



PREVENTION MANUAL

FIRE EXTINGUISHING SYSTEMS

405.10 FLOW SWITCH / PRESSURE SWITCH

EFFECTIVE: JANUARY 2009

SCOPE

Installation of flow switches rather than pressure switches on fire sprinkler systems.

PURPOSE

The purpose of this policy is to outline when flow switches shall be used for water flow alarms on fire-sprinkler systems in lieu of pressure switches.

REQUIREMENTS

Pressure switches are not permitted for indicating water flow on wet pipe fire sprinkler systems. Alarm-check valves with mechanical water motor gongs or paddle-type flow switches with electric bells shall be used for local alarms. Central station monitoring shall be accomplished by flow switch. Use of paddle-type flow switches for dry pipe, pre-action, and deluge systems is specifically prohibited by National Fire Protection Association (NFPA) 13. When pressure switches are used on these systems, alarm-trip valves ahead of these switches shall be locked open.

Pressure switches on wet pipe systems are not desirable for the following reasons:

1. Local experience has shown such switches are unreliable due to corrosion, presence of sediment, and mechanical failure.

A pressure switch may become inoperable by neglecting to open a small one-quarter turn valve in the alarm-valve assembly. This latter risk has been accepted for dry, deluge, and pre-action systems as the paddles on water flow switches are not designed to accept the water hammer effect of a quick-opening valve and a pressure switch is the only available alternative.