	± 0.01 of API No.

Specifications for volumetric and mass flowmeters

Input

Flow range	± 12 m/s (± 40 ft/s), bidirectional
Flow sensitivity	0.0003 m/s (0.001 ft/s), flow rate independent

Accuracy

Typical accuracy	± 0.5 to 1 % of flow
Calibratable accuracy	± 0.15 % ... 0.3 % of flow, depending on version
Batch repeatability	± 0.05 % of flow, maximum

Specifications for all SITRANS FUH1010 products

Input

Pipe size	6.4 mm ... 9.14 m (0.25" ... 360")
Analog inputs	<ul style="list-style-type: none"> Current: 4 x 4 ... 20 mA (IP65 (NEMA 7) enclosure has (2))

Output

Standard outputs	<ul style="list-style-type: none"> Current: 4 x 4 ... 20 mA (1 kΩ at 30 VDC) Voltage: 2 x 0 ... 10 V DC (5 kΩ minimum) (None for IP65 (NEMA 7) enclosure) 1 x 0 ... 5 kHz Pulse Rate, Digital Quad. (None for IP65 (NEMA 7) enclosure) RS 232 Serial Port
Extended outputs	<ul style="list-style-type: none"> MODBUS (not for IP65 (NEMA 7) enclosure) Up to 4 x additional 4 ... 20 mA (not for IP65 (NEMA 7) enclosure) 4 x form C relays (not for IP65 (NEMA 7) enclosure) Up to 4 x digital pulse (not for IP65 (NEMA 7) enclosure)
Status/Alarm I/O	<ul style="list-style-type: none"> 4 x Programmable relays (not for IP65 (NEMA 7) enclosure) 2 x Optically coupled output logic gates (for IP65 (NEMA 7) enclosure, only) 1 x Totalizer clear switch input (not for IP65 (NEMA 4X) enclosure)¹⁾ 1 x Totalizer hold switch input (not for IP65 (NEMA 7) enclosure)¹⁾ 1 x Opto iso. totalizer clear switch input (for IP65 (NEMA 7) enclosure, only)¹⁾ 1 x Opto iso. totalizer hold switch input (for IP65 (NEMA 7) enclosure, only)¹⁾

Accuracy

Zero Drift	0.0003 m/s (0.001 ft/s), with ZeroMatic Path active (not provided for interface detector)
Data refresh rate	5 Hz

Rated operation conditions

Degree of protection	<ul style="list-style-type: none"> Wall mount IP65 (NEMA 4X) Compact explosionproof IP65 (NEMA 7) Wall mount explosionproof IP66 (NEMA 7)
Liquid temperature	<ul style="list-style-type: none"> Standard -40 ... +120 °C (-40 ... +250 °F) Optional -40 ... +230 °C (-40 ... +450 °F)
Ambient temperature	-18 ... +60 °C (0 ... 140 °F)

Design

Dimensions	see SITRANS F US Clamp-on "System info and selection guide"
Weight	see diagrams

Power supply

<ul style="list-style-type: none"> IP65 (NEMA 4X) wall mount and IP66 (NEMA 7) wall mount explosionproof 	90 ... 240 V AC, 50 ... 60 Hz, 30 VA or 9 ... 36 V DC, 12 W
<ul style="list-style-type: none"> IP65 (NEMA 7) compact explosionproof 	90 ... 240 V AC, 50 ... 60 Hz, 15 VA or 9 ... 36 V DC, 10 W

Indication and operation

Data logger memory	1 MByte
Display	<ul style="list-style-type: none"> IP65 (NEMA 4X) and IP66 (NEMA 7) Enclosures 128 x 240 pixel LCD with backlight IP65 (NEMA 7) Enclosure 2 x 16 Alphanumeric LCD Display
Keypad	<ul style="list-style-type: none"> IP65 (NEMA 4X) and IP66 (NEMA 7) Enclosures 33 keypad buttons with tactile feedback IP65 (NEMA 7) Enclosure 5 Magnetic hall effect switches
Language options	English, Spanish, German, Italian, French

¹⁾ Totalizer switch inputs are not provided for the interface detector.

Certificates and approvals

IP65 (NEMA 4X) wall mount enclosure

FM and CSA

- Transmitter
N-I Class I, Div 2
S Class II, Div 2
Sensor
- I.S. Class I, II, Div 1

CE

EMC Directive 2004/108/EC
ATEX Directive 94/9/EC

C-TICK

ATEX

- Transmitter:
Ex II (1) G [Ex ia] IIC
Ex II 3 (1) G Ex nC [ia] IIC T5
- Sensors:
Ex II 1 G Ex ia IIC T5

INMETRO (Brazil)

- Transmitter:
[BR-Ex ia] IIC
BR-Ex nC [ia] IIC T5
- Sensors:
BR-Ex ia IIC T5

IECEX

Pending

IP65 (NEMA 7) compact explosion-proof enclosure ratings

FM and CSA

- Transmitter
XP Class I, Div 1
D-I Class II, Div 1
N-I Class I, Div 2
S Class II, Div 2
Sensor
- I.S. Class I, II, Div 1

CE

- EMC Directive 2004/108/EC
- ATEX Directive 94/9/EC

C-TICK

ATEX

- Transmitter:
Ex II 2 (1) G Ex d [ia] IIB + H2 T5
- Sensors:
Ex II 1 G Ex ia IIC T5

INMETRO (Brazil)

- Transmitter:
BR-Ex d [ia] IIC T5
- Sensors:
BR-Ex ia IIC T5

IECEX

Pending

IP66 (NEMA 7) wall mount explosionproof enclosure ratings

FM and CSA

- Transmitter
XP Class I, Div 1
D-I Class II, Div 1
N-I Class I, Div 2
S Class II, Div 2
Sensor

CE

- I.S. Class I, II, Div 1
- EMC Directive 2004/108/EC
ATEX Directive 94/9/EC

ATEX

- Transmitter:
Ex II (1) G [Ex ia] IIC
Ex II 3 (1) G Ex nC [ia] IIC T5
Ex II 2 (1) G Ex d [ia IIC] IIB + H2 T5

INMETRO (Brazil)

- Sensors:
Ex II 1 G Ex ia IIC T5

IECEX

- Transmitter:
[BR-Ex ia] IIC
BR-Ex d [ia IIC] IIB T5
- Sensors:
BR-Ex ia IIC T5

Pending

Flow Measurement

SITRANS F US Clamp-on

SITRANS FUH1010 (Oil)

Standard MLFB for quick delivery on SITRANS FUH1010 (Oil)

Selection and Ordering data	Article No.	Order code
SITRANS FUH1010 (Oil)	7ME360 - 0 -	K12 + K12 + R12
Design	0	
IP65 (NEMA 4X) wall mount	4	
Number of ultrasonic paths/meter type	A	
Dual path Standard Volume	A	
Flowmeter functions and I/O configurations	0	
includes graphic or digital display, IP66 (BNB6665 (NEMA 4X)) and IP66 (NEMA 7) wall mount explosionproof units:	0	
Standard	1	
• Graphic display	2	
• 4 x 4 ... 20 mA analog input	3	
• 2 x 0 ... 10 V	4	
• 2 x 4 ... 20 mA		
• 2 x pulse outputs		
• 4 x form C relays		
• 2 x RTD input		
Meter power options		
90 ... 240 V AC		
Communication options		
RS 232 (standard)		
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 SITRANS FUH1010 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. outer diam. listed)		
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	
D4H (high precision) Mounting frame and straps provided up to 1200 mm (48")	R	
D1H (high precision) High Temperature to 104 °C/219 °F	Z	P 1 P
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	
D4H (high precision) Mounting frame and straps provided up to 1200 mm (48")	R	
D1H (high precision) High Temperature to 104 °C/219 °F	Z	Q 1 P
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.

Flow Measurement SITRANS F US Clamp-on

SITRANS FUH1010 (Oil)

3

Selection and Ordering data	Article No.	Ord. code
SITRANS FUH1010 (Oil)		
<ul style="list-style-type: none"> IP65 (NEMA 4X) wall mount IP65 (NEMA 7) compact explosionproof IP66 (NEMA 7) wall mount explosionproof 	7ME3600- 7ME3601- 7ME3603-	
	0 -	
Number of ultrasonic paths/meter type		
Single path (precision volume)	0	
Single path (interface detector)	1	
Dual channel/Dual path (interface detector)	2	
Dual path (precision volume)	3	
Dual path (standard volume/mass)	4	
Special: Four path (standard volume/mass) only	9	H 1 A
Flowmeter functions and I/O configurations		
Includes graphic or digital display		
<u>IP65 (NEMA 4X) wall mount and IP66 (NEMA 7 wall mount explosionproof) units</u>		
<ul style="list-style-type: none"> Standard <ul style="list-style-type: none"> 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 form C relay 2 x RTD input Extended I/O option <ul style="list-style-type: none"> additional 2 x 4 ... 20 mA outputs Form C relays 4 x digital pulse outputs (2 x open collector and 2 x 0 ... 5 V TTL) 	A	
<u>IP65 (NEMA 7) compact explosionproof units</u>		
<ul style="list-style-type: none"> Standard <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> 1 x digital pulse open collector output 2 x 4 ... 20 mA (Loop) 2 x 4 ... 20 mA analog input 1 x status (open collector) 1 x RTD input 	C	
Meter power options		
90 ... 240 V AC	A	
9 ... 36 V DC (except compact NEMA 7)	B	
9 ... 36 V DC negative GND (compact only)	J	
9 ... 36 V DC positive GND (compact only)	K	
Communication options		
RS 232 (standard)		0
Standard MODBUS configurations include Baudrate: 9600, Parity: None, Stop Bits: 1, Data bits: 8, MODBUS data: 16 bit, Data format: word normal, Mode: RTU, and MODBUS format: Gould. For other configurations please select option 9 and L1Y and state requirements in plain text		
MODBUS (excludes NEMA 7 compact)		1
Other Version, MODBUS, N2, Other Baud Rate, Other Parity, State in Plain Text		9

Selection and Ordering data	Article No.	Ord. code
SITRANS FUH1010 (Oil)		
<ul style="list-style-type: none"> IP65 (NEMA 4X) wall mount IP65 (NEMA 7) compact explosionproof IP66 (NEMA 7) wall mount explosionproof 	7ME3600- 7ME3601- 7ME3603-	
	0 -	
RTD temperature sensor (includes mounting hardware for pipes above 1.5" OD)		
No RTDs (Note: temperature input is required for SITRANS FUH systems)		0
1 x Standard clamp-on RTD		1
2 x Standard clamp-on RTD ²⁾		2
1 x Submersible clamp-on RTD		3
2 x Submersible clamp-on RTD ²⁾		4
Sensor for channel/path 1 (includes standard pipe mounting kit and spacer bar for indicated max. outer diameter listed) See "Sensor selection charts" 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):		
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
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
¹⁾ Supplied spacer bar supports pipes up to 750 mm (30 inch). For pipes larger than 750 mm (30 inch) purchase also, spare part 7ME3960-0MS40 (1012BN-4).		
²⁾ Dual channel interface detector only		

Flow Measurement

SITRANS F US Clamp-on

SITRANS FUH1010 (Oil)

Selection and Ordering data

SITRANS FUH1010 (Oil)

- IP65 (NEMA 4X) wall mount
- IP65 (NEMA 7) compact explosionproof
- IP66 (NEMA 7) wall mount explosionproof

Article No. Ord. code

7ME3600-

7ME3601-

7ME3603-

0 -

Sensor for channel/path 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
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

Sensor for channel/path 2

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

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
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

Selection and Ordering data

SITRANS FUH1010 (Oil)

- IP65 (NEMA 4X) wall mount
- IP65 (NEMA 7) compact explosionproof
- IP66 (NEMA 7) wall mount explosionproof

Article No. Ord. code

7ME3600-

7ME3601-

7ME3603-

0 -

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) ¹⁾	Z	Q 1 P
D2H (high temperature range HP) ¹⁾	Z	Q 1 Q
D3H (high temperature range HP) ¹⁾	Z	Q 1 U
D4H (high temperature range HP) ¹⁾	Z	Q 1 R

Approvals

FM/CSA/CE/C-TICK (default), also for non hazardous area

1

ATEX

2

INMETRO (Brazil)

3

- ¹⁾ Supplied spacer bar supports pipes up to 750 mm (30 inch).
For pipes larger than 750 mm (30 inch) purchase also, spare part 7ME3960-0MS40 (1012BN-4).

Selection and Ordering data

Order code

Further designs

Please add "-Z" to Article 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 cable

T11

- RTD cable termination kit for standard RTD

T21

- RTD cable termination kit for submersible RTD

T31

Languages (Meter and Documentation), English (default)

- 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

Selection and Ordering data	Article No.
Operating Instructions for SITRANS FUH1010	
English NEMA 4X & NEMA 7 wall mount Standard Volume	A5E02951449
German NEMA 4X & NEMA 7 wall mount Standard Volume	A5E02951529
English NEMA 4X & NEMA 7 wall mount explosionproof Precision Volume	CQO:1010PVNFM-3
English NEMA 4X & NEMA 7 wall mount explosionproof Interface Detector	A5E02951504
English NEMA 7 compact explosionproof Standard Volume	CQO:1010DVXFM-3
English NEMA 7 compact explosionproof Precision Volume	CQO:1010PVXFM-3
English NEMA 7 compact explosionproof Interface Detector	CQO:1010BXXFM-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	

MLFB example

Application example

A clamp-on meter is required for a 12" carbon steel hydrocarbon line flowing multiple products, with a wall thickness of 12.7 mm (0.5"). Meter electronics are to be located in a Class I Div 2 area only 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 Article No.: **7ME3600-3CB00-3QQ1-Z**
K03 + K03 + R03

Selection and Ordering data	Article No.	Ord. code
SITRANS FUH1010 meter family	7 ME 3 6 0	0 - 0 -
IP65 (NEMA 4X) enclosure	0	
Dual path precision volume	3	
Custody Transfer option with digital pulse	C	
9 ... 36 V DC power option	B	
RS 232 Standard	0	
RTD required for viscosity comp	3	
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
30 m (100 ft) cable for RTD		R 0 3

High precision sensor selection chart IP68

Based on pipe wall thickness (steel pipes only)					
Sensor Pipe wall	Order Code	Pipe wall (mm)		Pipe wall (inch)	
		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
B3H	T	2.7	3.3	0.106	0.128
D3H	U	7.4	9.0	0.293	0.354

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)	K06	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 delivery