

Pressostato digitale e trasmettitore di pressione CS2100

Con connessione filettata



Aree di applicazione

- Industria chimica e petrolchimica
- Ingegneria generale di processo
- Tecnologia generale di processo

Caratteristiche

- Trasmettitore di pressione / pressostato multifunzione
- Grado di protezione IP 65
- Display a LED a 4 cifre, può essere specchiato di 180 °
- Modulo di indicazione ruotabile di 300 °
- Campi di misura
 - 0...100 mbar a 0...400 bar rel.
 - 0...1 bar a 0...6 bar abs.
- Segnale di uscita 4 ... 20 mA, tecnologia a 2 fili
- Precisione $\leq 0,2\%$
- Facile da programmare localmente (secondo lo standard VDMA)
- Isolamento galvanico tra trasmettitore e uscite di commutazione
- Varie connessioni al processo
- Dichiarazione EAC (su richiesta)

Opzioni

- Approvazioni e certificati
 - Certificato di strumenti di misurazione per la Federazione Russa
 - Certificato materiale secondo EN 10204-3.1
 - Certificato di calibrazione secondo EN 10204-3.1
- 2 contatti flottanti
- Contatti di commutazione con corrente di commutazione elevata (1A)
- Grado di protezione IP 67

Applicazioni

Il trasmettitore di pressione / pressostato PASCAL CS è adatto per misurare le pressioni relative e assolute di gas, vapori e liquidi. Il PASCAL CS multifunzione visualizza la misurazione; emette un segnale di corrente proporzionale alla pressione. Ha due contatti opzionali.

Dati tecnici

Constructional design / case

Design:	Sturdy case design Fully encapsulated electronics unit
Material:	Stainless steel mat.-no. 1.4301 (304) Indication module: macrolon
Degree of protection per EN 60529:	■ IP 65 ■ Optional IP 67
Pressure compensation:	Aeration via sintered filter
Electrical connection:	■ circular connector M12, 4 pin ■ circular connector M12, 8 pin (necessary for devices with switch function) Incl. sealing ring to ensure case is completely sealed
Climatic category per EN 60721 3-4:	4K4H

Process connection

Design:	See order details
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Material wetted parts

Sensor :	Piezoresistive	Thin film
Sensor diaphragm:	1.4404/1.4435 (316L)	1.4542 (630)
Socket:	1.4404/1.4435 (316L)	1.4301/1.4404 (304/316L)

Measuring system

Sensor:	Piezoresistive	Thin film
Sensor filling:	Synthetic oil, free of silicone FD1, FDA listed	Without

Measuring ranges / overload limits

Measuring range / overload limit:	See order details
Vakuum tightness:	Long term vacuum measurements at relative measurement ranges can alter the device characteristics. (piezoresistive measuring system, only)

Zero settings

Zero point:	Easy zero setting max. $\pm 20\%$.
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Accuracy

Limit point setting:	per DIN 16086
Accuracy (Lin./Hyst./Repr.):	0.2 % v. of mr (mr ≥ 250 mbar) 0.5 mbar (mr < 250 mbar)
Long-term drift:	$\leq 0.1\%$ / year per EN 61298-1
Temperature influence:	<u>Range:</u> 0...50 °C: $\leq 0.25\%$ of mr (mr ≥ 400 mbar) $\leq 0.4\%$ of mr (mr < 400 mbar) $\leq 0.5\%$ of mr (mr < 160 mbar) <u>Range:</u> -20...0 and 50...85 °C: $\leq 0.4\%$ of mr (mr ≥ 400 mbar) $\leq 0.6\%$ of mr (mr < 400 mbar) $\leq 0.8\%$ of mr (mr < 160 mbar) mr = measuring range

Indication

Type:	4 digit, red LED with 7 segments
Digit high:	8.5 mm
Resolution:	-9999...9999 digit
Accuracy:	$\pm 0.2\% \pm 1$ digit
Temperature-influence:	$\pm 0.1\%/10K$
Alignment:	Can be rotated through 300°, Can be mirror-imaged by 180° when installed upside down
Indication:	Visual confirmation for operator when a button is pressed
Decimal point:	Automatic setting depending on measuring range/unit, max. 3 decimal places Or manual setting 0...3 decimal places

Indication automatically changing from measurement value to measurement unit or indication of unit or value per key-stroke.

Measuring unit:	bar, mbar, PSI, kPa, MPa, %, mA
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Output

Signal:	4...20 mA , 2-wire technology
Sampling rate:	10 measurements / second
Current range:	3.8...20.8 mA
Resolution:	2 μ A
Current limitation:	≤ 22 mA
Alarm state:	< 3.6 mA
Load, R:	$R \leq (U-14V)/0.02$ A [Ω] U = supply voltage

Switching output (option)		Supply voltage	
Type:	2 floating contacts with common ground (low side NPN) or common power supply (high side PNP)	Functional range:	14...30 V DC
Switching capacity:	200 mA, short-circuit-proof Optional 1 A	Temperature ranges	
Switching status:	breakers or makers, programmable, device off circuit: open contact	Ambient:	-20...85 °C
Switching function:	window / hysteresis, programmable	Media:	-20...100 °C
Setting range:	within range limits	Storage:	-40...85 °C
Hysteresis:	within range limits	Tests and certificates	
Switching delay:	0,0...999.9 s	EMC:	EMC directives 2014/30/EU
Repeat accuracy:	0.2 % of full-scale value	■ EAC declaration upon request ■ Certificate of measuring equipment for Russian Federation	
Temperature influence:	± 0.1 % / 10K	Mounting information	
Galvanic isolation:	between transmitter and outputs	Mounting position:	At choice
Switching cycles:	> 10 millions	Calibration position:	Vertical
Voltage drop:	< 1 V (< 1.5 V, if current is > 100 mA)		
Output state indicator:	red LED per switching output		
Parameterisation:	3-key parameterisation		

Parametrizzazione

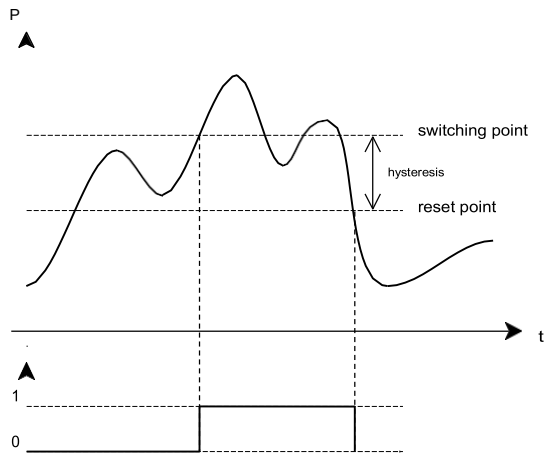
The following parameters can be assigned via 3 keys:

Parameter	Values
unit	Bar, mbar, PSI, kPa, MPa, %, mA
pressure trimming	lower range value/upper range value
min/max-value	between upper range and lower range value, resettable
display time for measurement	1.0...99.9 s
display time for unit	0.0...99.9 s
display rotation	0° / 180° (when installed upside down)
decimal point	automatic, manual 0...3 decimal places
switching function	hysteresis function breakers makers window function breakers makers
switching point	between upper range value and reset point
reset point	between lower range value and switching point
ON delay	0.0...999.9 s
OFF delay	0.0...999.9 s

Parameterisation see operating instruction BA_060.

Funzione di isteresi

Funzione di isteresi



Funzione Window

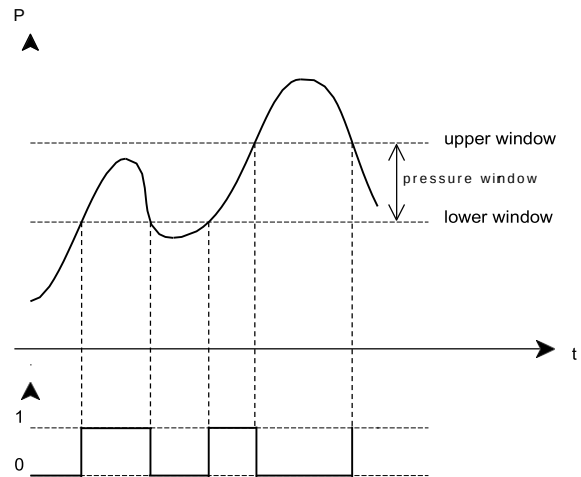
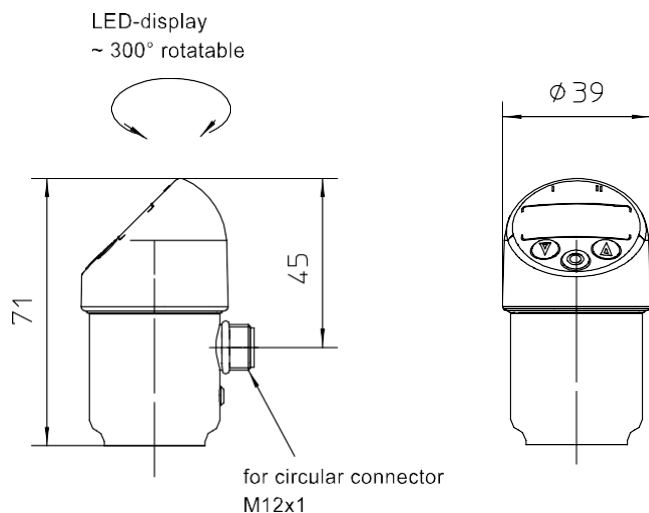


Diagramma di connessione

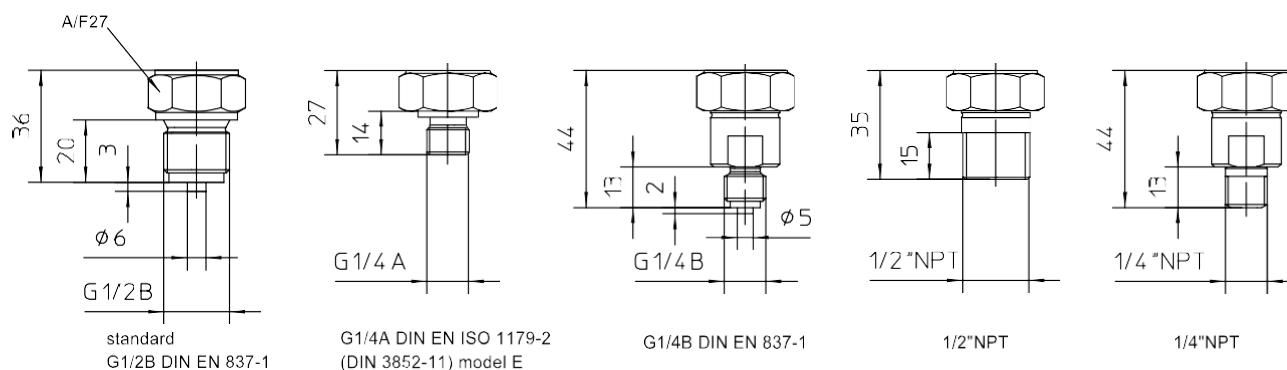
4-pin connector	8-pin connector (for switching outputs)	Explanations
		(+) plus-side of supply (-) minus-side of supply n.c. not connected S1/S2 common pin of switching outputs (see below) S1 switching output 1 S2 switching output 2 Pgm 1/2 programming pins

Dimensioni

Alloggiamento

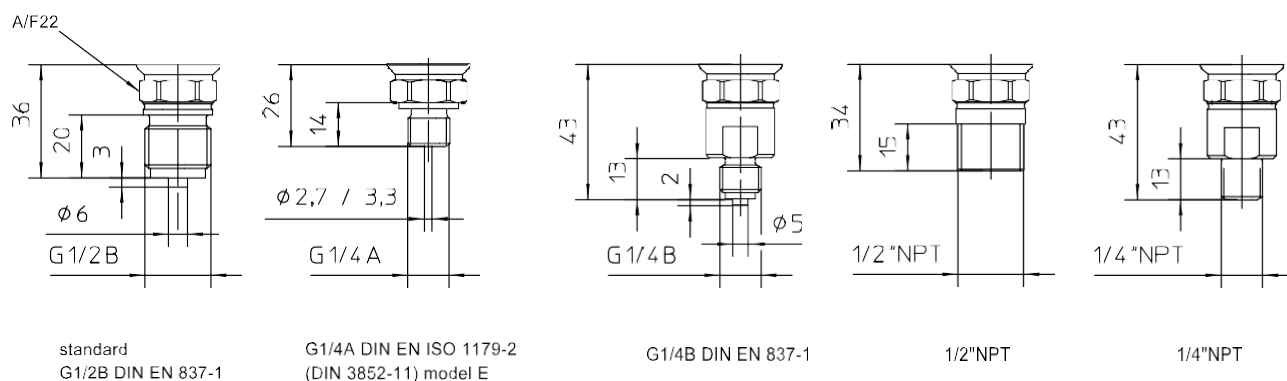


Connessioni al processo piezoresistive, diaframma interno



All dimensions are in mm

Connessioni al processo a film sottile, diaframma interno



All dimensions are in mm

Dettaglio ordine

Pressure transmitter PASCAL CS with threaded connection

Type series CS2100

Order details PASCAL CS2100

CS2100	Pressure transmitter PASCAL CS with threaded connection				
		measuring range	overload limit	type of sensor	
A1008	measuring range	0...100 mbar	1 bar	piezoresistive	
A1009		0...160 mbar	1 bar		
A1010		0...250 mbar	3 bar		
A1011		0...400 mbar	3 bar		
A1012		0...600 mbar	3 bar		
A1053		0...1 bar	10 bar		
A1054		0...1,6 bar	10 bar		
A1055		0...2,5 bar	10 bar		
A1056		0...4 bar	20 bar		
A1057		0...6 bar	20 bar		
A1058		0...10 bar	100 bar		
A1059		0...16 bar	100 bar		
A1060		0...25 bar	100 bar		
A1061		0...40 bar	100 bar		
A3062		0...60 bar	200 bar	thin film	
A3063		0...100 bar	200 bar		
A3064		0...160 bar	400 bar		
A3065		0...250 bar	600 bar		
A3066		0...400 bar	600 bar		
A1025		-100...0 mbar	1 bar	piezoresistive	
A1026		-160...0 mbar	1 bar		
A1027		-250...0 mbar	3 bar		
A1028		-400...0 mbar	3 bar		
A1552		-600...0 mbar	3 bar		
A1086		-1...0 bar	10 bar		
A1087		-1...0,6 bar	10 bar		
A1088		-1...1,5 bar	10 bar		
A1089		-1...3 bar	20 bar		
A1090		-1...5 bar	20 bar		
A1091		-1...9 bar	100 bar		
A1092		-1...15 bar	100 bar		
A1093		-1...24 bar	100 bar		
B1053		0...1 bar abs	10 bar		
B1054		0...1,6 bar abs	10 bar		
B1055		0...2,5 bar abs	10 bar		
B1056		0...4 bar abs	20 bar		
B1057		0...6 bar abs	20 bar		
A9999		variants as in writing			
H11	output signal	4...20 mA, 2-wire technology			
N10	switching output	without			
N70		2 floating contacts	with common ground (NPN) switching capacity 30 V DC, 200 mA		
N70.1			with common power ground (NPN) switching capacity 30 V DC, 1 A		
N71			with common power supply (PNP) switching capacity 30 V DC, 200 mA		
N71.1			with common power supply (PNP) switching capacity 30 V DC, 1 A		
T30	electrical connection	circular connector M12	4-pin		
T31			8-pin ¹		
K1002	process connection material stainless steel	internal diaphragm	G1/4 B per EN 837-1		
K1010			G1/2 B per EN 837-1		
K1024			G1/4 A per DIN EN ISO 1179-2 (DIN 3852-11) Form E		
K1070			1/2" NPT		
K1072			1/4" NPT		

Additional features (to be indicated if required)		
F2	parametrisation	as in writing
T1	degree of protection	IP 67
W1020	material certificate	per EN 10204-3.1, wetted parts (stainless steel) ²
W2673	certificate of measuring equipment for Russian Federation	

Order code (example): CS2100 - A1056 - H11 - N70 - T30 - K1070 - ...

¹ needed with contacts

² only for piezoresistive measuring systems