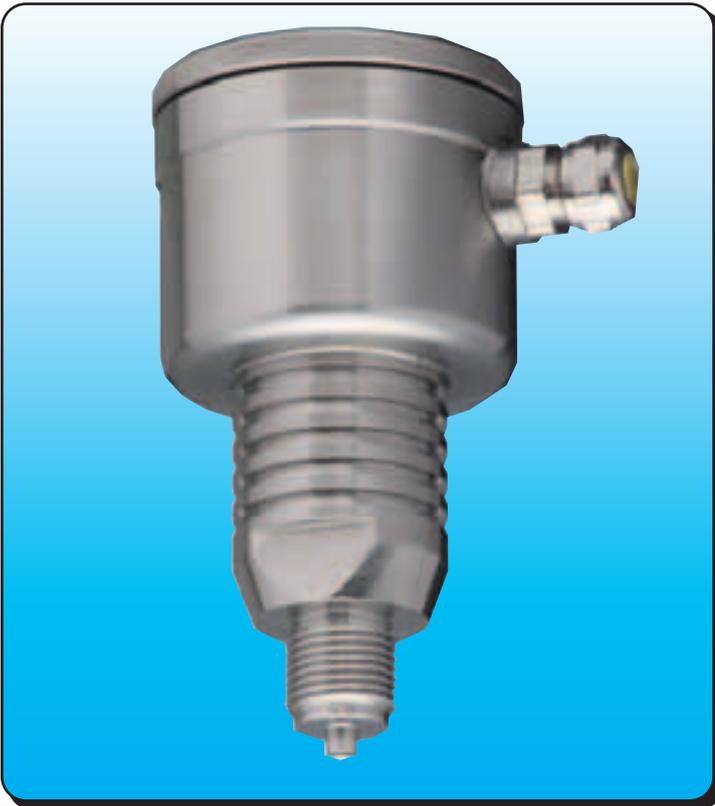




## ELECTRONIC PRESSURE TRANSMITTER

# Peramic®



- "ALL STAINLESS" TRANSMITTER
- CERAMIC PRESSURE SENSOR
- ACCURACY 0.2%
- OUTPUT 4-20 mA / 2-WIRE
- ZERO /SPAN INTERNAL ADJUSTABLE
- NO OIL FILLING
- WITHSTAND FULL VACUUM
- VERY HIGH OVERPRESSURES
- LOCAL INDICATOR AVAILABLE
- INTRINSICALLY SAFE  
(ATEX II1G EEx ia IIC T4)



## Description

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



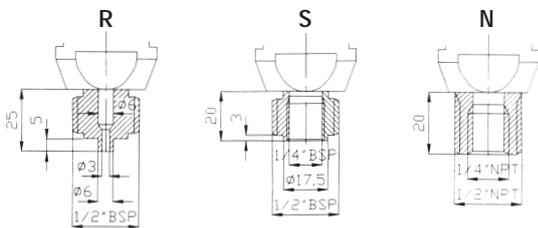
Topview with local indicator (option)

# Specifications

Measuring ranges : from 0-0.2 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 : IP66.  
 Weight : 0.6 kg.  
 Overpressure : see ordering information.  
 Process temperature : standard -20°C to 100°C  
 Temperature effect :  $\pm 0,015\%/K$  adjusted span.

Housing temperature : -20°C to +70°C.  
 Storage temperature : -30°C to +70°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.

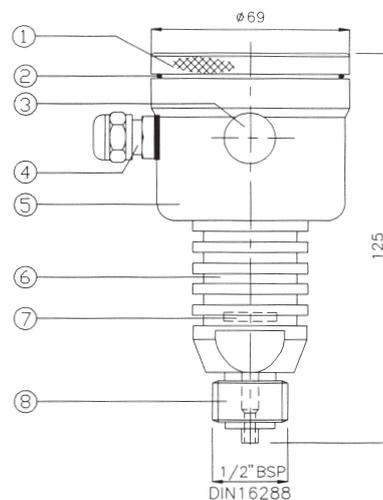
## Process Connections



### Parts description:

1. Cover	AISI 304
2. O-ring	EPDM
3. Venting (cover)	AISI 304
4. Cable entry	
5. Electronic housing	AISI 304
6. Foot/cooling fins	AISI 316
7. Ceramic sensor	Al <sub>2</sub> O <sub>3</sub> (96%)
8. Process connection	AISI 316

## Dimensions (mm)



## Ordering Information

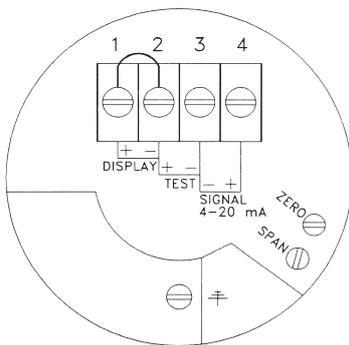
Order code key			SERIES CER-8000-						
measuring range bar	max. overpressure bar	adjustable span range in bar min. - max.	↑	↑	↑	↑	↑	↑	↑
0 - 0,2 ...0,8	6	0 - 0,2 / 0 - 0,8	C						
0 - 0,8 ...1,6	12	0 - 0,8 / 0 - 1,6	D						
0 - 1,6 ...4	20	0 - 1,6 / 0 - 4	E						
0 - 2,5 ...10	50	0 - 2,5 / 0 - 10	F						
0 - 10 ...40	120	0 - 10 / 0 - 40	G						
0 - 40 ...150	350	0 - 40 / 0 - 150	H						
0 - 100 ...350	600	0 - 100 / 0 - 350	I						
<b>PROCESS CONNECTIONS:</b>									
- G 1/2" (1/2" BSP) DIN 16288 manometer (gauge) connection									
- G 1/2" (male) and G 1/4" (female)									
- 1/2" NPT (male) and 1/4" NPT (female)									
<b>OPTIONAL:</b>									
- Digital local Indicator (3 1/2 digit, programmable) (EEx i, not programmable)									
- Intrinsically safe: ATEX II1G, EEx ia IIc T4								Ex	
- Vacuum range (Specify relative or absolute). Compound range available (example -1 / +1 bar)									V
- P / I converter: 3-15 PSI = 4-20 mA. Incl. wall mounting bracket. Always range D									P/I
- SPECIALS: please specify (example: PTFE or Hastelloy C wetted parts)									G

# 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.

## ATEX Ex(i) CERTIFICATE

The "Peramic" is certified for use in hazardous areas, according to ATEX II1G EEx ia IIC T4 (Intrinsically safe). Use only a certified power supply from 17-28 Vdc.



## EMC/CE

Klay Instruments manufactures all transmitters according to the 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.

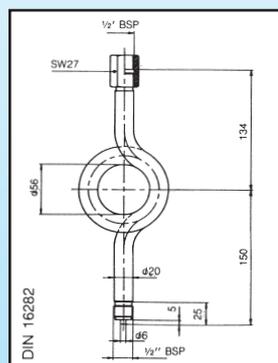
Process connection: G 1/2"

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 (Supply for transmitter)

Mounting : DIN-rail or wall-mounting

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

Type : Diginorm 75

Supply : 220 Vac

Input : 4-20 mA

Size : 96 x 48 mm

Incl. 2 alarm contacts



Klay Instruments b.v. is an ISO 9001-2000 certified company who develops and manufactures a wide range of electronic Pressure and Level transmitters, "Intelligent" transmitters with HART® protocol or Profibus PA and pressure and level switches. All instruments are designed and manufactured in our factory in Dwingeloo, The Netherlands. Klay Instruments has a world wide service and sales distribution network.



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

## Other Klay pressure- and level transmitters

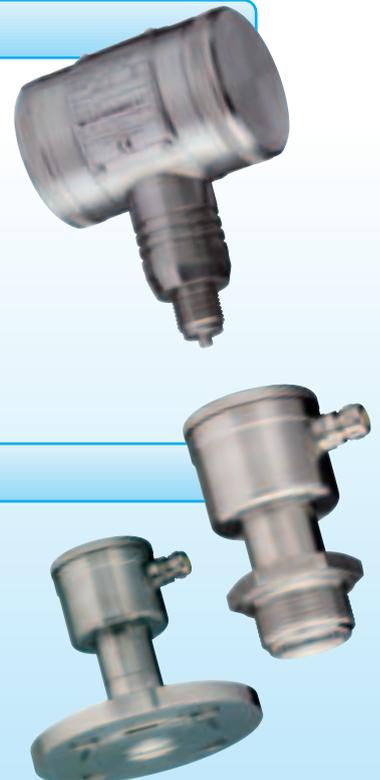
### 'Intelligent' pressure- and level transmitters

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 HART® Protocol or Profibus PA. Detailed brochure available.



### Pressure transmitter 'Peramic' "S"

The "Peramic" "S" is an "All Stainless" intelligent pressure transmitter based on a ceramic pressure cell which can withstand high overpressures. The "Peramic" can be used for all gauge- and absolute pressure measurements on steam, liquids, gases and vapours. The available process connections are G $\frac{1}{2}$ " (1/2" BSP) or 1/2" NPT. Zero and span are internally adjustable over wide ranges. Ranges are available from 0 - 0.2 bar to 0 - 350 bar. Peramic "S" (series CER-2000) includes the HART® protocol or Profibus PA. A Detailed brochure is available.



### Pressure- and level transmitters

Klay Instruments manufactures a wide range of electronic level and pressure transmitters with strong flush mounted diaphragms and various process connections. These "All Stainless" transmitters series 8000-SAN, are fully temperature compensated. Ranges are available from 0,1 bar till 60 bar. Zero and span are internally adjustable over wide ranges. The series 8000-SAN is also available in an "Intelligent" version, Series 2000-SAN (see above). From both series a detailed brochure is available.