

FLOWX3 F9.00 Flow Monitor & Transmitter



FLS FLOWX3 F9.00 Flow Monitors & Transmitters are designed to convert the signal from all FLOWX3 flow sensors into a display indication and a 4-20 mA signal for long distance transmission. A very simple and complete choice of options are granted by single or dual input/output, one open collector output and two optional open collector or relay outputs. The high flexibility is also maximized with only one packaging for compact pipe mount, panel or wall installation.

Self explaining calibration menus allow a customized setup of all measuring parameters and the state of the art electronic design ensures long-term reliable and stable signals.

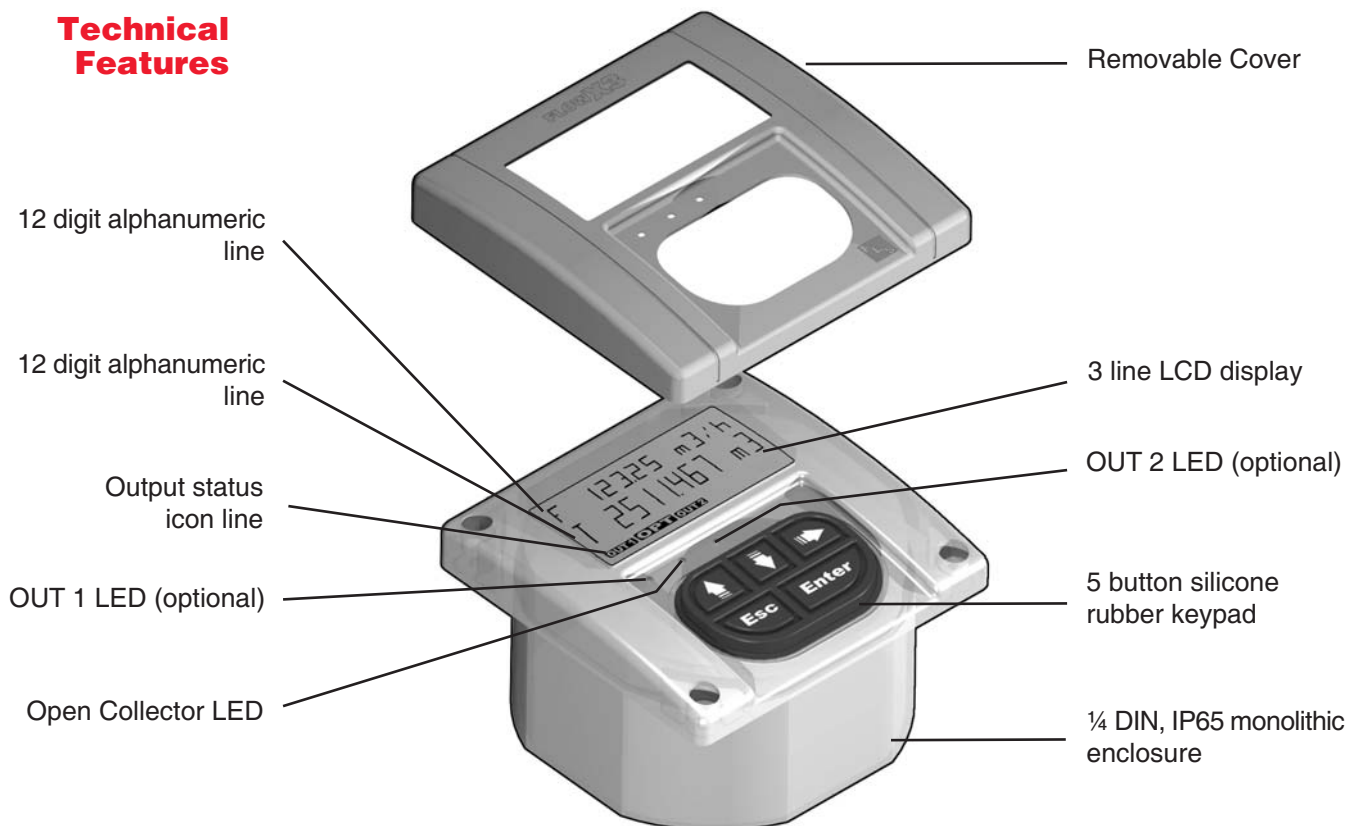
Main Features

- Permanent and resettable totalizer.
- Adjustable outputs.
- Relay and Open Collector options.
- Installation flexibility.
- 3 line alphanumeric standard or backlight LCD.
- IP65 monolithic packaging.
- 5 button keypad.
- Output simulation for system testing.
- One packaging for compact/pipe, panel or wall installation.
- Self explaining calibration menus.
- Auto-calibration.


Applications

- Flow control and measuring.
- Water treatment and regeneration.
- Industrial wastewater treatment and recovery.
- Water distribution.
- Leak detection.
- Processing and manufacturing industry.
- Textile finishing.
- Filtration systems.
- Chemical Industry.
- Liquid delivery systems.
- Auxiliary plants.
- Swimming pools & Spas.

Technical Features



Technical Features

Flow Monitor	Part No.	Wire Power Tech.	Associated Sensor	Sensor Input	4-20 mA Output	Open Collector Output	Relay Output
	F9.00	2 wire	Hall Effect	1	1	1 - MIN, MAX, Pulse, Freq, Off	----
	F9.01	3/4 wire	Hall Effect	1	1	3 - MIN, MAX, Pulse, Freq*, Off	----
	F9.02	3/4 wire	Hall Effect	1	1	1 - MIN, MAX, Pulse, Freq, Off	2 - MIN, MAX, Pulse, Off
	F9.03	3/4 wire	Hall Effect	2	2	1 - MIN, MAX, Pulse, Freq, Off	2 - MIN, MAX, Pulse, Off

* for OPT output only.

Engineering Data

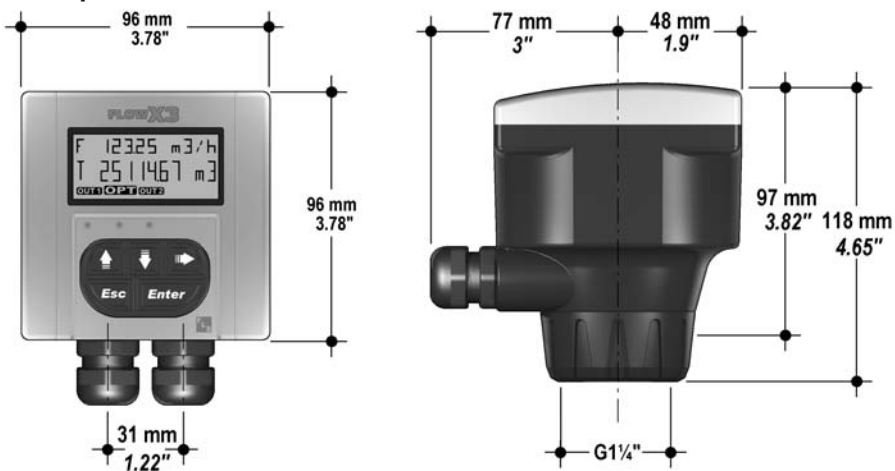
- The flow transmitter is designed with only one packaging for compact/pipe, panel or wall installation.
- The flow transmitter has ¼ DIN panel mount standard dimensions: 96 x 96 mm (3.8 x 3.8 inch).
- The instrument meets IP65 standards.
- The instrument provides flow rate indication and dual totalization with fully scaleable engineering units.
- The flow transmitter is equipped with a 3 line LCD: 2 x 12 alphanumeric lines and 1 icon line
- The LCD display is available both in standard and in backlight version.
- The flow transmitter is equipped with a silicone rubber 5 button keypad.
- The flow transmitter is compatible with all FLS FLOWX3 Hall Effect Flow Sensor.
- The instrument provides auto-calibration and simulation options.

Connections to FLOWX3 Sensors

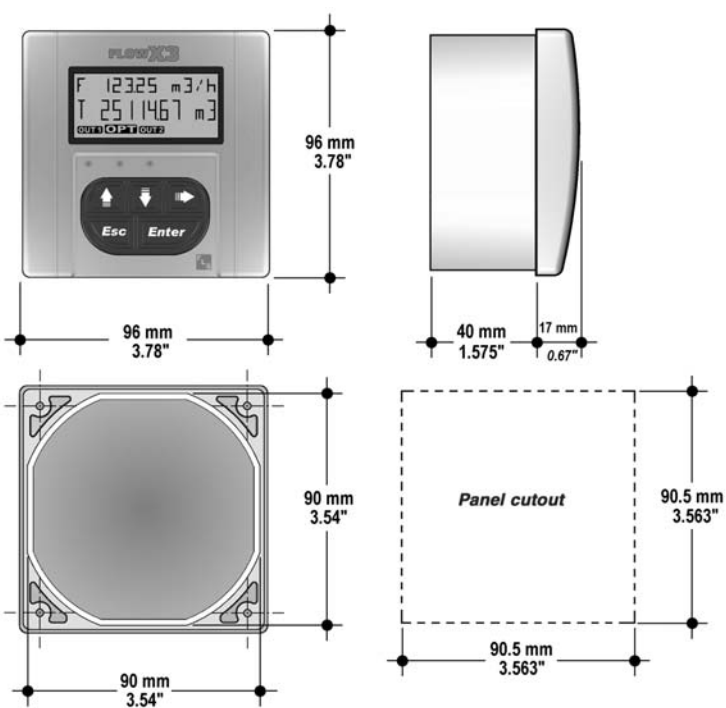
FLOWX3 Monitors	FLOWX3 Sensors														
	F3.00.H	F3.00.C	F3.01.H	F3.01.C	F3.10.H	F3.15.H*	F3.30.H*	ULF.H	ULF.R	ULF3.15*	ULF3.30*	F3.80	F111.H	F111.C	F3.60M F3.63M
F9.00	■		■		■				■				■		
F9.01	■		■		■	■		■		■		■	■		■
F9.02	■		■		■	■		■		■		■	■		■
F.9.03	■		■		■	■		■		■		■	■		■

* with Output Kit mounted.

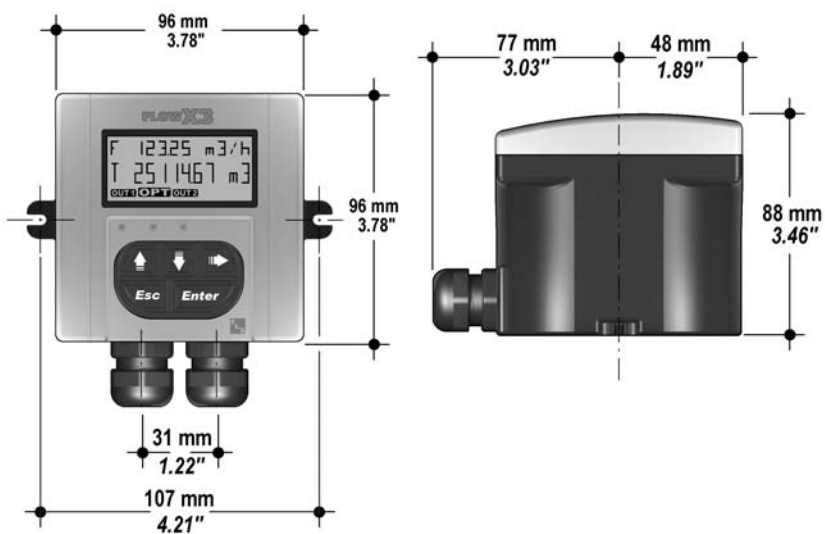
Dimensions Compact Mount



Dimensions Panel Mount



Dimensions Wall Mount

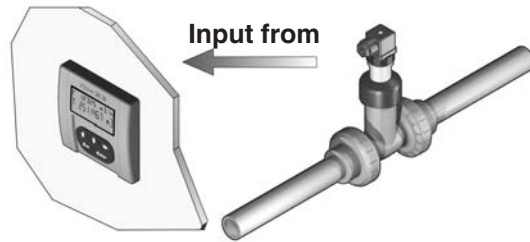


Installation

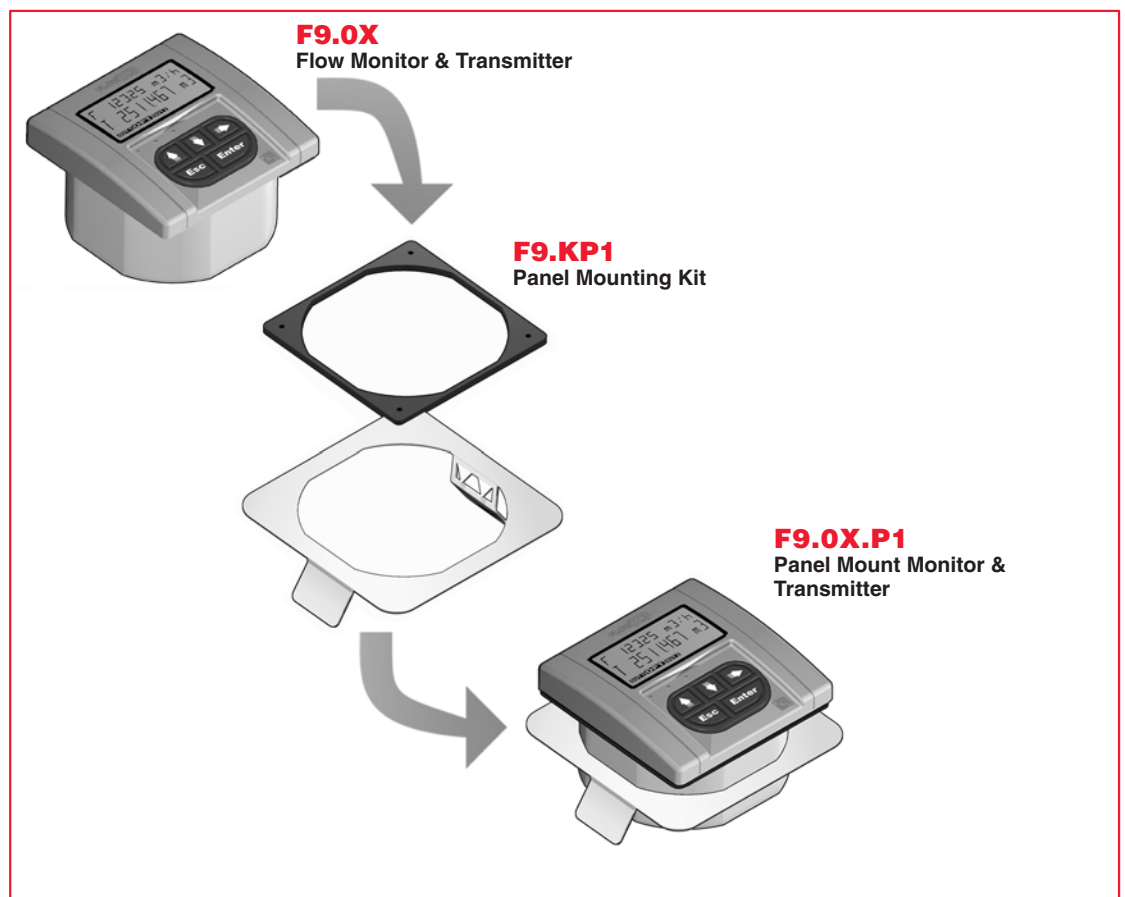
The flow monitor & transmitter is available just in one packaging for compact field version, panel or wall installation. The compact field version is mounted on top of the sensor using the compact mounting kit (F9.KC1), the panel version is installed using the panel mounting kit (F9.KP1), while the wall mounting version is fixed to the wall by the mounting kit (F9.KWX).

The mounting kits can be ordered directly connected to the monitor or separately and then simply installed on it. Please refer to Ordering Data section for a complete listing of part numbers.

Panel Mount



The panel mounting version consists of the monitor and the mounting bracket kit F9.KP1 with gasket for IP65 watertight panel installation. The monitor perfectly fits into a standard ¼ DIN panel cutout. The instrument and the kit can be ordered separately (code F9.0X for the monitor and code F9.KP1 for the mounting bracket) or together using the code F9.0X.P1.



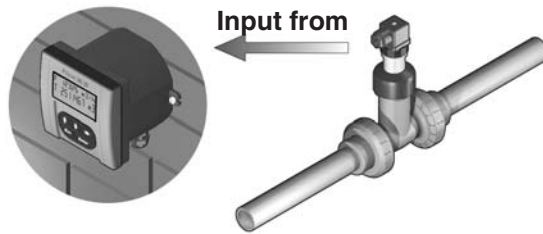
Input from



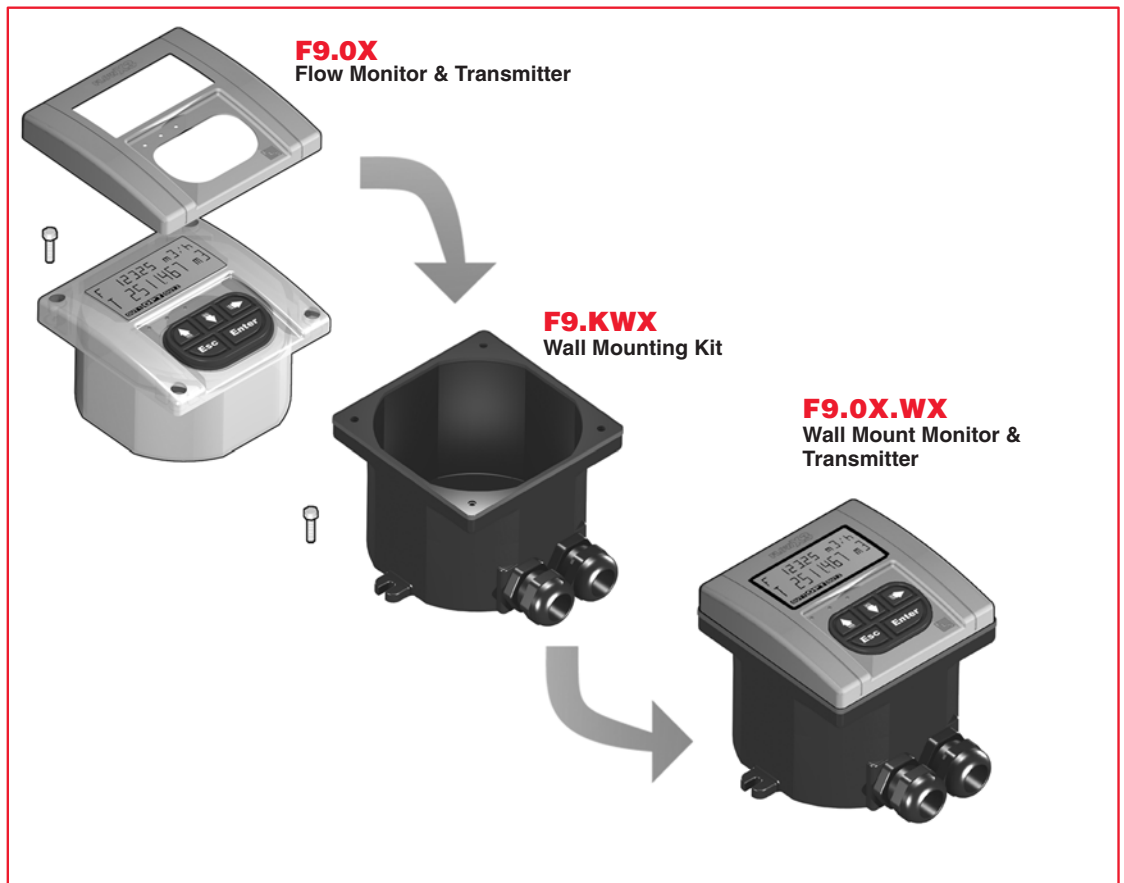
**FLS FLOWX3 Flow Sensor
(sold separately)**

F3.00.H.XX - F3.10.H.XX - F3.15.H.XX
 ULF01.H.X - ULF3.15.XX.X
 ULF03.H.X - F111.H
 F3.80 - New F3.60M & F3.63M

Installation Wall Mount



The wall mounting version consists of the monitor and the wall mounting kit. The F9.KW1 kit includes the plastic adapter, the gasket for IP65 watertight wall installation and the fixing screws. The F9.KW2 includes also a 110/230 VAC to 24 VDC power supply directly mounted into the plastic adapter to provide a low voltage regulated output to the flow monitor. The instrument and the kit can be ordered separately (code F9.OX for the monitor and code F9.KWX for the kit) or together using the code F9.OX.WX.



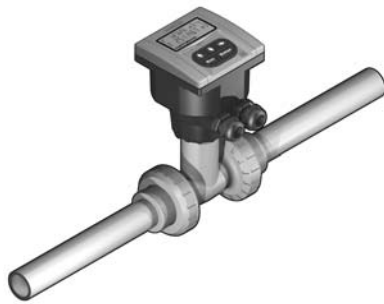
Input from



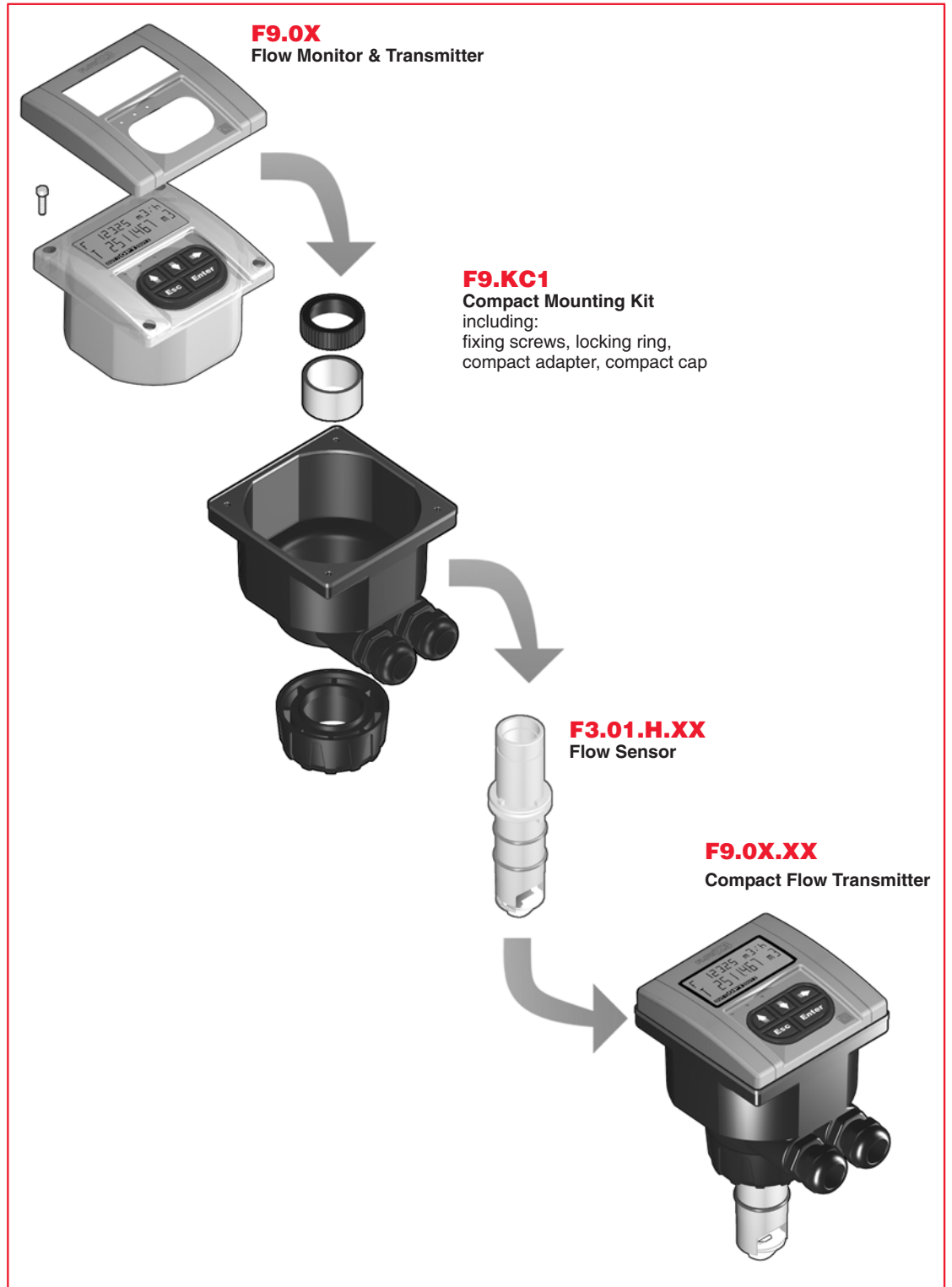
**FLS FLOWX3 Flow Sensor
(sold separately)**

F3.00.H.XX - F3.10.H.XX - F3.15.H.XX
 ULF01.H.X - ULF3.15.XX.X
 ULF03.H.X - F111.H
 F3.80 - New F3.60M & F3.63M

Installation Compact Mount

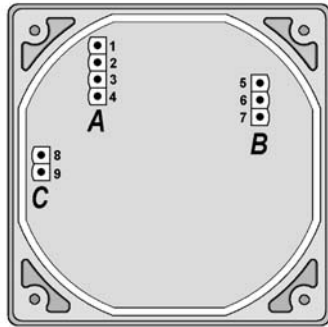


The compact mounting kit F9.KC1 includes the compact plastic adapter with gasket for IP65 watertight installation, the compact cap, the locking ring and four fixing screws for mounting the monitor directly onto the sensor. The instrument and the kit can be ordered separately (code F9.0X for the monitor and code F9.KC1 for the kit) or together using the code F9.0X.XX.



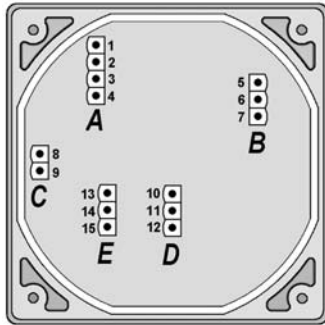
Rear Terminal View

Terminal F9.00



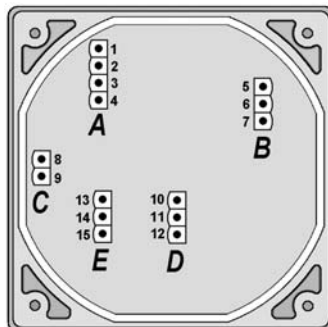
Power Supply	A	1	+ VDC
		2	+ LOOP
		3	- LOOP
		4	- VDC
SENSOR			
Sensor	B	5	GND
		6	IN
		7	V+
Open collector output	C	8	O.C.+
		9	O.C.-

Terminal F9.01



Power Supply	A	1	+ VDC
		2	+ LOOP
		3	- LOOP
		4	- VDC
SENSOR			
Sensor	B	5	GND
		6	IN
		7	V+
Open collector output	C	8	O.C.+
		9	O.C.-
Open collector	D	10	OUT 1+
		11	
		12	OUT 1-
Open collector	E	13	OUT 2+
		14	
		15	OUT 2-

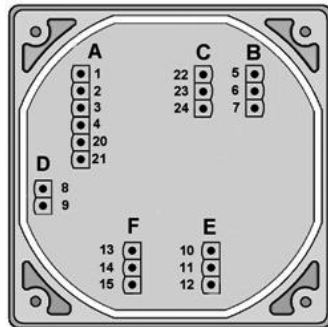
Terminal F9.02



Power Supply	A	1	+ VDC
		2	+ LOOP
		3	- LOOP
		4	- VDC
SENSOR			
Sensor	B	5	GND
		6	IN
		7	V+
Open collector output	C	8	O.C.+
		9	O.C.-
RELAY 1			
OUT 1 RELAY	D	10	NC
		11	COM
		12	NO
RELAY 2			
OUT 2 RELAY	E	13	NC
		14	COM
		15	NO

Rear Terminal View

Terminal F9.03



1	+ VDC
2	+ LOOP
3	- LOOP
4	- VDC
20	+ LOOP2
21	- LOOP2

Power Supply A

SENSOR A	
5	GND
6	IN
7	V+

Sensor A B

SENSOR B	
22	GND
23	IN
24	V+

Sensor B C

8	O.C.+
9	O.C.-

Open collector output D

RELAY 1	
10	NC
11	COM
12	NO

OUT 1 RELAY E

RELAY 2	
13	NC
14	COM
15	NO

OUT 2 RELAY F

Technical Data

General

- Associated flow sensor:
 - FLS FLOWX3 Hall effect with frequency output.
 - FLS FLOWX3 New Electromagnetic flow sensor*.
- Materials:
 - Case: PC
 - Panel gasket: Neoprene
 - Wall and Field gasket: EPDM
 - Keypad: 5 button silicone rubber.
- Display:
 - standard or backlight configuration
 - 3 line LCD: 2 x 12 alphanumeric lines and 1 icon line
 - Update rate: 1 second
 - Contrast: User adjustable with 5 levels.
- Enclosure: IP65 front.

Electrical

- Supply Voltage: 12 to 24 VDC $\pm 10\%$, regulated.
- Sensor Input (Frequency):
 - Sensor power: 3.8 ÷ 5 VDC @ < 30 mA*
 - Range:
 - F9.00-F9.03 → 0.5 to 500 Hz
 - F9.01-F9.02 → 0.5 to 1000 Hz
 - Optically isolated from current loop (only 4 wires version)
 - Short circuit protected.
- Current output:
 - 4-20 mA, isolated, fully adjustable and reversible
 - Max loop impedance: 150 Ω @ 12 VDC, 330 Ω @ 18 VDC, 600 Ω @ 24 VDC.
- Open Collector output:
 - User selectable as MIN alarm, MAX alarm,

- Pulse Out, Freq Out, Off
- Optically isolated, 50 mA MAX sink, 24 VDC maximum pull-up voltage
- Max pulse/min: 300
- Hysteresis: User selectable.
- Relay output:
 - User selectable as MIN alarm, MAX alarm, Pulse Out, Off
 - Mechanical SPDT contact
 - Max voltage rating: 3A @ 30 VDC, 3A @ 250 VAC resistive load
 - Max pulse/min: 180
 - Hysteresis: User selectable.
 - Expected mechanical life (min. operations): 10^7
 - Expected electrical life (min. operations):
 1. N.O. switching capacity 5A 250 VAC: 5×10^4
 2. N.C. switching capacity 2A 250 VAC: 2×10^5 .

Environmental

- Operating temperature: -10°C to +70°C (14°F to 158°F).
- Storage temperature: -15°C to +80°C (5°F to 176°F).
- Relative humidity: 0 to 95% non condensing.

Standards & Approvals

- Manufactured under ISO 9001 (Quality).
- Manufactured under ISO 14001 (Environmental Management).
- CE.

* For F3.60M & F3.63M power supply must be provided separately.

Ordering Data

FLOWX3 F9.0X

Part No.	Description	Wire Power Tech.	Power Supply	Input	Output
F9.00	Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)
F9.01*	Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)
F9.02*	Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)
F9.03*	Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	2 (Freq.)	2 (4-20mA) 1 (Open Collector) 2 (Relay)

* BACKLIGHT version available: just add ".L" at the end of Part No. (i.e. F9.02.L)

FLOWX3 F9.0X.P1 (Panel Mount version)

Part No.	Description	Wire Power Tech.	Power Supply	Input	Output
F9.00.P1	Panel Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)
F9.01.P1*	Panel Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)
F9.02.P1*	Panel Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)
F9.03.P1*	Panel Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	2 (Freq.)	2 (4-20mA) 1 (Open Collector) 2 (Relay)

* BACKLIGHT version available: just add ".L" at the end of Part No. (i.e. F9.02.P1.L)

FLOWX3 F9.0X.WX (Wall Mount version)

Part No.	Description	Wire Power Tech.	Power Supply	Input	Output
F9.00.W1	Wall Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)
F9.01.W1*	Wall Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)
F9.02.W1*	Wall Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)
F9.03.W1*	Wall Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	2 (Freq.)	2 (4-20mA) 1 (Open Collector) 2 (Relay)
F9.00.W2	Wall Mount Flow Monitor & Transmitter	2 wire	110 to 230 VAC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)
F9.01.W2*	Wall Mount Flow Monitor & Transmitter	3/4 wire	110 to 230 VAC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)
F9.02.W2*	Wall Mount Flow Monitor & Transmitter	3/4 wire	110 to 230 VAC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)
F9.03.W2*	Wall Mount Flow Monitor & Transmitter	3/4 wire	110 to 230 VAC	2 (Freq.)	2 (4-20mA) 1 (Open Collector) 2 (Relay)

* BACKLIGHT version available: just add ".L" at the end of Part No. (i.e. F9.02.W1.L)

Ordering Data

FLOWX3 F9.0X.XX (Compact Field Mount version)

Part No.	Description	Wire Power Tech.	Power Supply	Input	Output	Sensor Length	Sensor Body	Sensor O-rings
F9.00.01	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L0	CPVC	EPDM
F9.00.02	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L0	CPVC	FPM
F9.00.03	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L1	CPVC	EPDM
F9.00.04	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L1	CPVC	FPM
F9.00.05	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L0	PVDF	EPDM
F9.00.06	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L0	PVDF	FPM
F9.00.07	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L1	PVDF	EPDM
F9.00.08	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L1	PVDF	FPM
F9.00.09	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L0	316L SS	EPDM
F9.00.10	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L0	316L SS	FPM
F9.00.11	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L1	316L SS	EPDM
F9.00.12	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L0	316L SS	FPM
F9.00.13	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L0	BRASS	EPDM
F9.00.14	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L1	BRASS	FPM
F9.00.15	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L1	BRASS	EPDM
F9.00.16	Field Mount Flow Monitor & Transmitter	2 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector)	L1	BRASS	FPM

Ordering Data

FLOWX3 F9.0X.XX (Compact Field Mount version)

Part No.	Description	Wire Power Tech.	Power Supply	Input	Output	Sensor Length	Sensor Body	Sensor O-rings
F9.01.01	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L0	CPVC	EPDM
F9.01.02	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L0	CPVC	FPM
F9.01.03	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L1	CPVC	EPDM
F9.01.04	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L1	CPVC	FPM
F9.01.05	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L0	PVDF	EPDM
F9.01.06	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L0	PVDF	FPM
F9.01.07	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L1	PVDF	EPDM
F9.01.08	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L1	PVDF	FPM
F9.01.09	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L0	316L SS	EPDM
F9.01.10	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L0	316L SS	FPM
F9.01.11	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L1	316L SS	EPDM
F9.01.12	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L1	316L SS	FPM
F9.01.13	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L0	BRASS	EPDM
F9.01.14	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L0	BRASS	FPM
F9.01.15	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L1	BRASS	EPDM
F9.01.16	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 3 (Open Collector)	L1	BRASS	FPM

BACKLIGHT version available: just add ".L" at the end of Part No. (i.e. F9.01.01.L)

Ordering Data

FLOWX3 F9.0X.XX (Compact Field Mount version)

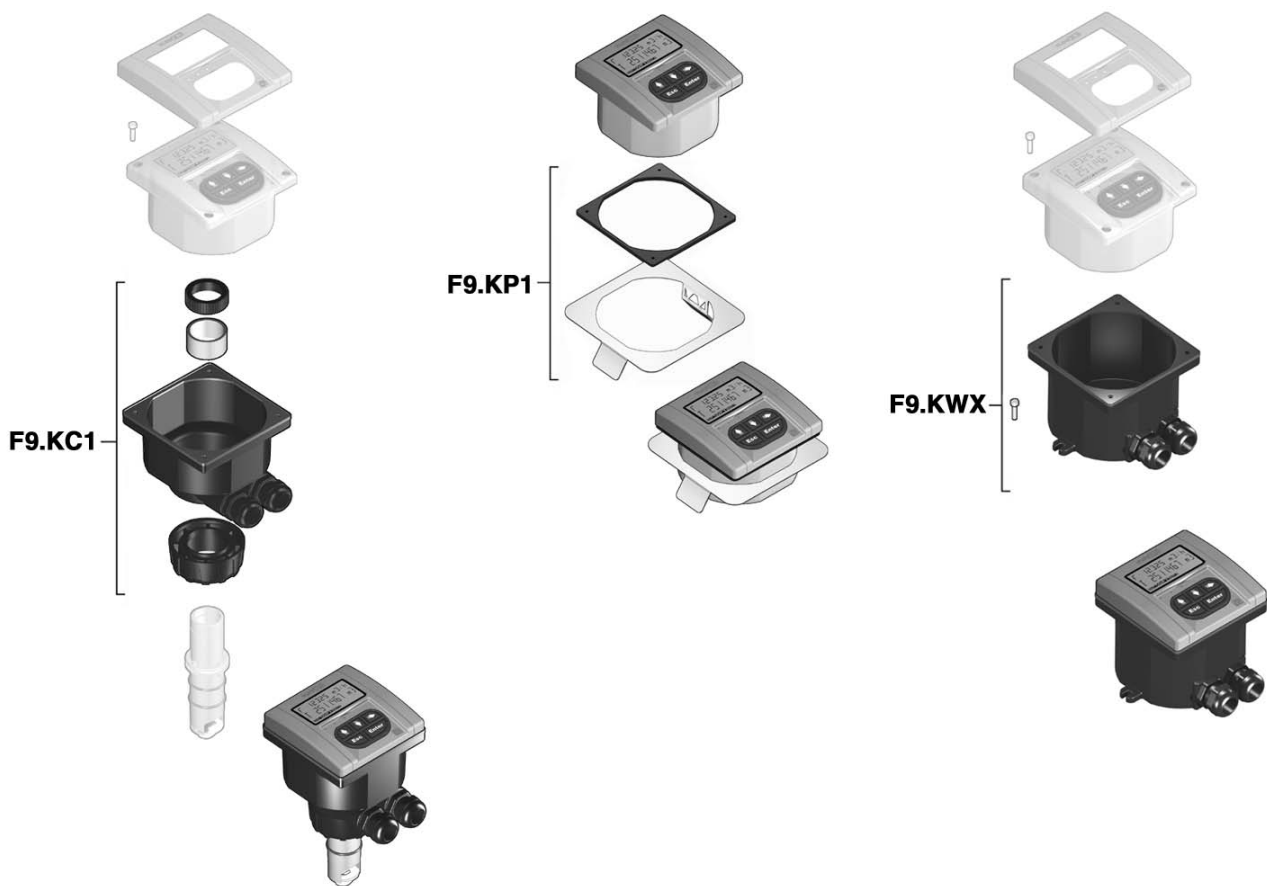
Part No.	Description	Wire Power Tech.	Power Supply	Input	Output	Sensor Length	Sensor Body	Sensor O-rings
F9.02.01	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L0	CPVC	EPDM
F9.02.02	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L0	CPVC	FPM
F9.02.03	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L1	CPVC	EPDM
F9.02.04	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L1	CPVC	FPM
F9.02.05	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L0	PVDF	EPDM
F9.02.06	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L0	PVDF	FPM
F9.02.07	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L1	PVDF	EPDM
F9.02.08	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L1	PVDF	FPM
F9.02.09	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L0	316L SS	EPDM
F9.02.10	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relè)	L0	316L SS	FPM
F9.02.11	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L1	316L SS	EPDM
F9.02.12	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L1	316L SS	FPM
F9.02.13	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L0	BRASS	EPDM
F9.02.14	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L0	BRASS	FPM
F9.02.15	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L1	BRASS	EPDM
F9.02.16	Field Mount Flow Monitor & Transmitter	3/4 wire	12 to 24 VDC	1 (Freq.)	1 (4-20mA) 1 (Open Collector) 2 (Relay)	L1	BRASS	FPM

BACKLIGHT version available: just add ".L" at the end of Part No. (i.e. F9.02.01.L)

Ordering Data

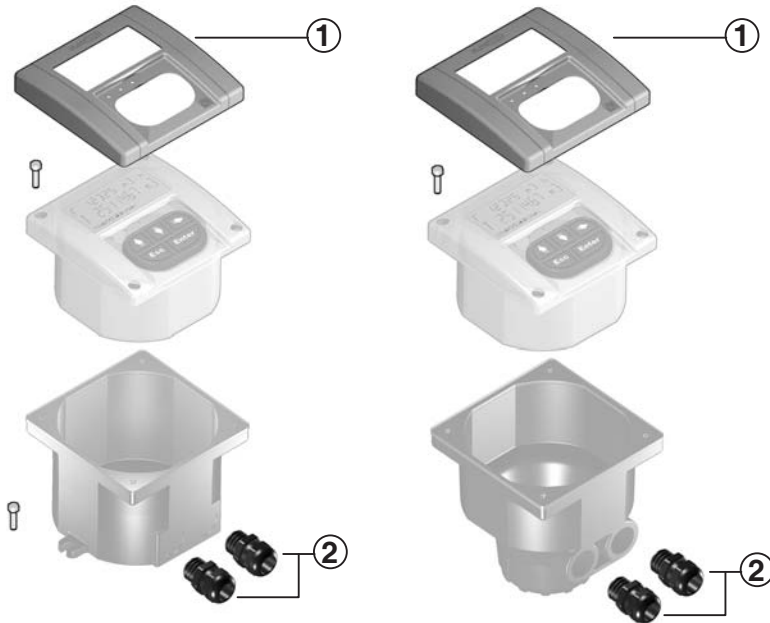
Mounting Kits

Part No.	Name	Description
F9.KC1	Compact mounting Kit	Plastic adapter with gasket, compact cap, locking ring and 4 fixing screws
F9.KP1	Panel mounting Kit	Mounting bracket with gasket
F9.KW1	Wall mounting Kit	Plastic adapter with gasket and fixing screws
F9.KW2	Wall mounting Kit with Power Supply	Plastic adapter with gasket, fixing screws and 110/230VAC to 24VDC power supply included



Spare Parts

Item	Part No.	Name	Description
1	F9.SP1	Cover	PC front cover, 1 LED
1	F9.SP2	Cover	PC front cover, 3 LED
2	F9.SP4.1	PG 13.5	PG13.5 Cable Gland for Compact or Wall mounting Kit
2	F9.SP4.2	PG 11	PG11 Cable Gland for Compact or Wall mounting Kit

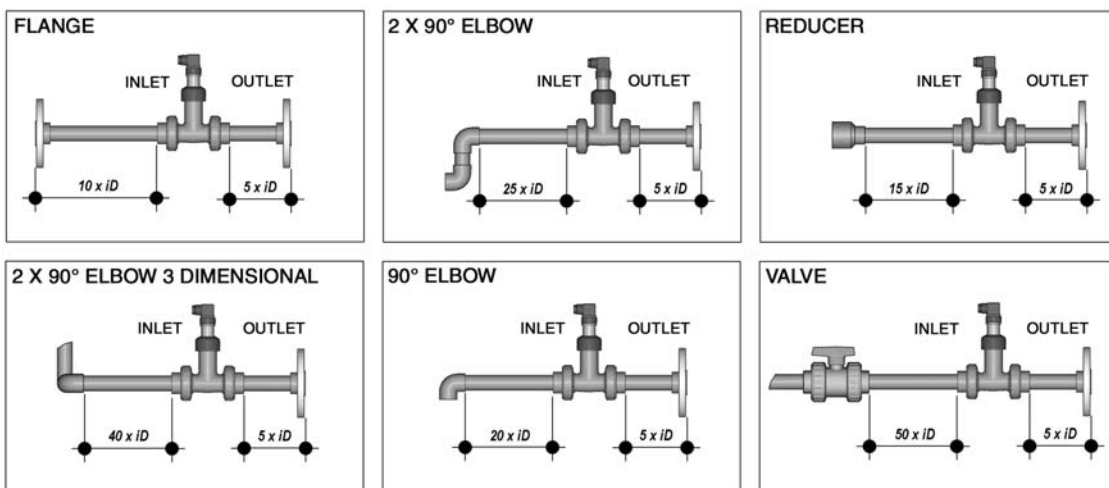


Installation Guidelines

Different pipe configurations and obstacles in the flow line such as valves, elbows, pipe bends and strainers create variations on the flow profile.

- The six most common installation configurations are shown to help in selecting the best location in the pipeline for paddlewheel flow sensor.

- For more information, please refer to EN ISO 5167-1.
- Always maximize distance between flow sensors and pumps.



Mounting Positions

Make sure the pipeline is always full.

- Horizontal pipe runs:

Fig.1 : installation with no sediments present

Fig.2 : installation with no air bubbles present

Fig.3 : installation if sediments or air bubbles may be present.

- Vertical pipe runs:

Install sensor in any orientation.

Upward flow is preferred to ensure full pipe.

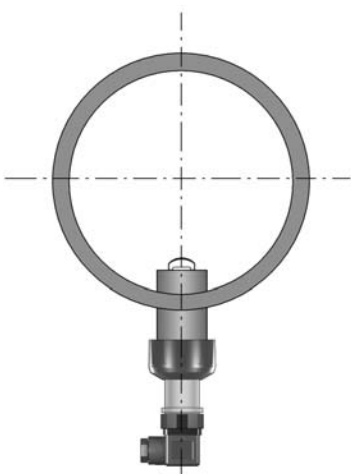


Fig. 1

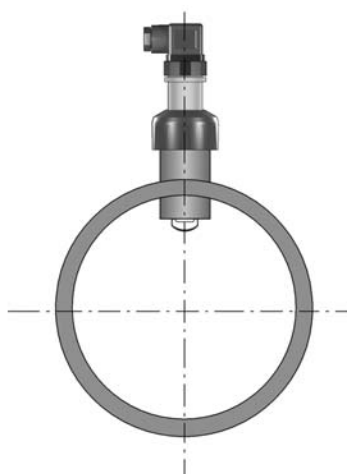


Fig. 2

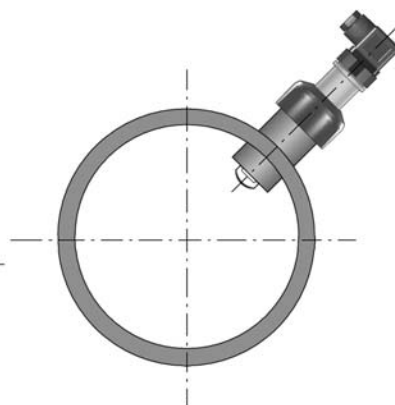


Fig. 3