o				1. Adjust liqui	id flow in the line to the	rate at which	
Specificatio	ons			2 Insert screv	ation is uselleu. vdriver into opening op	hackside of	
Wetted materials Body		Polypropylene, Brass, S Steel (Hydrolytically		housing an adjustment	d fit blade into the pote screw inside.	ntiometer	
Rotor nin		Stable, Glass Reinforced) Ceramic Ryton Composite, Colour: Black		 If LED is not illuminated, slowly turn screwdriver counterclockwise and stop as soon as LED illuminated 			
Rotor							
Lens O Ding		Polysulfone Buna N (Motal Body - Viton)		4 If I ED is illuminated turn screwdriver clockwise until			
U-Ring Max. operating pressure		Polypropylene Body: 7 bar		LED light g	oes out. Then, slowly tu	urn screwdriver	
		Metal Body:	14 bar	counterclockwise and stop as soon as LED illuminates			
Max. operating temperature		Polypropylene Body: Metal Body:	Polypropylene Body: 80°C Metal Body: 100°C				
Electronics		65°C Ambient					
Max. viscosity		45 cst			D		
Input power		24 Vdc or 110 Vac			ALL		
Relay contact ratings (SPDT)		1A, 24 Vd.c. Resistive 0, request)	5 A, 110 Vac (230 Vac on		SCREW		
Repeatability		2% max. Deviation					
Set point accu	racy (Factory Set)	± 5%			🚽 🦉 🌾 `		
Hysteresis		max. 15%	max. 15%		a an s	P	
Electrical termination		22 AWG PVC-Jacketed Cable, Length 60cm, Colour Code: Red = +Vac/Vdc, Black = Ground, White = N.O., Brown = N.C., Green = Common			QOP	∕~_ _{LED}	
Typical pressu	re drop:	See Graphs					
Filtration		150 microns					
How to Order		Flow Ranges (I/min)		Input	Order Number		
Ινιαιστιαι	1/4"			04.Vda		165405	
Polynropylopo	1/4	U.4 lU 4.U	2.0 10 20.0	24 VUC	155876RCDD	100420	
отурторущие	1/2"	6.0 to 45.0	15 0 to 75 0	24 Vdc	1554858SPP	155485	
	1/2	0.0 10 40.0	10.0 10 70.0	110 Vac	155886BSPP	155886	
	1/4"	0.4 to 4.0	2.0 to 20.0	24 Vdc	156265BSPP	156265	
	., .		0 2010	110 Vac	156266BSPP	156266	
Brass	1/2"	6.0 to 45.0	15.0 to 75.0	24 Vdc	156268BSPP	156268	
-				110 Vac	156269BSPP	156269	
-	3/4"		20 to 112.5	24 Vdc	180395BSPP	180395	
				110 Vac	180396BSPP	180396	
	1"		30 to 225	24 Vdc		181688	
				110 Vac		181689	
Stainless	9/16" - 18UNF	0.4 to 4	2.0 to 20.0	24 Vdc 110 Vac	N/A N/A	165073 165074	
Steel	1/2"	6 to 45	15.0 to 75.0	24 Vdc 110 Vac	165077BSPP	165077	

RotorFlow - RFS Types Flow Setpoint Switching

RotorFlow Switches build an extra level of reliability and protection into your

any reason.

equipment. By principle of operation, the rotor cannot be deceived into indicating a positive flow situation when no flow actually exists. Once set to a desired actuation point, RotorFlow will switch to a 'no-flow' condition should the rotor stop for

*	With	use of	Low-Flow-Adapter	supplied,	
---	------	--------	------------------	-----------	--

3/4"

1"

- - -

- - -

20 to 112.5

30 to 225

24 Vdc

110 Vac

24 Vdc

110 Vac

181691BSPP

181692BSPP

Switch Set Point Calibration With LED Signal

With the unit installed in the line and power supplied, complete the following steps to calibrate switch actuation point with proper flow rate. A small flat-blade screwdriver is the only tool required.

(RFS Type)

www.gemsse

65

181691

181692

181693

181694

sens & Control

FLOW SWITCHES

URBINE



ROTOR & TURBINE

FLOW SWITCHES

Pressure Drop Typical





throughout all options

Low Flow Range Units



High Flow Units



Installation and Maintenance

A proper installation will enhance RotorFlow sensor performance. Install using standard pipe fitting tools; horizontal fluid lines are recommended. For further installation and maintenance recommendations, refer to one of the following instruction bulletins: RFO Types - Part Number 157258; RFI Types - Part Number 157259; RFS Types - Part Number 157261. Since their function is to monitor dynamic fluid flow, naturally the rotor will react to turbulence, pulsation, entrained air, and other flow anomalies induced in the flow stream by other process hardware. For optimum performance, install RotorFlow units where nominal flow conditions exist with ports located at the top. Incoming flow may be placed to either port; a minimum of 20 cm of straight pipe on the inlet side is required. When operating in the low flow range, the supplied Low Flow Adapter must be installed in the incoming port.



RotorFlow sensors connect to piping via NPT mating thread forms. The use of an appropriate thread sealant is necessary to assure a leak-tight connection. Permatex "No More Leaks" or 2 wraps of Teflon tape are the only sealants recommended for GEMS flow sensors. 150 micron filtration is recommended. However, should foreign particles enter RotorFlow sensor, accumulation is easily cleared by removing the lens from the body. The lens is removed by turning its centre rib 45° counter-clockwise, and then pulling it out. To reinstall the lens, simply reverse the process.

Dimensions (in mm)

RFA, RFO, RFS Polypropylene Bodies



Metal Bodies





Т	W	Н	D DC models	D AC models	Р
1/4	77	60	61	114	20
1/2	77	60	61	114	22
3/4	100	66	75	121	27
1	100	66	75	121	27

Panel Mounting

Any RotorFlow sensors may be panel mounted using holes integrated into the bodies.

Two (2) mountings ears are provided at the body centre line to receive 3.5mm ø self tapping screws (e.g. DIN 7971-B 3, 5 x 19) to accommodate panel mounting of the plastic RotorFlow units.

Note: ANSI T type 23 self-tapping screw are recommended. They may be replaced with standard machine screws if reinstallation should be required.



Important: In either case, pressure must be relieved from the system prior to sensor clean-out.

Low Flow Applications

A low flow adaptor is supplied with all Rotorflow units. It is used to produce accurate response at low flow rates. Install the adapter, as shown above, in the port selected for incoming flow.