

Compact Pressure Transmitter Model C-10

WIKA Data Sheet PE 81.12



Applications

- Mechanical engineering
- Hydraulics / Pneumatics
- General industrial applications

Special Features

- Pressure ranges from 0 ... 0.25 bar to 0 ... 1000 bar
- Wiring with L-connector or flying lead
- Ingress protection IP 65 or IP 67
- Medium temperature
-30 ... + 100 °C / -22 ... + 212 °F
- Vacuum tight

Description

The compact transmitter line of WIKA is especially designed for hydraulic applications which are subject to severe shocks, vibrations and electromagnetic interference (EMI). The price/performance ratio is getting particularly interesting where quantities of medium or large size are required.

Flexible sensing principles give the optimum sensing solution for every measuring application.

Measuring tasks in low pressure ranges are carried out by a fully welded, piezoresistive measuring cell (inhouse made), while a thinfilm (strain gauge) sensor system which is also supplied by our own production is used for dynamic and static measurements in high pressure ranges.

A wide range of standardized and customer-specific output signals enables a simple connection into process measuring chains.



Fig. Pressure transmitter C-10

Available are, among other things: current output 4 ... 20 mA (2-wire) and voltage outputs 0 ... 10 V and 0 ... 5 V. The accuracy comprising non-linearity, hysteresis, non-repeatability, zero point and full scale error amounts to 1 %. Combined with an excellent long-term stability, a reliable measured value registration is ensured even over prolonged periods of time.

All wetted parts and the casing are exclusively made of stainless steel. Special welding procedures guarantee an excellent long-term sealing completely eliminating the need for additional sealing materials.

A wide range of standardized and customer-specific pressure connections ensure a simple integration into the applications.

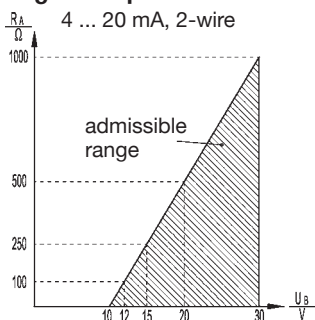
Specifications

Model C-10

Pressure ranges	bar	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16
Over pressure safety	bar	2	2	4	5	10	10	17	35	35	80
Burst pressure	bar	2.4	2.4	4.8	6	12	12	20.5	42	42	96
Pressure ranges	bar	25	40	60	100	160	250	400	600	1000	
Over pressure safety	bar	50	80	120	200	320	500	800	1200	1500	
Burst pressure	bar	96	400	550	800	1000	1200	1700	2400	3000	
{Absolute pressure available}											
Materials											
■ Wetted parts		Stainless steel									
■ Case		Stainless steel									
■ Internal transmission fluid ¹⁾		Synthetic oil									
		¹⁾ Not with pressure ranges > 25 bar									
Power supply UB	UB in VDC	10 < UB ≤ 30 (14 ... 30 with signal output 0 ... 10 V)									
Response time (10 ... 90 %)	ms	≤ 1 (≤ 10ms at medium temperatures below < -30°C for pressure ranges up to 25 bar									
Dielectric strength	VDC	500 ²⁾									
		²⁾ NEC Class 02 power supply (low voltage and low current max. 100 VA even under fault conditions)									
Accuracy	% of span	≤ 0.5 (BFSL)									
	% of span	≤ 1.0 ³⁾									
		³⁾ Including non-linearity, hysteresis, zero point and full scale error (corresponds to error of measurement per IEC 61298-2)									
		Adjusted in vertical mounting position with lower pressure connection									
Non-linearity	% of span	≤ 0.4 (BFSL) according to IEC 61298-2									
1-year stability	% of span	≤ 0.2 (at reference conditions)									
Permissible temperature of											
■ Medium ⁴⁾		-30 ... +100 °C					-22 ... +212 °F				
■ Ambience ⁴⁾		-30 ... +85 °C					-22 ... +185 °F				
■ Storage ⁴⁾		-40 ... +100 °C					-40 ... +212 °F				
		⁴⁾ Also complies with EN 50178, Tab. 7, Operation (C) 4K4H, Storage (D) 1K4, Transport (E) 2K3									
Compensated temp. range		0 ... +80 °C					32 ... +176 °F				
Temperature coefficients within compensated temp range											
■ Mean TC of zero	% of span	≤ 0.3 / 10 K									
■ Mean TC of range	% of span	≤ 0.2 / 10 K									
CE-conformity											
■ Pressure equipment directive		97/23/EC									
■ EMC directive		89/336/EEC emission (class B) and immunity according to EN 61 326									
Shock resistance	g	1000 according to IEC 60068-2-27 (mechanical shock)									
Vibration resistance	g	20 according to IEC 60068-2-6 (vibration under resonance)									
Wiring protection	VDC										
■ Overvoltage protection		36									
■ Short-circuit proofness		Sig+ towards UB-									
■ Reverse polarity protection		UB+ towards UB-									
Weight	kg	Approx. 0.1									

{ } Items in curved brackets are optional extras for additional price.

Signal output and admissible load



Output current (2-wire)

4 ... 20 mA: $RA \leq (UB - 10 V) / 0.02 A$
in Ohm and UB in Volt

Output voltage (3-wire)

0 ... 5 V: $RA > 5 k\Omega$
0 ... 10 V: $RA > 10 k\Omega$

Dimensions in mm

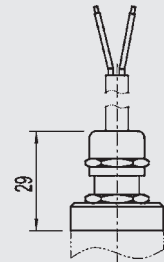
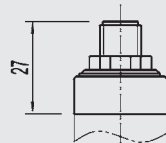
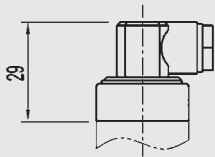
Ingress Protection IP per IEC 60529. The ingress protection classes specified only apply while the pressure transmitter is connected with female connectors that provide the corresponding ingress protection.

Electrical connections

"Mini-Hirschmann"
L-connector,
for conductor cross section up to
max. 0.5 mm²,
conductor outer diameter 4 to 7.5 mm
IP 65
Order code: II

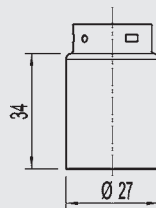
M 12x1, 4-pin.
circular connector,
IP 65
Order code: M4
*)

Flying leads
with 1.5 m of cable,
conductor cross section
up to max. 0.5 mm²,
AWG 20 with end splices,
conductor outer diameter 6.8 mm,
IP 67
Order code: DL



Others on request

Case

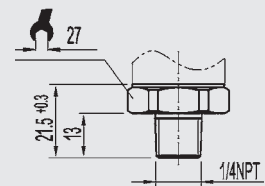
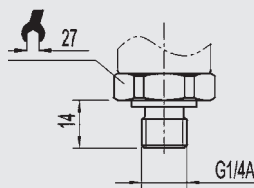
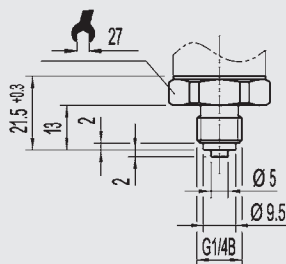


Pressure connections

G 1/4
EN 837
Order code: GB

G 1/4
DIN 3852-E
(over pressure safety max. 600 bar)
Order code: HD

1/4 NPT
per „Nominal size for US
standard tapered pipe
thread NPT“
Order code: NB



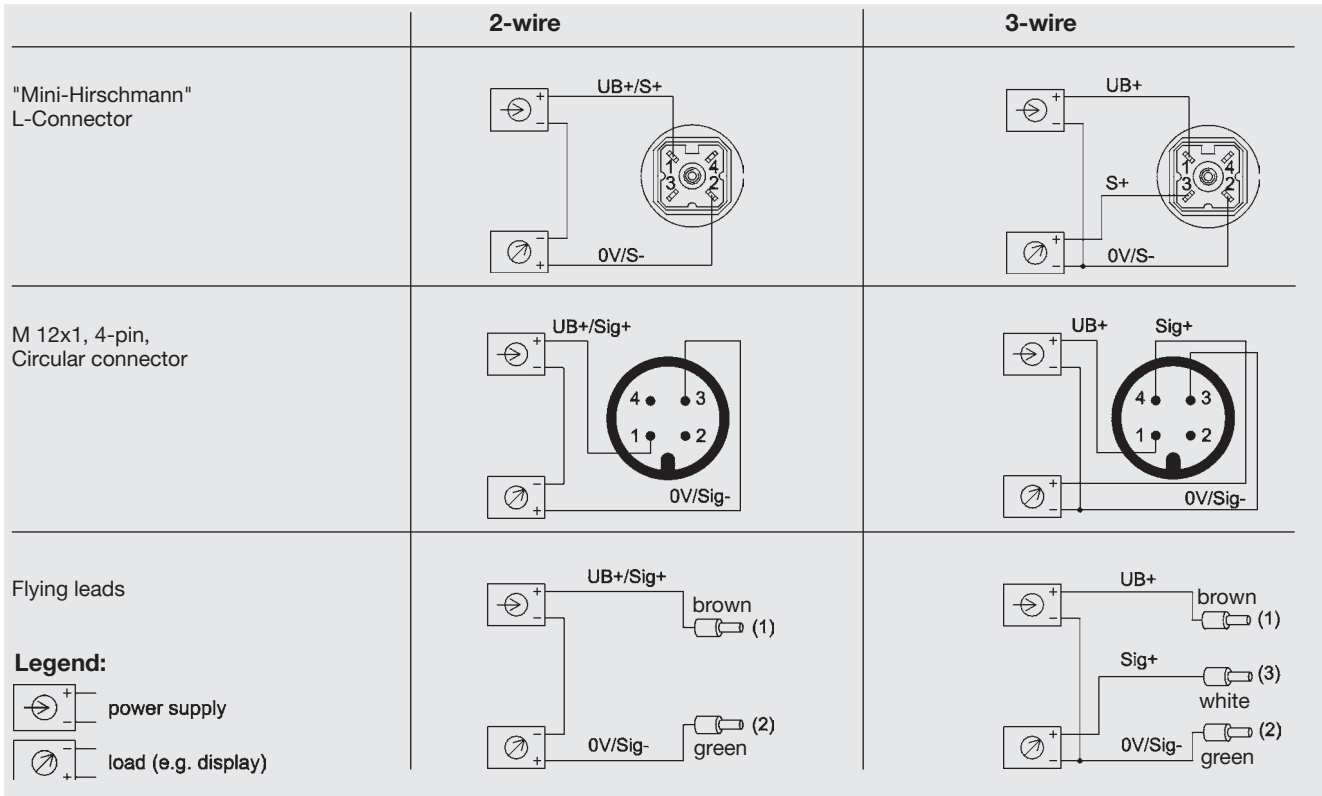
Others on request

For installation and safety instructions see the operating instructions for this product.

For tapped holes and welding sockets please see Technical Information IN 00.14 for download at www.wika.de -Service

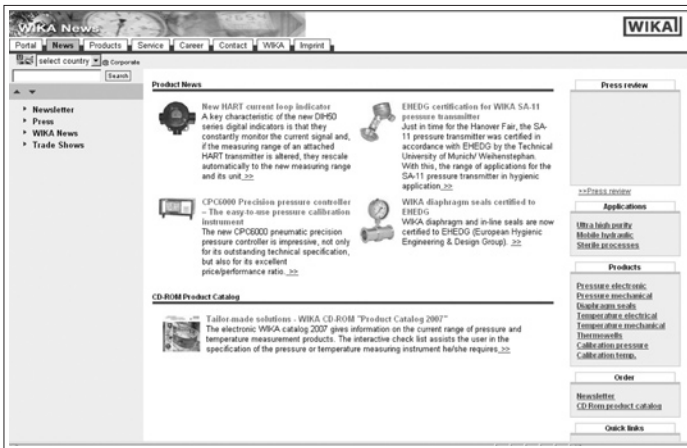
*) Connectors are not included in delivery.

Wiring details



Further information

You can obtain further information (data sheets, instructions, etc.) via our internet address www.wika.de



Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.



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