

K KLAY

ELECTRONIC PRESSURE TRANSMITTER



Peramic®

- "ALL STAINLESS" TRANSMITTER
- **CERAMIC PRESSURE CELL**
- ACCURACY 0.2% (ADJUSTED SPAN)
- OUTPUT 4-20 mA / 2-WIRE
- ZERO /SPAN INTERNAL ADJUSTABLE
- NO OIL FILLING
- WITHSTAND FULL VACUUM
- VERY HIGH OVERPRESSURES
- LOCAL INDICATOR AVAILABLE
- INTRINSICALLY SAFE EEx ia IIC T4



DESCRIPTION

The "Peramic" is a solid state, all stainless, pressure transmitter based on a ceramic pressure cell.

The amplifier system is based on a single integrated circuit, which ensures a perfect linearity in the 4-20 mA output, also the transmitter is fully temperature compensated on process temperatures.

The "Peramic" has the latest state of the art planar technology which results in a very compact construction, it is made for pressure applications in liquids, gases and vapours. Zero and span are internally adjustable in wide ranges. A local indicator (programmable) is available (option).



Topview with local indicator (option)

Made by:

KLAY-INSTRUMENTS B.V.

Nijverheidsweg 5 P.O. Box 13

7991 CZ DWINGELOO 7990 AA DWINGELOO Tel. +31-521-591550 Fax +31-521-592046

The Netherlands E-mail: info@klay.nl Our representative in your area is:

SPECIFICATIONS

Measuring ranges : from 0-02 to 350 bar.

Output signal : 2-wire, 4-20 mA.

Overall accuracy : ± 0,2% adjusted span.

Power supply : 12 to 40 VDC.

Electrical connection : PG9 / $^{1/2}$ NPT or M20.

Load (max.) : 600 Ohm/24 V till 1400 Ohm/40V.

Protection grade : IP65 - IEC 144.

Weigt : 0.6 kg.

Overpressure : see ordering information. Process temperature : standard -20°C to 100°C

(1/2 hour 130°C).

Temperature effect : $\pm 0.015\%$ /K adjusted span.

Housing temperature : $-20^{\circ}\text{C} + 70^{\circ}\text{C}$. Storage temperature : $-30^{\circ}\text{C} + 70^{\circ}\text{C}$.

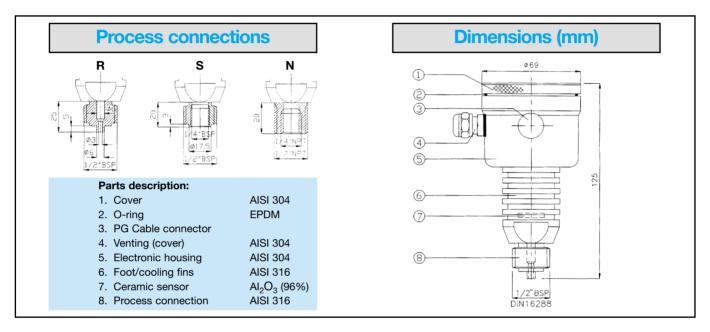
Adjustment : zero and span internally.
Process connections : see ordering information.
Wetted parts measuring cell : ceramic (Aluminiumoxyde 96%). Sensor sealing : standard viton O-ring (other materials on request).

Other wetted parts standard: AISI 316. Material housing: AISI 304.

Zero elevation/suppression available.

Vacuum and compound ranges available, please specify.

Specifications can change without notice.



ORDERING INFORMATION

Order code key		SERIES CER-8000-								
measuring range bar	max. overpressure bar	adjustable span range bar min max.			^		\	^		^
0 - 0,20,5	4	0 - 0,2 / 0 - 0,5	В							
0 - 0,40,8	6	0 - 0,4 / 0 - 0,8	С							
0 - 0,81,6	12	0 - 0,8 / 0 - 1,6	D							
0 - 1,64	20	0 - 1,6 / 0 - 4	Е							
0 - 2,510	50	0 - 2,5 / 0 - 10	F							
0 - 1040	120	0 - 10 / 0 - 40	G							
0 - 40150	350	0 - 40 / 0 - 150	Н							
0 - 100350	600	0 - 100 / 0 - 350		I						
PROCESS CONNECTIONS: - G 1/2" (1/2" BSP) DIN 16288 manometer (gauge) connection - G 1/2" (male) and G 1/4" (female) - G 1/2" NPT (male) and G 1/4" (female)				R S N						
OPTIONAL:										
- Digital local Indicator (31/2 digit, programmable) (EEx i, not programmable)					I		_			
- Intrinsically safe: CENELEC EEx ia IIC T4						Ex	<u> </u>	_		
- Vacuum range (Specify relative or absolute). Compound range available (example -1 / +1 bar)						V	\perp	_		
- P / I converter: 3-15 PSI = 4-20 mA. Incl. wall mounting bracket. Always range D								P/	1	<u> </u>
- SPECIALS: please specify (example: PTFE or Hastelloy C wetted parts)									G	



Nijverheidsweg 5 P.O. Box 13 Tel. +31-521-591550 Fax +31-521-592046 7991 CZ DWINGELOO 7990 AA DWINGELOO The Netherlands E-mail: info@klay.nl

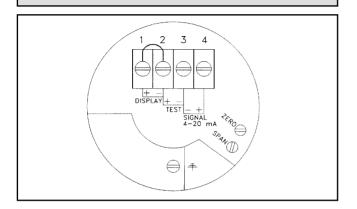
ADDITIONAL INFORMATION "PERAMIC"

APPLICATIONS

The "Peramic" is a universal pressure transmitter for all gauge- and absolute pressure measurements on liquids, gases and vapours.

When a flush diaphragm has to be used, for example food- or paper industry or for level applications. ask for our transmitters series 8000 or 8000-SAN, or our "Intelligent" transmitters, series 2000 (see page 4).

TERMINAL BOARD



MATERIALS

Construction materials of the standard unit are:

- Measuring cell : Ceramic (Aluminiumoxyde

96%)

- O-Ring seal Viton - Process connection: 316 SS - Electronic housing: 304 SS

* Other materials for wetted parts available on request.

Always check the medium and look which o-ring you have to use.

INSTALLATION

When mounting the "Peramic", use the same principles as those for a manometer (gauge).

We recommend using shut-off valves and water trap pipes acc. to BS/DIN standards, specially on steam applications and those applications where the process temperature will be higher than 100°C.

PERAMIC "SPECIALS"



For all kinds of pressure and level measurements on highly corrosive media, the "Peramic" is available with "wetted parts" made out of PTFE, PVC or PVDF. The available process connections are:

- 1" BSP or NPT
- DIN of ANSI flanges. A detailed brochure is available.

Ex(i) CERTIFICATE

The "Peramic" is certified for use in hazardous areas.

EEx ia IIC T4 (Instrinsically safe).

Use only certified power supply from 17-28 Vdc.

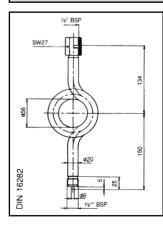
EMC/CE

Klay Instruments manufactures all transmitters according to the new EMC/CE rules.



ACCESSOIRES

WATER TRAP PIPE



For use on steam applications and those applications where the process temperature will be higher than 100°C.

Water trap pipe (syphon) acc. to DIN 16282.

Process connection: G 1/2"

Type: Syphon-CS-1/2" Material: Carbon Steel

Type: Syphon-SS-1/2" Material: SS 316

POWER SUPPLY UNIT/PANELMETERS

Power supply unit, 24 Vdc for Peramic.

Type : D4PS Supply: 220 Vac Output : 24 Vdc

Mounting DIN-rail or wall-mounting

Programmable 4 digit panelmeter, including 24 Volt power supply for transmitters.

Type : Diginorm 65 : 220 Vac Supply : 4-20 mA Input : 96 x 48 mm Size

Incl. 2 alarm contacts





Nijverheidsweg 5 P.O. Box 13 Tel. +31-521-591550 Fax +31-521-592046

7991 CZ DWINGELOO 7990 AA DWINGELOO The Netherlands E-mail: info@klay.nl



Factory Klay Instruments B.V. at Dwingeloo, The Netherlands

KLAY INSTRUMENTS B.V.

Klay Instruments B.V. is a Dutch manufacturer of electronic pressure- and level transmitters, "Intelligent" transmitters with HART® protocol and pressure- and level switches. We are developing and manufacturing all our instruments at our factory in Dwingeloo, The Netherlands. Klav Instruments has a worldwide service and distribution network.

OTHER KLAY PRESSURE/LEVEL TRANSMITTERS

"INTELLIGENT" PRESSURE/LEVEL TRANSMITTERS

The Klay series 2000 is a complete range of microprocessor based pressure- and level transmitters with local display and adjustment by three pushbuttons. Zero and span can be adjusted without testpressure. The display can be used during programming to assist the operation. An engineering unit can be chosen and also the process temperature can be shown on the display. Also a damping (0-25 sec) and a current simulation (4-20 mA) can be performed. Over 40 different process connections are available including many flush diaphragm designs. The series 2000 are also available with the HART® protocol. A detailed brochure is available.



"INTELLIGENT" PRESSURE TRANSMITTER PERAMIC "S"

The "Peramic" is also available in an "Intelligent" version, type **Peramic "S"** (series CER-2000) including the HART® protocol.

The Peramic "S" can be adjusted by 3 pushbuttons and a local display.

Zero and span can be adjusted without testpressure.

The display can be used during programming tot assist the operation. An engineering unit can be chosen and also the process temperature can be shown on the display. Also a damping (90-25 sec) and a current simulation (94-20 mA) can be performed.

A detailed brochure is available.



FOOD- AND BEVERAGE INDUSTRY

For the food- and beverage industry (dairy, breweries, etc.) and the pharmaceutical industry, Klay Instruments manufactures a wide range of electronic level and pressure transmitters with varius hygienic process connections, like DIN milkcoupling, SMS, IDF and tri-clamp.

These "all stainless" transmitters series 8000-SAN, are fully temperature conpensated. Ranges are available from 0,1 bar till 60 bar. Zero and span are internally adjustable over wide range.

The series 8000-SAN is also available in an "Intelligent" version, Series 2000-SAN. From both series a detailed brochure is available.



Nijverheidsweg 5 P.O. Box 13 Tel. +31-521-591550 Fax +31-521-592046

7991 CZ DWINGELOO 7990 AA DWINGELOO The Netherlands E-mail: info@klay.nl