



Level



Pressure



Flow



Temperature



Liquid Analysis



Registration



Systems Components



Services



Solutions

Pressure transmitters for absolute and gauge pressure measurement

Cerabar T PMC131

E-direct

www.e-direct.us



PMC131/plug/pressure gauge connection

PMC131 cable connection

- Rugged ceramic sensor withstands corrosion and abrasion
- Can withstand up to 40 times overload at peak pressures
- Reliable with long-term stability
- Suitable for vacuum applications
- Dry (oil-free) measurement cell

Application

The Cerabar T PMC131 allows measurement of absolute and gauge pressure in liquids, vapors and gases. Safe operation is guaranteed by special long-term stability and overload resilience of the capacitance ceramic sensors. This instrument is a pressure transducer equipped with a highly accurate capacitance ceramic sensor. The ceramic sensor is very resistant to corrosion and abrasion. It is especially suitable for measurement of absolute and gauge pressure ranges between 0 to 5 psi and 500 psi.

Measurement principle

The measurement pressure causes a slight deflection of the sensor diaphragm. The change in proportion to pressure is measured and is available as a 4 to 20 mA output signal. The pressure transducer comes with a plug connection (ISO 4400) for wiring to an external loop-power supply (e.g. an RNS221 power supply from E-direct).

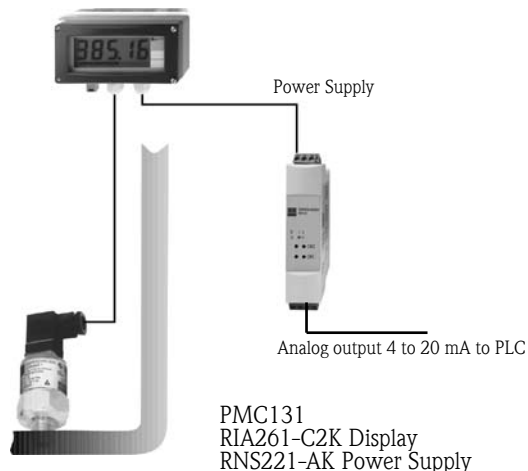
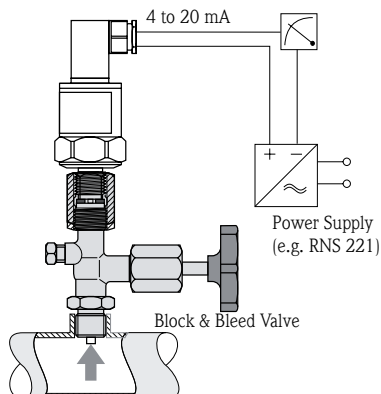
Application example

Cerabar T pressure transducer and external power supply, such as RNS221 and remote display unit from E-direct.

Product: liquids, vapors and gases	Measuring cell: Dry (oil-free) ceramic cell
Overload stability: up to factor 40	Measuring range (limits): -0.29 to 580 psi
Product temperature: -4 to +212°F	Accuracy: < 0.5 %

Measurement system

Cerabar T pressure transducer with 4 to 20 mA output and external power supply, such as RNS221 from E-direct.



Cerabar T PMC131

Technical data

General

- Output signal 4 to 20 mA/two-wire
- Max. load R_a $R_a [\Omega] \leq (U_b - 11 \text{ V})/0.02 \text{ A}$

Accuracy

- Measurement accuracy Reference conditions according to DIN IEC 770; < 0.6% FS¹⁾ (linearity including hysteresis and repeatability)
- Effect of ambient temperature in relation to nominal value
Zero point: typ. < 0.15%/10 K
Range: typ. < 0.1%/10 K
- Long-term stability < 0.15% FS¹⁾ per year
- Response time T_{90} 40 ms

Operating conditions

- Material temperature -4 to +212°F
- Ambient temperature -4 to +185°F
- Storage temperature -58 to +212°F
- Climate class 4K4H according to DIN EN 60721-3
- Protection NEMA 4 w/plug; NEMA 6 w/cable
- Vibration stability 4M5 according to DIN EN 60721-3
- Electromagnetic compatibility Interference emission according to EN 50081-1, Interference emission according to EN 50082-2, 10 V/m according to EN 61000-4-3

Mechanical construction

- Process connection 1/2" MNPT with 1/4" FNPT
- Materials in contact with medium Process connection and housing: 304 SS
Seal (internal location): FPM (Viton)
- Process diaphragm Al₂O₃ (aluminum oxide ceramic)
- Electrical connection 4-pole plug connection according to ISO 4400 with 1/2" NPT conduit entry or 15 ft. fixed cable, 3 conductor with pressure compensation line

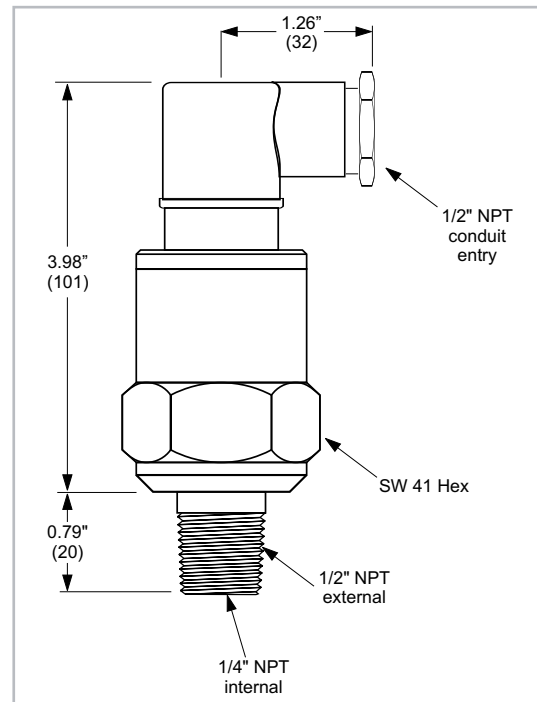
Power supply U_b

- Supply voltage 11 to 30 V DC at 5% wave

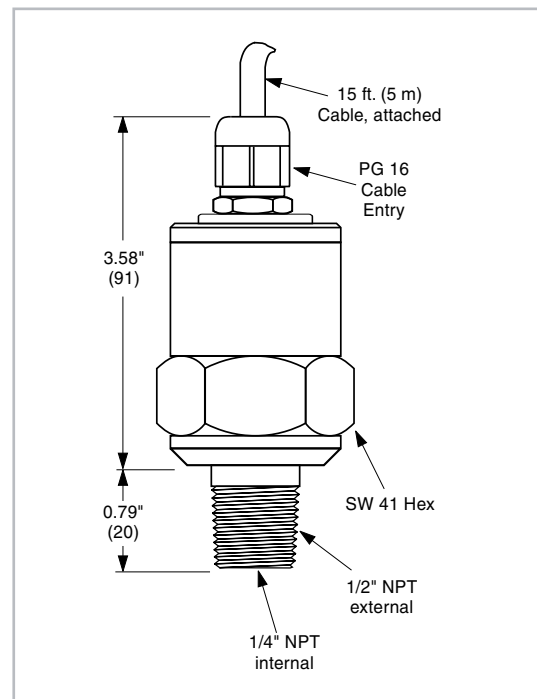
¹⁾ FS = Full Scale = Measuring range

Dimensions in inches (mm) and materials

PMC131/plug/pressure gauge connection



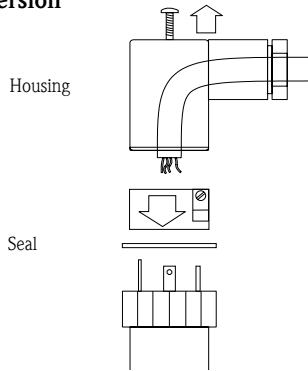
PMC131 cable connection



Cerabar T PMC131

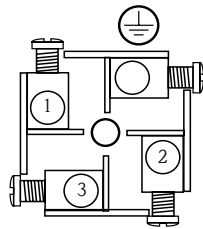
Electrical connection

Plug version

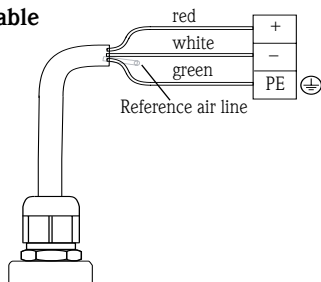


Electrical connector

Analog output 4 to 20 mA
2-wire
① Power supply and output (+)
② Power supply and output (-)
③ not assigned
⊕ Ground (PE)

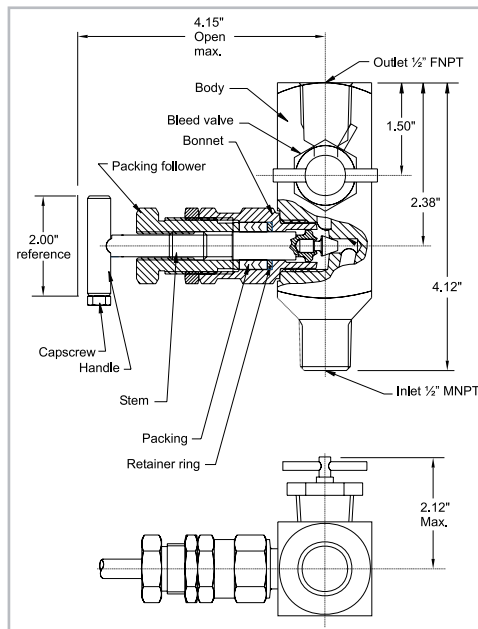


Version with fixed cable



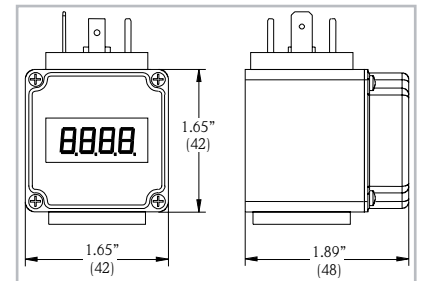
Accessories - Block and bleed valve

- Block and bleed valve Part No. 71037610 (316SS, PTFE)
Part No. 71037611 (316SS, grafoil)
max. 450 °F / 4800 psi
nom. 200 °F / 6000 psi
Teflon® packing
½" MNPT and ½" FNPT

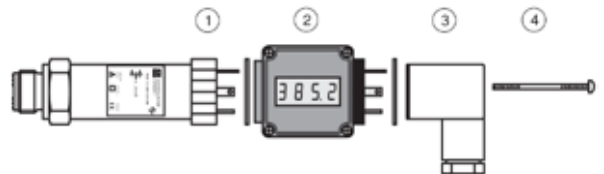


Accessories - MINIDIS display for plug version

- Display 4 digits, red LED, loop powered to use in 4 to 20 mA loops, angular connector DIN 43650 0.3" (7.62 mm) display height, turnable in angle of 90°
- Display range -1999 to +9999, programmable by two buttons
- Protection class NEMA 4
- Material plastic PA6 GF30, face plate PMMA
- Voltage drop ≤ 5 V (equivalent burden of max. 250 Ω)
- Temperature range 32 to 140°F (0 to 60°C) Ambient
- Programming By means of two keys, menu-guided; display scale, decimal point, damping, error message
- Dimensions in inches (mm)



Installation of MINIDIS



Mechanical connection (display rotated 90° compared to delivery status). Image shows PMP131; MINIDIS may be installed on PMP131 or PMC131.

- Insert the MINIDIS display ② between the plug ③ and plug base ① of the sensor.
- Replace the screw ④ with the extended screw included in the package.
- Place seals (included) between sensor/MINIDIS display and MINIDIS display/plug
- The display can be rotated 90°
- A sticker which is included in the package and contains information on the engineering units can be affixed beneath the LED display.

Cerabar T PMC131

Measuring ranges

for Cerabar T PMC131 plug version

Many other models, versions and options are available. Please contact Endress+Hauser for more information.

	Measuring range, Unit	Overload
Code	Gauge pressure (psi)	
Q4F	0 to 5 psig	100 psi
Q4H	0 to 15 psig	150 psi
Q4N	0 to 50 psig	300 psi
Q4R	0 to 150 psig	600 psi
Q4T	0 to 500 psig	850 psi

please add to 'Order No.'

for Cerabar T PMC131 cable version

	Measuring range, Unit	Overload
Code	Gauge pressure (psi)	
Q4H	0 to 15 psig	150 psi
Q4R	0 to 150 psig	6000 psi

please add to 'Order No.'

* please add code for measuring range

Product	Version	Order no.	Price/piece in \$			we hereby order:	total price:
			1 to 5	6 to 15	16 to 35		
PMC131	Plug version and gauge pressure connection	PMC131-A22F1 ____*	\$209.00	\$189.00	\$170.00	pcs	\$
	Cable version and pressure gauge connection	PMC131-A32F1 ____*	\$247.00	\$223.00	\$201.00	pcs	\$
Accessories	Block & bleed valve, 1/2" NPT, 316SS, PTFE	71037610	\$140.00			pcs	\$
	Block & bleed valve, 1/2" NPT, 316SS, grafoil	71037611	\$165.00			pcs	\$
	MINIDIS, display for Cerabar T with analog output	52022914	\$204.00	\$184.00	\$166.00	pcs	\$

Net excluding cost of shipping and taxes.

Acceptance per our Standard Terms and Conditions (find at www.e-direct.us).

Total price:

FOB Greenwood, IN; shipped pre-paid; shipping charges and applicable taxes added to invoice.

\$ _____

E-direct catalog (free)

Shipping method

Ground

Priority One Day

Priority Two Day

E-direct

E-direct
Endress+Hauser, Inc.
2350 Endress Place
Greenwood, IN 46143

(For customers in the USA only)

Online Shop www.e-direct.us

Order: by phone **888-EH DIRECT**
(343-4732)

by fax **800-321-7754**

For special requests, e-mail us: e-direct@us.endress.com

Warranty

Should an instrument fail during the 1 year warranty period, a replacement unit will be provided.

Delivery

Shipment from receipt of order for quantities 1-3 within 2 business days.

Endress+Hauser 

People for Process Automation