

29PS SERIES | MANUAL RESET

PRESSURE SWITCHES

Introduction

The 29PS Series is a manual reset, single pole, single throw, snap acting pressure switch. The 29PS is based on Sensata Technologies' 20PS pressure switch, long recognized as an industry standard control device. Features of this switch include manual reset, a broad assortment of port fittings and electrical connections, and the option of a panel mount or line mount design.

Sensata Technologies has been a leading global supplier of pressure sensors and switches for over 50 years.



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

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 design 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 making 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 compact size coupled with a wide variety of threaded and brazed pressure connections allows the 29PS to be mounted wherever is most appropriate 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-mounted fittings are available to simplify installation. Many different lead termination options are available for maximum flexibility.



DESIGN SPECIFICATIONS

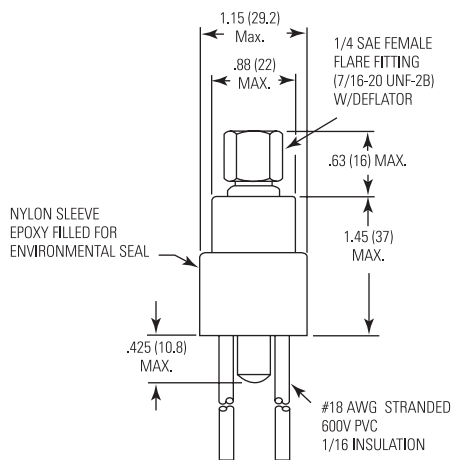
Operating Pressure	200 to 750 psig (14 to 52 bar)	
Proof Differential and Tolerance	For actuation pressures of 200-350 psig (14 - 24 bar), tolerance is ± 10 psig (± 0.7 bar), 60-70% is standard differential; 351-500 psig (24 - 34.5 bar), ± 10 psig (± 0.7 bar), 65-75% differential; Differential = (release 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 NPTF 1/8" male NPTF 1/4" SAE male flare 24" and 36" capillary tubes, straight or flared ends	
Electrical Configuration	Single-pole single-throw normally closed at atmospheric pressure with manual reset	
Electrical Ratings	Pilot-duty, 375 VA at 120 VAC 2.9 FLA, 15.0 LRA at 240 VAC	5.8 FLA, 34.8 LRA at 120 VAC 240 VAC 6A IND
Dielectric Strength	750 Vrms across open contacts; 1554 Vrms to ground	
Life at Rated Current	10,000 cycles	
Leads	AWG stranded UL style 1056 with 1/2" strip standard 6" and 12" lengths standard, other lengths available and special terminals available upon request	
Ambient Temperature	-20°F to 150°F (-29°C to 66°C)	
Fluid Temperature	-65°F to 275°F (-54°C to 135°C)	



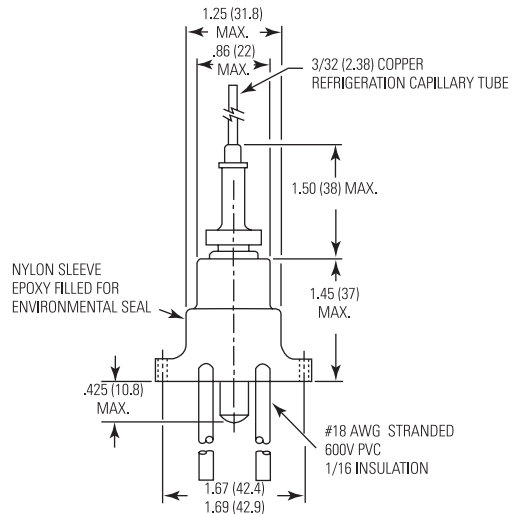
TYPICAL DIMENSIONAL DRAWINGS

All dimensions in millimeters [Inches].

Typical Line Mount Construction



Typical Panel Mount Construction





AGENCY APPROVALS AND CERTIFICATIONS



UL	File No. SA995; U.S. Category SDFY2; Canada Category SDFY8
ENEC	PED CE0035 Module B/D



WARNINGS



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

Failure to follow these instructions will result in death or serious injury

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at www.sensata.com SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

CONTACT US



Distributeur Officiel
59 Rue Emile Deschanel,
92400 Courbevoie, France
Industrie@jbcontrols.com
Tel: + 33 (0)1 46 91 93 30
www.jbc-aero.com
www.jbcontrols.com