

F27 TIME DELAY FLOW SWITCH

FEATURES

- DRY RUN PROTECTION FOR PRESSURE SYSTEMS
- DRY RUN PROTECTION FOR BORE PUMPS
- DIRECTLY CONTROL PUMPS TO 3.75kW 5HP
- INBUILT START-UP TIMER
- AUTOMATIC RUN-ON TIMER
- NO METAL PARTS IN CONTACT WITH LIQUIDS
- 240V, 24VAC AND DC MODELS AVAILABLE
- INDICATOR LED'S FOR ALL FUNCTIONS
- RELIABLE PROVEN CONSTRUCTION
- WEATHERPROOF ENCLOSURE
- SUITS PIPES 25mm AND ABOVE
- 18 BAR (260 PSI) PRESSURE RATING
- STAINLESS MODELS AVAILABLE

GENERAL DESCRIPTION

The F27 time delay flow switches are paddle flow switches with built-in digital timers that override the off state of the flow switch and allow a pump to start in spite of an initial lack of flow. They also have adjustable run-on timers that let the pump ignore minor flow interruptions while still being fully protected against running dry.

DRY RUN PROTECTION FOR STANDARD PRESSURE SYSTEMS

If a normal pressure system operated by a pressure switch is run dry, severe damage to the pump and its seal may result. An F27 flow switch connected between the pressure switch and the pump will protect the pump from dry run damage by shutting it down, in spite of the pressure switch trying to keep it running.

CONSTRUCTION

The F27 flow switches have no metal parts in contact with liquids. They operate through a seal-less magnetic coupling system, and are therefore ideally suited to use in aggressive or saline ground water, seawater or chlorinated water.

The F27 is made from a high tech blend of ABS, and Polypropylene thermoplastics, specifically tailored to give the highest possible performance in terms of mechanical strength, ultraviolet stability, and chemical inertness. All the F27 flow switches use our well proven magnetic suspension system, to give a frictionless spring return action to the paddle, and total isolation of the electronic module. The electronics built into the F27 are both brown-out and voltage surge protected.

INSTALLATION

The F27 pump controller should be mounted in a straight section of the pump's discharge pipe, either before or after the air cell. A 1" BSP female thread must be provided to fit the controller. The F27 is supplied with an extra long paddle to allow it to be installed in large pipes for industrial or irrigation use. The paddle is normally cut down to suit the specific pipe into which the controller is to be installed.

BASIC MODE

With both its start-up and run-on timers set to zero, the F27 mimics the action of a basic flow switch. It simply turns on and off in direct response to flow. The start-up override and run-on functions are ignored.

OVERRIDE ON START

When powered up, the F27 turns on the pump and lets it run for a settable time in spite of a lack of initial flow. It expects to see its paddle pushed into the on position by flow during the start-up time. If flow is not established by the end of the set time period the F27 shuts down the pump and prevents it from running dry. The override on start time is adjustable in 16 steps from 1 second to 3 minutes. Normally a time setting of a few seconds is all that is required to start a pump. The extra long start-up time settings can be used to start submersible bore pumps with self-draining risers and in any situation where a long delay in flow stabilisation may be encountered.

IGNORE PADDLE BOUNCE

The F27 has an adjustable run-on function so that minor fluctuations in flow don't cause the pump to instantly stop. The run-on function is adjustable in 16 steps from 1 second to 5 minutes. A setting of a few seconds run-on is all that is normally needed to ignore minor flow interruptions, such as air bubbles in the pipework. The extra long run-on feature can be used to allow the pump to pressurise high volume piping systems, to charge large air cells or to pump down low yield bores at very low flow rates.



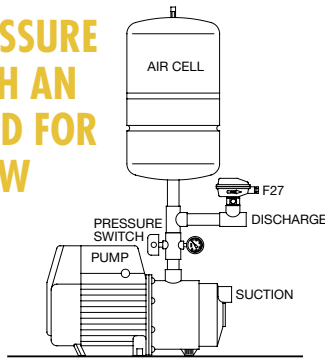
- Run-on Timer Control
- Start-up Timer Control
- Paddle LED
- Timer LED



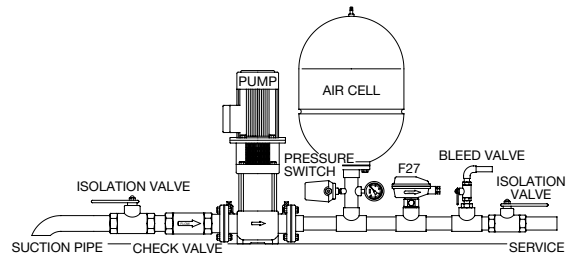
AUSTRALIAN MADE

TECHNICAL DATA

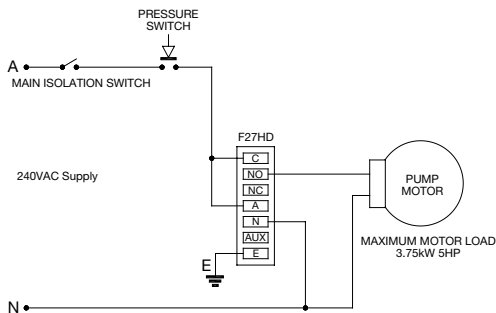
TYPICAL PRESSURE SYSTEM WITH AN F27 INCLUDED FOR LOSS OF FLOW PROTECTION



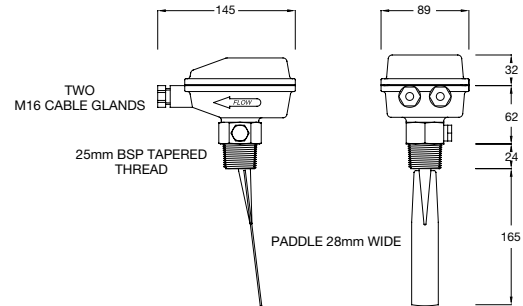
TYPICAL RURAL OR INDUSTRIAL PUMP INSTALLATION



CIRCUIT FOR A STANDARD PRESSURE SYSTEM CONTROLLED BY AN F27



DIMENSIONS



MODELS

Part Number	Maximum 240VAC Motor Load	Supply Required	Contact Type	Typical Application	Output Type	Output can drive timers or small relays
F27-240HD	3.75kW 5HP	140mA at 240VAC	S.P.D.T.	Control of pump motors to 5HP	Hybrid Solid State Drive	NO
F27-24HD	3.75kW 5HP	140mA at 24VAC	S.P.D.T.	Control of pump motors to 5HP	Hybrid Solid State Drive	NO
F27-240	0.75kW 1HP	140mA at 240VAC	S.P.D.T.	Control of pump motors to 1HP	Mechanical Relay	YES
F27-24	0.75kW 1HP	140mA at 24VAC	S.P.D.T.	Control of pump motors to 1HP	Mechanical Relay	YES
F27-DC	0.75kW 1HP (AC Motors Only)	140mA at 12 to 24VDC	S.P.D.T.	Control of pump motors to 1HP	Mechanical Relay	YES

OPTIONS

316 Stainless steel body with 100 Bar pressure rating
1" NPT Male Polypropylene process connection
Trailing Wire Flow Sensor for effluent applications

SPECIFICATIONS

Microprocessor digital control.
Fully independent control over both the start-up and run-on timers.
Start-up timer adjustable from 0 to 180 seconds in 16 steps.
Run-on timer adjustable from 0 to 300 seconds in 16 steps.
True paddle status LED, turns green in direct response to flow.
Power indication LED slowly blinks red to indicate when the F27 is powered up and in standby mode.
Timer LED turns green to indicate when the start-up timer is running.
Timer LED turns red to indicate when the run-on timer is running.
Output to drive the pump, Hybrid Drive or Relay.
One set of normally closed 16 Amp contacts are also provided to operate an external alarm or warning light, to indicate the pump has stopped.
The F27 flow switch has both brown-out and voltage surge protection built in.
Magnetic paddle adjustment for flow sensitivity.
Two M16 cable glands in the controller's housing accept 8mm flex or two M16 conduit connections, to bring power to the F27 and to run a cable to the pump.
Maximum operating pressure, static or dynamic, standard models, 18Bars (260 PSI), or 100Bars (1400PSI) for the optional stainless steel models.
Maximum liquid temperature 70°C All models.
Minimum liquid temperature -20°C All models.
Liquid Ph 1 to 14.
Weatherproof rating IP56 (Hose proof).

MADE IN AUSTRALIA BY

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