Code No. LIT-1900968
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F240EA Pneumatic Liquid Flow Switch Catalog Page

Description

The F240EA Pneumatic Liquid Flow Switch detects the increase or decrease of liquid flow in a pipe. The F240EA switch responds to liquid flow in a pipe that carries water, ethylene glycol, or other nonhazardous fluids.

The F240EA switch uses a variety of paddle sizes to respond to liquid flow rates in applications with pipe sizes greater than 1-inch trade size. The paddle has three segments. You can remove (or trim) the paddle segments for pipe sizes under 3 inches. A 6 in. paddle that can be trimmed for 4 in. and 5 in. pipe is available.

Refer to the *F240EA Pneumatic Liquid Flow Switch Product Bulletin (LIT-12012126)* for important product application information.

Application

Use F240EA Pneumatic Liquid Flow Switches in applications with fluid pressures up to 290 psi (2,000 kPa). The F240EA switch acts as an automatic operating control in air conditioning, heating and cooling water systems and in processing work.

Typical applications include:

- Flow detection switch to start the refrigeration compressor on a liquid chiller system when flow has been established.
- Signal or alarm switch to indicate when the pump on a condenser cooling water system shuts down.
- Proving the flow of water before an electric immersion heater is turned on.

F240EA Pneumatic Liquid Flow Switches are compatible with several common media:

- water
- ethylene glycol
- other nonhazardous fluids

Features

- Type 3R (NEMA)/IP43 polycarbonate enclosure allows use in indoor and outdoor applications and provides dust protection.
- Viton® diaphragm seals the switch compartment; allows use in fluid lines carrying water, ethylene glycol, or other nonhazardous fluids.
- Dependable normally-open pneumatic switch detects the presence or absence of liquid flow.
- Convenient barbed fitting for 1/4 in. O.D. plastic tubing allows simple installation.
- Maximum liquid pressure 290 psi (2,000 kPa) allows use in a wide variety of applications.

Repair Information

If the F240EA Pneumatic Liquid Flow Switch fails to operate within its specifications, replace the paddles or the unit. For a replacement F240EA switch or flow paddles, contact the nearest Johnson Controls® representative

⚠ WARNING

This product is made of a copper alloy, which contains lead. The product is therefore not to be used on drinking water.



F240EA Pneumatic Liquid Flow Switch

Selection Chart

F240EA Pneumatic Liquid Flow Switch

Product Code Number	Description
F240EA-01C	Pneumatic liquid flow switch with Type 3R (NEMA) enclosure, stainless steel 3-piece paddle (3 in., 2 in., and 1 in. segments)

Replacement Paddle Parts

Product Code Number	Description
KIT21A-600	Stainless steel 3-piece paddle (3 in., 2 in., and 1 in. segments)
KIT21A-601	Stainless steel 6 in. paddle
KIT21A-602	Stainless steel 3-piece paddle (3 in., 2 in., and 1 in. segments) and Stainless steel 6 in. paddle

Technical Specifications

F240EA Pneumatic Liquid Flow Switch (Part 1 of 2)

Switch	Pneumatic
Ambient Operating Conditions	32 to 140°F (0 to 60°C)
Maximum Fluid Temperature[1]	250°F (121°C)
Maximum Fluid Pressure	290 psi (2,000 kPa)
Enclosure	Type 3R (NEMA)/IP43

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products. © 2018 Johnson Controls.

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F240EA Pneumatic Liquid Flow Switch (Part 2 of 2)

Paddle	Stainless steel
Pipe Connector	1 in. 11-1/2 NPT Threads
Pneumatic Switch Action	Closes on increasing flow, opens on decreasing flow
Tubing Connector	Barb fitting for 1/4 in. O.D. plastic tubing
Shipping Weight	1.7 lb (0.8 kg)

1. Ensure that the low liquid temperature combined with the low ambient temperature does not lead to freezing the liquid inside the body (or bellows, where appropriate). Please observe the liquid freezing point.

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