

FRN series Flow switches



Features

- Operates in low flow conditions
- Minimum restriction to flow
- Suitable with appropriate adaptors for connection to 15 mm, 22 mm and 28 mm pipes
- Material Water Research Council approved for hot (85°C) and cold potable water
- High grade Noryl (UL 94-V1 rated) or dezincified brass housing
- Pressure tested to 10 bar
- Solid state ac mains or reed switch dc switching versions available
- Vertical mount
- Axial design for ease of installation
- Choice of 22 mm compression fittings or 3/4" B.S.P. male and female connections

Description

The Honeywell FRN series is a range of flow switches designed to produce minimal pressure drops in low flow rate applications.

FRN switches have a free-floating shuttle which acts as the flow trigger. No internal mechanical actuation is needed. Consequently the devices are sensitive to very low flow rates and produce negligible pressure drops. This construction is maintenance-free and extremely reliable.

Noryl thermoplastic and brass housings are available. Thermoplastic types are lightweight, durable and do not corrode. Brass types are dezincified and suitable for harsh-duty applications subject to severe environments.

The FRN series comprises ac versions rated 250 V_{rms}, 3A and dc versions rated 300 Vdc, 0,5 A, 10 W. The switches are simple to install and can be fitted to 15, 22 and 28 mm pipes using suitable adaptors.

Typical applications

- Central heating systems
- Shower control
- Mains water control
- Flow sensing

Catalogue listing system

FRN	
Switch rating	1 - 250 V rms, 3 A 2 - 300 Vdc, 0,5 A, 10 W
Material (body)	1 - Noryl 2 - Brass - dezincificated
Connections	1 - 3/4" B.S.P., thread, male and female 2 - 22 mm compression fitting (Both sides)
Flow rate	1 - 1,0 litre/min. water; 0,00255 m³/s. air
Termination	1 - 0,5 m 2 core 0,5 mm² BS6500 PVC cable 2 - 1 m 2 core 0,5 mm² BS6500 PVC cable
Packing	B - Bulk pack of 30 Omit last digit to order standard pack of 1

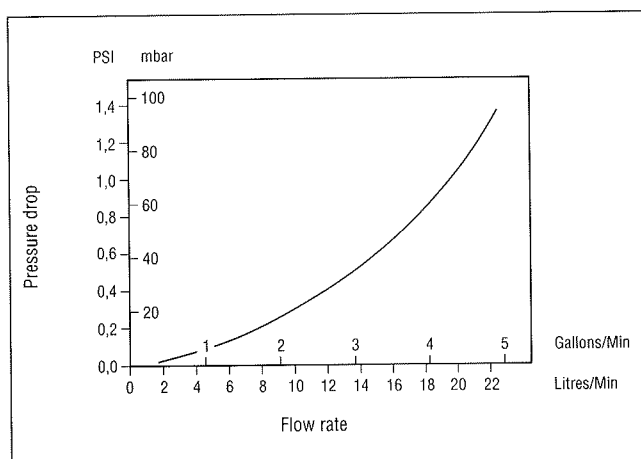
Ordering information: available catalogue listings

Honeywell listing	Description
FRN 11112	250 Vrms Noryl thermoplastic flow switch, 3/4" B.S.P. thread and 1 metre cable
FRN 21112	300 Vdc Noryl thermoplastic flow switch, 3/4" B.S.P. thread and 1 metre cable
FRN 12212	250 Vrms dezincificated brass flow switch, 22 mm compression fittings and 1 metre cable
FRN 22212	300 Vdc dezincificated brass flow switch, 22 mm compression fittings and 1 metre cable

Technical specifications

Electrical data	
Switch Rating (max)	
Models FRN1	250 Vrms; 3 A
Models FRN2	300 Vdc; 0,5 A; 10 W
Mechanical specifications	
Mounting Position	Vertical ±15°
Shock (Reed switch only)	50 g for 11 ms
Vibration (Reed switch only)	35 g up to 500 Hz
Nominal Cable Length	1 m
Temperature Range	-30°C to +100°C

Flow rate v pressure drop



Installation notes

- 1) The unit should be mounted vertically ±15°, with the flow arrow pointing upwards. When British Standard (B.S.P.) 3/4" fittings are used for connection it is recommended that the sealing washers supplied are used. Otherwise a tape or sealant applied sparingly is acceptable.
- 2) A tightening torque of 20 Nm must not be exceeded when making connections to the Noryl type flow switch. Flow must be in the direction of the arrow.
- 3) There is no electrical output from the flow switch, only switching capability. It should be connected to the device to be switched as shown in figure 1. (Mains version FRN1)

Connection diagram

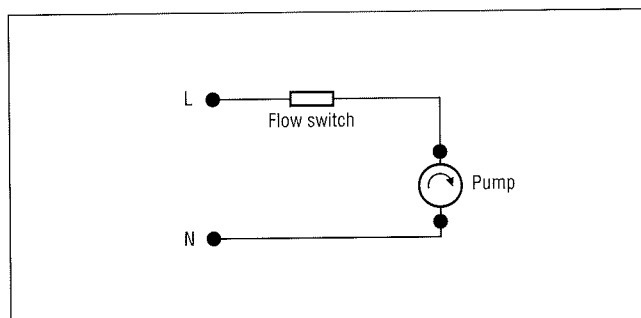
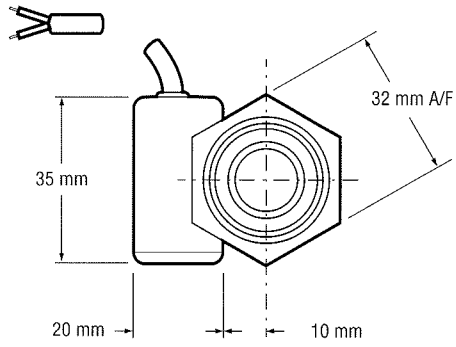


Figure 1

Dimensions in mm (for reference only)

Noryl thermoplastic body



Brass body

