

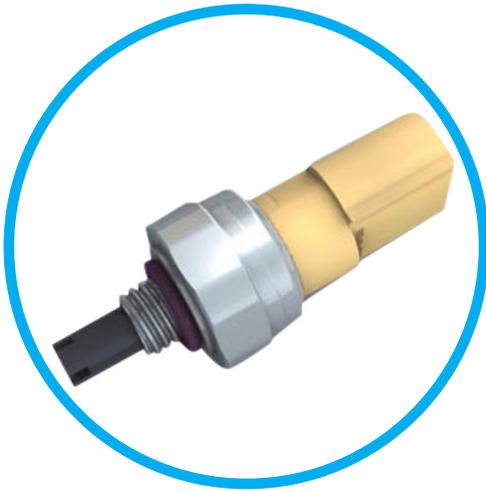
# | 112CP SERIES

Combined Pressure & Temperature Sensor

## Introduction

The 112CP series combined pressure and temperature sensors delivers the benefit of both pressure and in-stream temperature sensing in a single, robust integrated package.

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



## Features

- Pressure and temperature measurement in one package
- Fast, in-stream temperature measurement
- Precise superheat measurement

## Applications

- Air conditioning & refrigeration
- Alternative energy management
- Engine controls & monitors
- Compressors & pumps

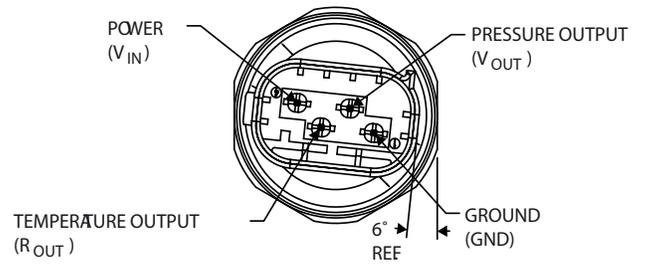
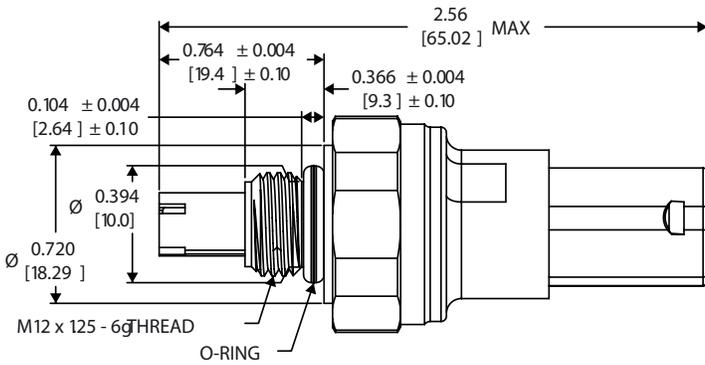
## SPECIFICATIONS

<b>Pressure Ranges</b>	0 to 150 psi through 0 to 650 psi
<b>Pressure Accuracy</b>	±0.8% F.S. (linearity, hysteresis, repeatability and calibration)
<b>Total Error Band</b>	±1.7% F.S. (0°C to +85°C)
<b>Proof Pressure</b>	≥ 2X
<b>Burst Pressure</b>	≥ 3X
<b>Temperature Accuracy</b>	±1% (delta R/R)
<b>Resistance @ 25°C</b>	10K or 100 ohms
<b>Operating Temperature</b>	-40°C to 135°C
<b>Supply Voltage (VCC)</b>	4.5 to 5.5 VDC
<b>Output Voltage</b>	0.5 to 4.5 VDC
<b>Supply Current</b>	0.5 to 4.5 VDC
<b>Output Current</b>	8.0 mA
<b>Output Load Range</b>	10K to 50K ohms
<b>Overvoltage Protection</b>	16 VDC
<b>Reverse Voltage Protection</b>	-14 VDC
<b>Output Response Time</b>	10mS

<b>Cycle Life</b>	≥ 1M cycles
<b>Vibration</b>	5g
<b>Drop (any Axis)</b>	1m
<b>Electrical Connection</b>	4 pin AMP Micro-Quadlok System™ connector
<b>Weight</b>	1.5 oz max

\*Refer to chart for seal compatibility  
 NOTE: Not suitable for use in conductive media  
 Micro-Quadlok System is a trademark of Tyco Electronics Corporation

## DIMENSIONS



## STANDARD OFFERINGS

**Pressure Connections**

M12 x 1.25 - 6g plated steel  
 1/4" NPT male brass

**Pressure References**

Absolute  
 Sealed gage

**Pressure Ranges**

9 to 149 psia  
 26.8 to 510 psia

**Elastomer Seals**

See Seal Compatibility Guide



## SEAL COMPATIBILITY GUIDE

Seal Material	Media Compatibility	Max Seal Temperature Range
Nitrile (BUNA-N, NBR)	Petroleum oils, lubricants, detergent solutions, helium	-20°C to 100°C
HNBR (Hydrogenated Nitrile)	Petroleum oils, lubricants, detergent solutions	-20°C to +135°C
Ethylene Propylene	Steam, soaps, polar solvents, brake fluids, acetone, Skydrol™	-40°C to +135°C
Fluorosilicone	Chlorinated solvents, oils, fuels, air	-40°C to +135°C
Neoprene	Refrigerants (freons/ammonia)	-40°C to +120°C
Fluorocarbon (Viton™)	Fertilizers, freons, butanes, oils, trichlorethylene	-35°C to +135°C



## ORDERING OPTIONS

Part Number	Pressure	Pressure Connection	Thermistor	Internal Seal	Thread O-Ring
112CP3-4	9 to 149 psia	M12 x 1.25 - 6g plated steel	10k Ohm @ 25°C	Neoprene	Neoprene
112CP3-6	9 to 149 psia	1/4" NPT male brass	10k Ohm @ 25°C	Nitrile	—
112CP3-8	26.8 to 510 psia	M12 x 1.25 - 6g plated steel	10k Ohm @ 25°C	Neoprene	Neoprene
112CP3-9	26.8 to 510 psia	1/4" NPT male brass	10k Ohm @ 25°C	Nitrile	—



## AGENCY & CERTIFICATIONS

RoHS, REACH available

Datasheets provided by Sensata Technologies, Inc., its subsidiaries and/or affiliates ("Sensata") are solely intended to assist third parties ("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, valuation, and judgment in designing Buyer's systems and products. Sensata datasheets 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 datasheet. Sensata may make corrections, enhancements, improvements, and other changes to its datasheets or components without notice.

Buyers are authorized to use Sensata datasheets with the Sensata component(s) identified in each particular datasheet. 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 DATASHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATASHEETS OR USE OF THE DATASHEETS, 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 DATASHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at [www.sensata.com](http://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](mailto:sensors@sensata.com)

[switches@sensata.com](mailto:switches@sensata.com)

#### Europe, Middle East & Africa

+359 (2) 809 1826

[pressure-info.eu@sensata.com](mailto:pressure-info.eu@sensata.com)

#### Asia Pacific

[sales.isasia@list.sensata.com](mailto: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