

| 116CP / 126CP SERIES

PRESSURE SENSOR

Introduction

Utilizing Sensata's industry leading ceramic capacitive technology, the 116CP / 126CP is housed in a small and innovative plastic package ideal for boilers, pumps, and other light industrial applications.

The 116CP / 126CP is offered in a wide range of configurations including various pressure ports, electrical outputs and pressure ranges from 0-4 to 0-16 bar.



Features

- Multiple port & Connector options
- High accuracy: $\pm 1.5\%V_s$
- Small & compact size
- 100% automated calibration
- REACH/RoHS/CE compliant
- Drinking water safe options available (126CP only)

Applications

- Boilers
- Heat pumps
- Residential booster pumps
- Lawn & Pool pumps
- Circulator pumps
- Pump controllers
- Food & Beverage equipment

SPECIFICATIONS

Electrical

Supply Voltage	5VDC (ratiometric) or 8-30VDC (voltage regulated)
Output Voltage	Commonly 0.5 to 3.5V or 0.5 to 4.5V (Others available under ordering options)
Supply Current	8.0mA
Output Current	5.0mA (max)
Output Load	10kOhm pull down
Output Response Time	<10ms
Overvoltage Protection	$\pm 40V$
Reverse Voltage	-14V
Short Circuit Protection	Up to 40V
EMC	EMC Conforms to EN 61326-2-3 for sensors
ESD	Conforms to IEC 61000-4-2 Level 3, 4kV contact / 8kV air

Pressure Ranges	0-4 to 0-16bar (0-60 to 0-232 PSI)
------------------------	------------------------------------

Physical

Proof Pressure	2xFS ⁽¹⁾
Burst Pressure	3xFS ⁽¹⁾
Random Vibration	DIN IEC 60068-2-27: 5G (2-2kHz)
Mechanical Shock	DIN IEC 60068-2-6: 40G1/2 HL SINE
Drop (any Axis)	1m
Medium	Water*

⁽¹⁾ FS (Pressure) = Pmax – Pmin

*Other Media available upon consultation with Sensata

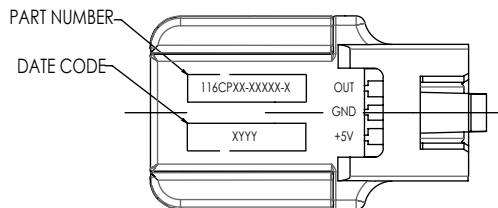
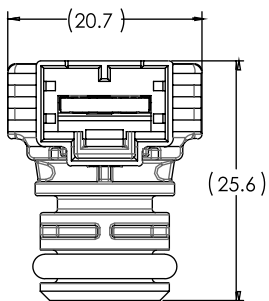
Performance

Electrical Connection	RAST 2.5 (see ordering options)
Pressure Connection	G , G¼, quick connect (see configurations below and ordering options)
Pressure Reference	Sealed Gauge (1bar)
Total Error Band Accuracy	+/-1.5%V _s (typical) ⁽²⁾
Operating Temperature	2° to 90°C
Storage Temperature	-40° to 115°C

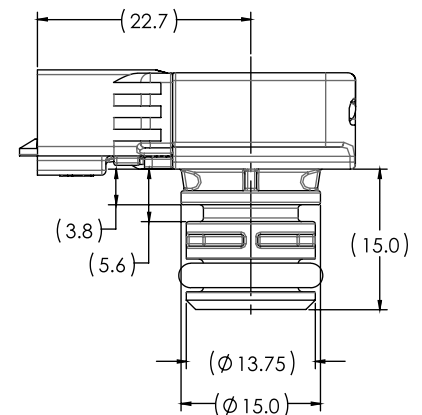
⁽²⁾ Vs = Supply Voltage

DIMENSIONS

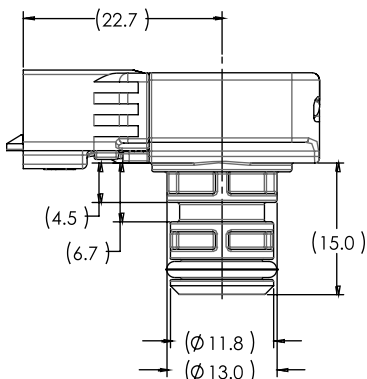
Dimensions in mm



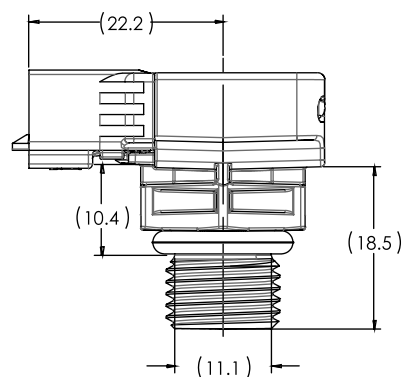
Quick Connect Type 1



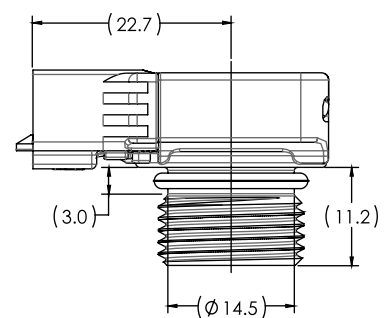
Quick Connect Type 2



G 1/4 Thread



G 3/8 Thread





ORDERING OPTIONS

Example : 116CP21-M04S2-50

5VDC ratiometric output, ceramic capacitive pressure sensing, quick connect type 1, RAST 2.5 3 position connector, 4 bar sealed gauge pressure, 0.5-3.5 voltage output, standard requirements

116 - **CP** - **2** - **1** - **M04** - **S** - **2** - **50**

Family

- 116:** (5VDC Ratiometric)
- 126:** (5VDC Ratiometric, Drinking Water Safe)

Family

CP: Ceramic Capacitive Pressure (APT)

Port

- 2:** (Quick Connect Type 1)⁽³⁾
- 3:** (G1/4 Thread)
- 4:** (G3/8 Thread)
- 5:** (Quick Connect Type 2)⁽³⁾
- 6:** (Quick Connect Type 3)

Connector

- 1:** (RAST 2.5 3 Pin)
- 2:** (RAST 2.5 4 Pin)
- 3:** (RAST 2.5 3 Pin Alternate)

Pressure

- Bar:** PSI
- M04:** 060
- M06:** 090
- M10:** 150
- M16:** 230
- MX:** YYY

Pressure Reference

- S:** (Sealed Gauge)

Span

- 1:** (1.125-3.6V)
- 2:** (0.5-3.5V)
- 3:** (0.5-4.5V)
- 4:** (0.5-2.75V)
- 5:** (0.5-2.5V)
- 6:** (0.5-4.25V)

Special Requirement

- 50:** (Standard)
- 51+:** (Application Dependent)

⁽³⁾ Only available in 116CP



STANDARD CONFIGURATIONS

Item Number	Input Voltage	Port	Connector	Pressure	Span
116CP21-M04S2-50	5VDC Ratiometric	Quick Connect Type 1	RAST 2.5 3 Pin	4 Bar Gauge	0.5-3.5V
116CP21-M10S3-50	5VDC Ratiometric	Quick Connect Type 1	RAST 2.5 3 Pin	10 Bar Gauge	0.5-4.5V
116CP21-M16S3-50	5VDC Ratiometric	Quick Connect Type 1	RAST 2.5 3 Pin	16 Bar Gauge	0.5-4.5V
116CP31-M04S2-50	5VDC Ratiometric	G1/4 Thread	RAST 2.5 3 Pin	4 Bar Gauge	0.5-3.5V
116CP31-M10S3-50	5VDC Ratiometric	G1/4 Thread	RAST 2.5 3 Pin	10 Bar Gauge	0.5-4.5V
116CP31-M16S3-50	5VDC Ratiometric	G1/4 Thread	RAST 2.5 3 Pin	16 Bar Gauge	0.5-4.5V



AGENCY APPROVALS & CERTIFICATIONS



REACH
NSF-61, WRAS, KTW, and ACS

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