Pressure transmitter for refrigeration and HVAC applications Model AC-1

WIKA data sheet PE 81.46

Applications

- Refrigeration plants
- Heat pumps
- Chillers

Special features

- Wetted parts made of brass, CR70 (chloroprene) and ceramic
- Resistant against the most important refrigerants
- Special case design for the best possible condensation tightness

Fig. left: Model AC-1 with M12 x 1
Fig. centre: Model AC-1 with Metri Pack 150
Fig. right: Model AC-1 with cable outlet

Description

Refrigeration and HVAC applications
Due to its excellent resistance against the most commonly used refrigerants the AC-1 pressure transmitter with integrated ceramic thick-film sensor is optimally suited for refrigeration and HVAC applications.

Excellent performance and quality
The AC-1 unites innovative design and highest demands on quality. The instrument has successfully passed a test process that is specially adapted to the harsh requirements of the refrigeration and HVAC market.

Attractive price/performance ratio
With its highly flexible product and manufacturing concept the AC-1 is convincing thanks to its high availability, even in large quantities, and that at an attractive price/performance ratio.

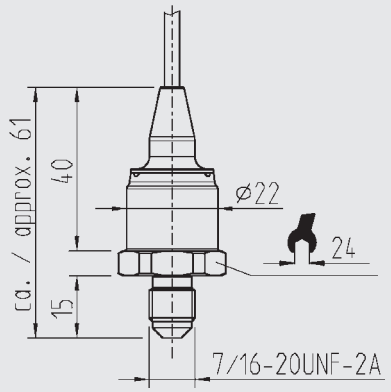
Specifications		Model AC-1				
Measuring range	bar	7	10	16	25	60
Overpressure safety	bar	20	20	40	40	100
Burst pressure	bar	25	25	50	50	120
	All measuring ranges also available from -1 bar. {Vacuum, gauge pressure, compound ranges are available}					
Materials						
■ Wetted parts		Brass, ceramic Al_2O_3 96 % O-ring: CR70 (chloroprene)				
Resistance		To refrigerants R12, R22, R134a, R404a, R407c, R410a, R502, R507				
■ Case		Brass				
■ Electrical connection		Highly resistive, fibreglass-enforced plastic (PBT GF 30)				
		Signal output		Power supply U_B		Maximum load R_A
		4 ... 20 mA, 2-wire		DC 7 ... 30 V		$R_A \leq (U_B - 7\ V) / 0.02\ A$
		0 ... 10 V, 3-wire		DC 14 ... 30 V		$R_A > 10$ kOhm
		0.5 ... 4.5 V, ratiometric		DC 5 V ± 0.5 V		$R_A > 4.5$ kOhm
Settling time	ms	≤ 5				
Insulation voltage	DC	500 V				
Accuracy	% of span	≤ 2 [1)]				
Long-term stability	% of span	≤ 0.3 / year (at reference conditions)				
Permissible temperature range						
■ Medium		-40 ... +100 °C -40 ... +212 °F				
■ Ambient		-25 ... +80 °C -13 ... +176 °F				
■ Storage		-25 ... +80 °C -13 ... +176 °F				
Rated temperature range		-25 ... +80 °C -13 ... +176 °F				
Temperature coefficients within rated temperature range						
■ Mean TC of zero	% of span	typ. ≤ 0.5 / 10 K				
■ Mean TC of span	% of span	≤ 0.3 / 10 K				
Approvals		cULus (recognition)				
CE conformity						
■ EMC directive		2004/108/EEC, EN 61 326 Emission (Group 1, Class B) and Immunity (industrial locations)				
Short-circuit protection		S_+ towards 0V				
Reverse polarity protection		U_B towards 0V				
Overvoltage protection	DC	36 V				
Weight	kg	approx. 0.08				

{ } Items in curved brackets are optional extras for additional price
1) Including non-linearity, hysteresis, zero-point and full scale deviations (corresponds to measured error per IEC 61298-2).

Dimensions in mm

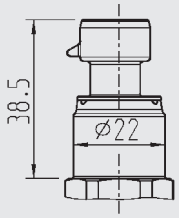
Pressure transmitter

with cable outlet

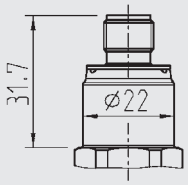


Electrical connections

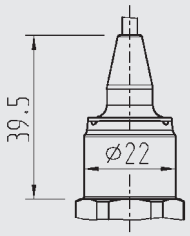
Instrument connector
Metri Pack Series 150



Circular connector
M12 x 1

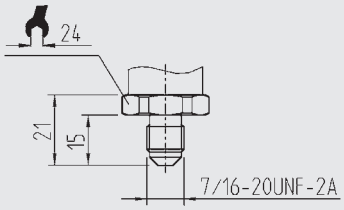


Cable outlet

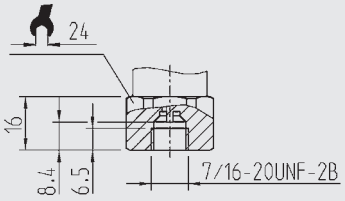


Process connections

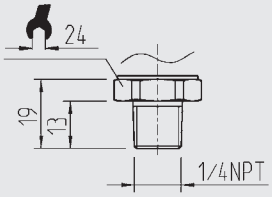
7/16-20 UNF-2A
Cone 90°



7/16-20 UNF-2B
Schrader female thread

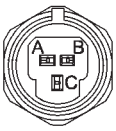


1/4 NPT
ANSI/ASME B1.20.1



For information on tapped holes and welding sockets, see Technical Information IN 00.14 at www.wika.de.

Electrical connections

	Circular connector M12 x 1, 4-pin			Instrument connector Metri Pack series 150, 3-pin			Cable outlet, 1 m / 2 m		
									
2-wire	U_B = 1	0V = 3		U_B = B	0V = A		U_B = brown	0V = green	
3-wire	U_B = 1	0V = 3	S_+ = 4	U_B = B	0V = A	S_+ = C	U_B = brown	0V = green	S_+ = white
Wire cross-section							3 x 0.14 mm^2		
Cable diameter							3.2 mm		
Ingress protection per IEC 60529	IP 67			IP 67			IP 69K		
	The stated ingress protection only applies when plugged-in using mating connectors that have the appropriate ingress protection.								

other pin assignments on request

WIKA Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg/Germany
Tel. (+49) 9372/132-0
Fax (+49) 9372/132-406
E-mail info@wika.de
www.wika.de

04/2011 GB