

| 116CP SERIES

PRESSURE SENSOR

Introduction

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

The 116CP 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 and 127CP 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)
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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) = P_{max} – P_{min}

*Other Media available upon consultation with Sensata

Performance

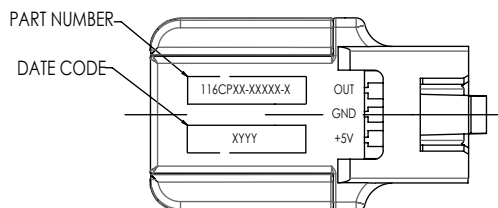
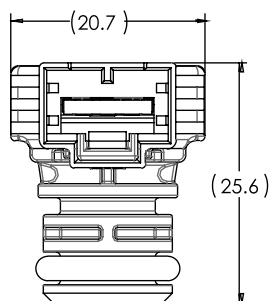
Electrical Connection	RAST 2.5 (see ordering options)
Pressure Connection	G $\frac{3}{8}$, G $\frac{1}{4}$, quick connect (see configurations below and ordering options)
Pressure Reference	Sealed Gauge (1bar)
Total Error Band Accuracy	+/-1.5%V _s (typical) ⁽²⁾
Operating Temperature	2° to 90°C
Storage Temperature	-40° to 115°C

⁽²⁾ V_s = Supply Voltage

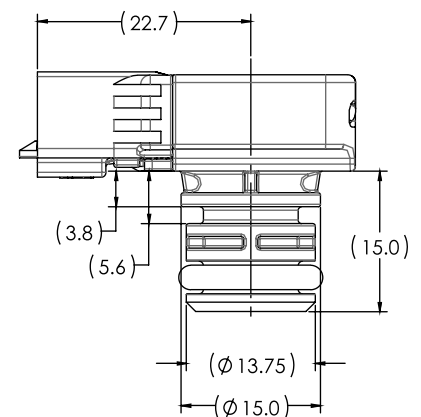


DIMENSIONS

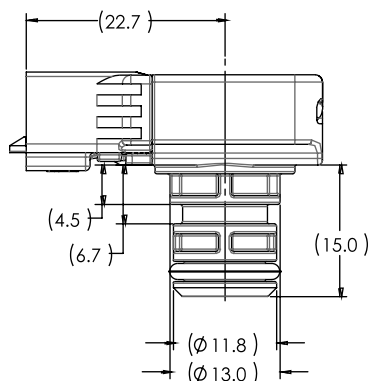
Dimensions in mm



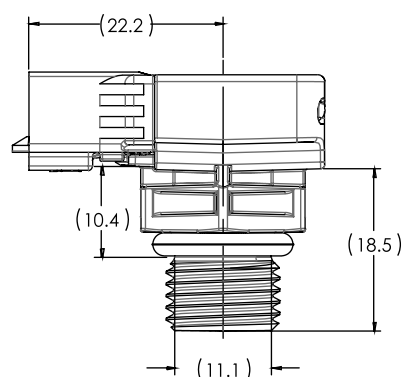
Quick Connect Type 1



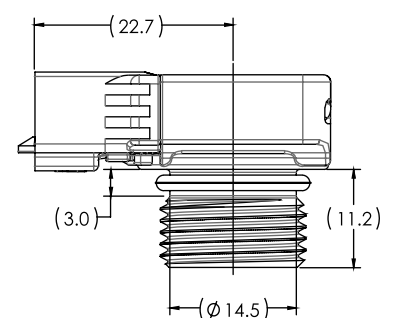
Quick Connect Type 2



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) 117 (8-30VDC Voltage Regulated) 126 (5VDC Ratiometric, Drinking Water Safe) 127 (8-30VDC Voltage Regulated, Drinking Water Safe)														
Family															
	CP Ceramic Capacitive Pressure (APT)														
Port															
	2 (Quick Connect Type 1) 3 (G1/4 Thread) 4 (G3/8 Thread) 5 (Quick Connect Type 2)														
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)														



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

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