

PS80-2X SERIES | CO₂ SYSTEM PRESSURE SWITCHES

FOR USE IN R744/CO₂ OPERATED SYSTEMS

Introduction

The PS80-2X is an automatic reset pressure switch designed to meet the unique challenges of R744/CO₂ based air conditioning and refrigeration equipment. These green systems require robust switches capable of withstanding the increased pressures and temperatures generated by these units. Sensata has redesigned the flagship PS80 to meet the special requirements of these transcritical R744 systems

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



Features and Benefits

- Hermetically sealed
- Environmentally sealed leads
- Reliable over a broad pressure & temperature range
- Factory calibrated settings
- Single pole, single throw
- Normally open/normally closed
- Proven reliability

Applications

- CO₂ Air Conditioning
- CO₂ Refrigeration
- CO₂ Heat Pump
- High Pressure Safety Cut Out
- Low Pressure Safety Cut Out

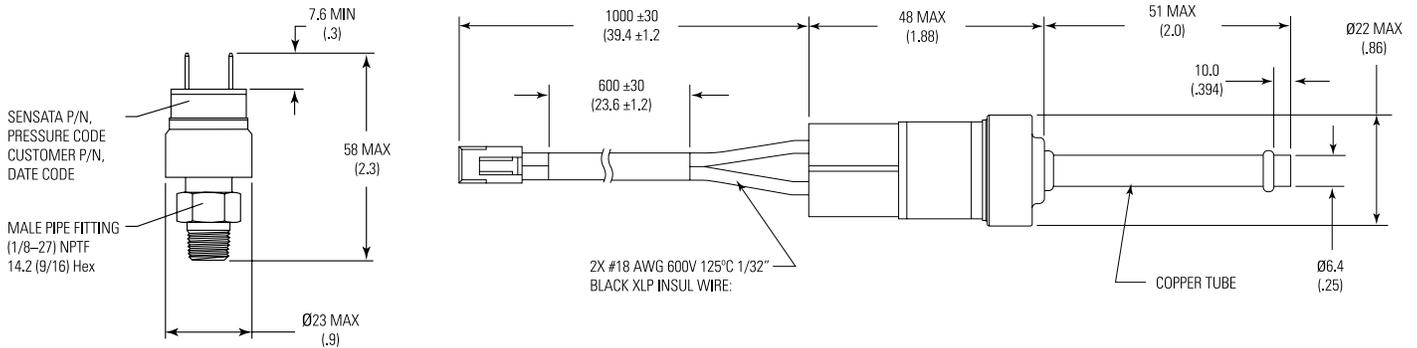
TECHNICAL SPECIFICATIONS

Maximum Operating Pressure	2300 psig 160 bar 16.0 MPa
Maximum Calibration Pressure	2275 psig 157 bar 15.7 MPa
Proof Pressure	3100 psig 215 bar 21.5 MPa
Burst Pressure	6100 psig 420 bar 42.0 MPa
Electrical Ratings	120/240 Vac - 6.0 FLA 36 LRA 120/277 Vac - 375 VA Pilot Duty 24Vac - 125 VA Pilot Duty Gold contacts available
Life at Rated Current	100,000 cycles

Dielectric Strength	750 Vrms Open Contacts 1500 Vac for 1 minute
Lead Wire Material / Electrical Connection	#18 AWG 600 V 125°C 1/32" XLP UL 3173 #18 AWG 600 V 125°C 1/16" XLP UL 3290 Quick Connects
Ambient Temperature (UL Rating)	-20°F to 176°F / (-29°C to 80°C)
Fluid Temperature (UL Rating)	-65°F to 275°F (-54°C to 135°C)

DIMENSIONS

All dimensions are in millimeters [Inches].



PS80-20 Series Part Numbering System

Part Numbering Scheme	Switch Logic/Termination Style	Contact Type
PS80-21-XXXX	Normally closed switch, Wire leads	Silver contacts
PS80-22-XXXX	Normally open switch, Wire leads	Silver contacts
PS80-23-XXXX	Normally closed switch, Quick connect	Silver contacts
PS80-24-XXXX	Normally open switch, Quick connect	Silver contacts
PS80-25-XXXX	Normally closed switch, Wire leads	Gold contacts
PS80-26-XXXX	Normally open switch, Wire leads	Gold contacts
PS80-27-XXXX	Normally closed switch, Quick connect	Gold contacts
PS80-28-XXXX	Normally open switch, Quick connect	Gold contacts

AGENCY APPROVALS & CERTIFICATIONS



UL	File SA995 Guide SDFY2
UL (Canada)	File SA995 Guide SDFY8
PED EN 12263	Module B&D
ENEC, EN60730	EN60730-1, EN60730-2-6

RoHS Compliant



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

Americas

+1 (800) 350 2727
sensors@sensata.com
switches@sensata.com

Europe, Middle East & Africa

+359 (2) 809 1826
pressure-info.eu@sensata.com

Asia Pacific

sales.isasia@list.sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7117
Korea +82 (31) 601 2004
India +91 (80) 67920890
Rest of Asia +886 (2) 27602006
ext 2808