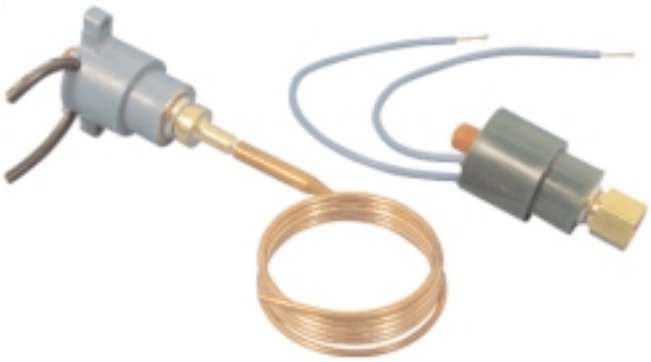
Product Bulletin

KLIXON

29 PS
Manual Reset Pressure Switch



Key Features

- Manual reset
- Snap-acting, trip-free mechanism
- Single-pole single-throw switch, normally closed
- Factory calibrated pressure setpoints from 200 to 750 psig (14 to 52 bar)
- Tamper Resistant

The 29PS series has been designed to meet the manual reset application needs of the commercial and industrial sectors. The 29PS is a derivative of the Texas Instruments 20PS pressure switch, long recognized as an industry standard control device. Attributes of this series include the manual reset feature, a broad assortment of port fittings and electrical connections, and the option of a panel mount or line mount design.

Applications

The Model 29PS pressure switch is primarily applied as an upper limit control on unitary and central air conditioning systems, heat pumps, roof top units, and refrigeration systems.

This hermetic pressure switch employs a trip-free manual reset function, providing high reliability in an environmentally sealed, low-cost package.

Operation

The 29PS utilizes a snap-acting stainless steel Klixon® disc that reverses its curvature when pressurized above a customer-specified actuation pressure. When the disc snaps, it opens a set of electrical contacts by means of a transfer pin. Resetting of the switch must be accomplished manually by pressing the integrated reset button.

The unique latching mechanism in the 29PS design assures safe electrical cutout even if the reset button is held firmly depressed. This “trip-free” design prevents the consumer from restarting the equipment until the line pressure has dropped below the release setpoint. Without this “trip-free” mechanism, the equipment could be restarted by simply holding the reset button in the depressed position, while an overpressure condition remains.

Product Features

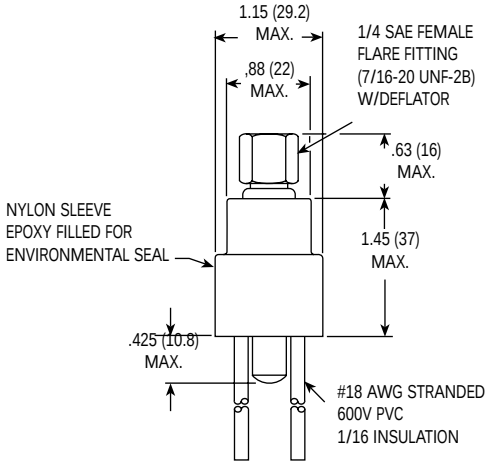
The welded, hermetic sensor of the 29PS provides increased reliability and maintenance-free operation for the lifetime of the switch. The actuation and release pressures of the disc are factory calibrated, simplifying installation and helping make the 29PS tamper resistant.

The epoxy potting and rubber boot provide an environmental seal for the switch mechanism, protecting it from dust, oil and moisture. The 29PS is built into a vibration resistant package.

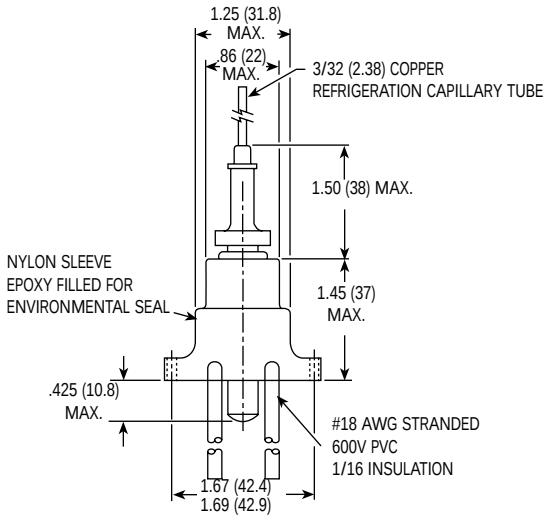
Its small, compact size coupled with a wide variety of threaded and brazed pressure connections allows the 29PS to be mounted wherever is most convenient for the application, inside a control box or out in the elements. Panel-mounted devices are typically provided with capillary tubes to allow for convenient access to the reset button. A variety of line-mount fittings are available to simplify installation. Many different lead termination options are available, for maximum flexibility.

Typical Dimensional Drawings

Typical Line Mount Construction



Typical Panel Mount Construction



Design Specifications

Operating Pressure:	200 to 750 psig (14 to 52 bar)
Pressure Differential & Tolerance:	For actuation pressures of 200-350 psig (14-24 bar), tolerance is ±10 psig (±0.7 bar), 60-75% is standard differential; 351-500 psig (24-34.5 bar), ±10 psig (±0.7 bar), 65-80% differential; Differential = (release setpoint/actuation setpoint) X 100. Release Tolerance setpoint on all devices (±0.2 bar), ±30 psig
Proof Pressure:	600 psig (41 bar) for actuation pressure up to 400 psig (28 bar); 800 psig (55 bar) for higher actuation pressures
Burst Pressure:	5000 psig (345 bar)
Standard Port Fittings:	1/4” SAE female flare with deflator; 1/4” male NPT; 1/8” male NPT; 1/4” male SAE; 24” and 36” capillary tubes, straight or bulbed ends
Electrical Configuration:	Single-pole single-throw normally closed at atmospheric pressure
Electrical Ratings:	Pilot-duty, 375 VA at 120 VAC; 5.8 RLA, 34.8 LRA at 120 VAC; 2.9 RLA, 15.0 LRA at 240 VAC
Dielectric Strength:	750 Vrms across open contacts; 1554 Vrms to ground
Life at Rated Current:	10,000 cycles
Leads:	#18 AWG stranded 600V PVC, 1/16” insulation with 1/2” strip standard; 6” and 12” lengths standard, other lengths available and special terminals available upon request
Ambient Temperature:	-20^{o}F to 150^{o}F (-29^{o}C to 66^{o}C)
Fluid Temperature:	-65^{o}F to 275^{o}F (-54^{o}C to 135^{o}C)
Agency Approvals:	UL recognized File No. SA995; U.S. Category SDFY2; Canada Category SDFY8; ENEC Certified, PED CE0035 Module B/D

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