

# Type F3.30 and ULF3.30 Blind Transmitters

The Type F3.30 and ULF3.30 are 3-wire flow transmitters with a 4 to 20 mA analog output. For applications not requiring visual flow indication, they are an economical alternative to an F9.00 instrument/sensor direct mount assembly.

## ■ Type F3.30

**Body Materials:** CPVC, PVDF, 316L Stainless Steel, Brass

**Rotor:** ECTFE (Halar®)

**Shaft & Bearings:** Ceramic

**Seals:** EPDM, Viton®

**Pipe Sizes:** 1/2"– 24" in two sensor lengths, L0 or L1  
See Installation Fittings (pages 39–41)

**Flow Ranges:** See page 45

## ■ Type ULF3.30

	Polyoxymethylene Version (POM)	ECTFE Version
<b>Sensor Body:</b>	POM	ECTFE (Halar®)
<b>Rotor:</b>	POM	ECTFE (Halar®)
<b>Shaft:</b>	Corepoint®†	Sapphire
<b>Bearings:</b>	–	Sapphire
<b>O-Ring:</b>	Viton®	Viton® or Kalrez®
<b>Connection:</b>	Inline 1/4" BSP male threaded	
<b>Flow Range:</b>		
ULF01 Model:	1.5 to 100 l/h (0.0066 to 0.44 gpm)	
ULF03 Model:	6 to 250 l/h (0.0264 to 1.10 gpm)	

† Corepoint® is a steel alloy.

## ■ Features

- **Large Selection of Sensor Materials** – Including stainless steel and brass.
- **Corrosion Resistant PVC Electronics Housing**
- **Ceramic Shaft and Bearings** – Provide long life on services containing grit
- **Self Cleaning Design** – Lower maintenance

**Digiflow®**  
**FLOW X3**

F3.30



ULF3.30



# Type F3.30 and ULF3.30 Blind Transmitters



## ■ Technical – General

**Supply Voltage:** 12 to 24 VDC regulated  
**Current Consumption:** < 50 mA  
**Max. Loop Impedance:** 800Ω @ 24 VDC, 300Ω @ 12 VDC  
**Enclosure:** NEMA 4, 4X (IP65) PVC housing  
**Repeatability:** ± 0.5% of full scale  
**Output:** 4 to 20 mA, 3 wire

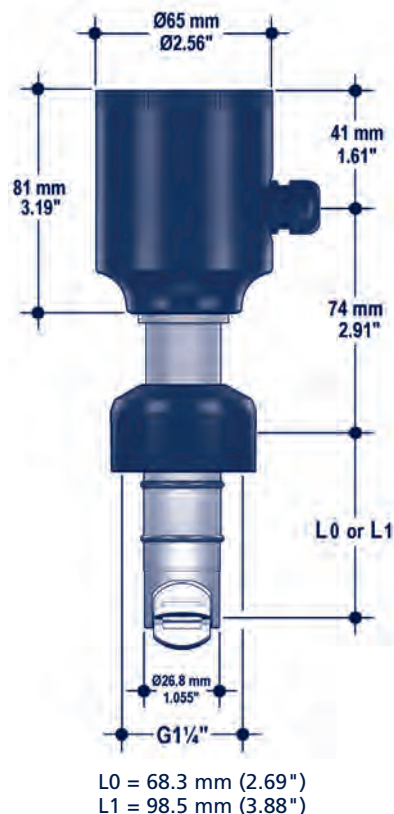
## ■ Technical – Type F3.30

**Accuracy:** < ± 1% of reading value after field calibration or ± 0.75% of full scale  
**Viscosity Range:** 0.5 to 20 centistokes. Factory calibration is required if outside this range, up to 40 centistokes maximum.  
**Maximum % Solids:** 10% with particle size not exceeding 0.5 mm cross section or length  
**Ambient Temperature:** 0 to 60°C (32 to 140°F)  
**Max. Operating Pressure/Temperature:** See chart on page 43

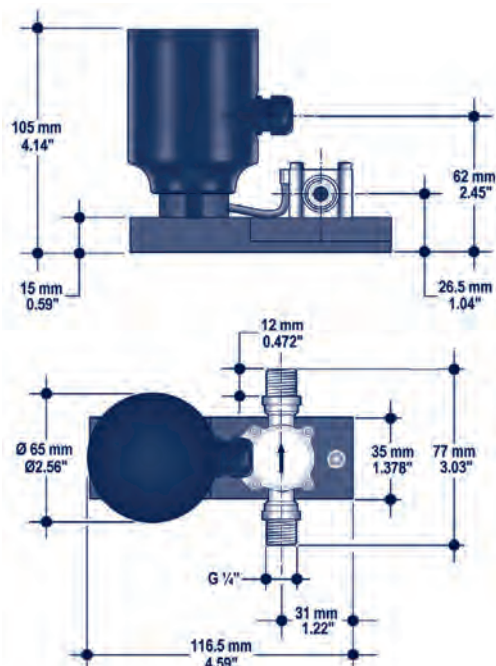
## ■ Technical – Type ULF3.30

**Accuracy:** < ± 2% of reading value after field calibration or ± 1% of full scale  
**Viscosity Range:** 1 to 10 centistokes  
**Maximum % Solids:** Clean service only, no solids recommended  
**Ambient Temperature:** 0 to 60°C (32 to 140°F)  
**Working Temperature:** -10 to 80°C (14 to 176°F)  
**Working Pressure:** 5 bar (70 psi) max. @ 22°C (72°F)

F3.30



ULF3.30



## ■ Wiring & Operation (Cable not supplied)

(See Instruction Manual for detailed wiring information)



Power Supply A	1	+ VDC
	2	4-20 mA OUTPUT
	3	- VDC
Sensor B	SENSOR	
	5	GND
	6	IN
7	V+	

### ① Calibration Switch

The full scale range, corresponding to 4 to 20 mA output is set by means of switches 2, 3 and 4. Switch 1 is used to set a filter on the current output.

## ■ Item Numbers

• See page 24

# Item Numbers

## Flow Switches and Blind Transmitters



### ■ No-Flow Switches See page 19

#### Type F3.05

Electrical Class	O-Ring	Sensor Length	Item No.		
			CPVC	PVDF	316L SS
NEMA 4, 4X (IP65)	EPDM	L0	F3.05.H.01	F3.05.H.05	F3.05.H.09
	Viton®	L0	F3.05.H.02	F3.05.H.06	F3.05.H.10
	EPDM	L1	F3.05.H.03	F3.05.H.07	F3.05.H.11
	Viton®	L1	F3.05.H.04	F3.05.H.08	F3.05.H.12

### ■ Adjustable Flow Switches See pages 20 and 21

#### Type F3.15

Electrical Class	O-Ring	Sensor Length	Item No.			
			CPVC	PVDF	316L SS	Brass
NEMA 4, 4X (IP65)	EPDM	L0	F3.15.H.01	F3.15.H.05	F3.15.H.09	F3.15.H.13
	Viton®	L0	F3.15.H.02	F3.15.H.06	F3.15.H.10	F3.15.H.14
	EPDM	L1	F3.15.H.03	F3.15.H.07	F3.15.H.11	F3.15.H.15
	Viton®	L1	F3.15.H.04	F3.15.H.08	F3.15.H.12	F3.15.H.16

#### Type ULF3.15

Electrical Class	Flow Trip Point (l/hr)	Item No.		
		POM <sup>†</sup> / Viton®	ECTFE* / Viton®	ECTFE* / Kalrez®
NEMA 4, 4X (IP65)	1.5 – 21	ULF3.15.01.0	ULF3.15.01.2	ULF3.15.01.3
	6 – 53	ULF3.15.03.0	ULF3.15.03.2	ULF3.15.03.3

### ■ Flow Transmitters See pages 22 and 23

#### Type F3.30

Electrical Class	O-Ring	Sensor Length	Item No.			
			CPVC	PVDF	316L SS	Brass
NEMA 4, 4X (IP65)	EPDM	L0	F3.30.H.01	F3.30.H.05	F3.30.H.09	F3.30.H.13
	Viton®	L0	F3.30.H.02	F3.30.H.06	F3.30.H.10	F3.30.H.14
	EPDM	L1	F3.30.H.03	F3.30.H.07	F3.30.H.11	F3.30.H.15
	Viton®	L1	F3.30.H.04	F3.30.H.08	F3.30.H.12	F3.30.H.16

#### Type ULF3.30

Electrical Class	Flow Range (l/hr)	Item No.		
		POM <sup>†</sup> / Viton®	ECTFE* / Viton®	ECTFE* / Kalrez®
NEMA 4, 4X (IP65)	1.5 – 100	ULF3.30.01.0	ULF3.30.01.2	ULF3.30.01.3
	6 – 250	ULF3.30.03.0	ULF3.30.03.2	ULF3.30.03.3

<sup>†</sup> POM = "Polyoxymethylene". \* ECTFE is also referred to as "Halar®".