



DESCRIPTION

ALZ 3742 is based on a high-precision capacitive ceramic oil-free sensor with ranges starting at 40 mbar for measuring liquid levels as low as 40 cm. High overload capacity of the sensor, flush ceramic diaphragm and plastic housing make ALZ 3742 a great choice for the aggressive* and viscous media. Similar model ALZ 3740 in stainless steel housing is available for abrasive media applications.

SPECIFICATIONS

Ranges: 0.4 mH₂O up to 100 mH₂O

Basic accuracy: ±0.25%

Sensor: high precision ceramic capacitive

Probe: Ø45 mm, plastic

Output signal: 4...20 mA; RS-485 / Modbus RTU;

Media temperature: up to -20...+70 °C

Optional: HART®, Pt100 temperature sensor

APPLICATIONS

Viscous media

Aggressive media*

Sewage, waste water, sludge

Precise level monitoring in tanks

* please consult the manufacturer for particular media compatibility

Appearance, mounting kit contents and/or specifications are subject to change without prior notice. We are constantly working on further improvement of our products.
Delivery is subject to standard terms of delivery.
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TECHNICAL SPECIFICATIONS

MEASURING RANGES

Pressure range, bar	Level, mH ₂ O	Overpressure, bar	Pressure range, bar	Level, mH ₂ O	Overpressure, bar
0...0.04	0.4	0.3	0...1.0	10	3.0
0...0.06	0.6	0.3	0...1.6	10	6.0
0...0.10	1.0	1.0	0...2.5	25	6.0
0...0.16	1.6	1.0	0...4.0	40	15
0...0.25	2.5	1.0	0...6.0	60	15
0...0.40	4.0	1.0	0...10	100	30
0...0.60	6.0	3.0			

PERFORMANCE	P > 0.1 bar	P ≤ 0.1 bar
Accuracy, % of span*	≤ ±0.25	≤ ±0.5
Temperature effect (% of span / 10 °C)	≤ ±0.2	≤ ±0.3
Compensated range	-20...+50 °C	0...+50 °C
Power supply effect	≤ ±0.05% of span / 10 V	
Load resistance effect	≤ ±0.05% of span / kOhm (transmitters with current output)	
Long-term stability	≤ ±0.1% of span / year	
Response time (10...90%)	≤ 150 ms	

* Accuracy includes non-linearity, hysteresis and non-repeatability.

OPERATING CONDITIONS

Medium temperature (depends on seal)	-20...+50 °C
Ambient temperature	-20...+50 °C
Storage temperature	-20...+50 °C
Service life	> 100 x 10 ⁶ cycles

MECHANICAL SPECIFICATIONS

Housing	PVC; PVDF
Seal	FKM; EPDM; NBR
Diaphragm	ceramics Al ₂ O ₃ 96 %
Cable external jacket	PVC, PUR, FEP
Ingress protection	IP69K

ELECTRICAL SPECIFICATIONS

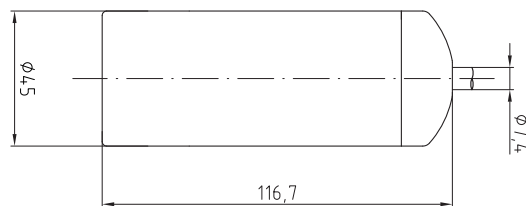
Output signal	Power supply, U_s	Load resistance, R	Power consumption
4...20 mA / 2-wire	12...36 V	$\leq [(U_s - 12 \text{ V}) / 0.02 \text{ A}] \text{ Ohm}^*$	$\leq 26 \text{ mA}$
4...20 mA / HART®			
0.5...4.5 V / 3-wire	5 V	$\leq 5 \text{ kOhm}$	$\leq 2 \text{ mA}$
0.5...4.5 V / 3-wire	6...15 V		$\leq 7 \text{ mA}$
RS-485 / Modbus RTU	12...36 V	-	$\leq 7 \text{ mA}$

* For output signal 4...20 mA / HART® minimum load resistance for digital communication: 250 Ohm.

ELECTRICAL CONNECTIONS / PIN ASSIGNMENT

Circuits		Cable gland wires
2-wire	power +	white (red)
	power -	brown (blue)
	ground	yellow-green
3-wire	power +	white (red)
	power -	brown (blue)
	signal +	green (black)
	ground	yellow-green
RS-485	power +	white (red)
	power -	brown (blue)
	A	yellow
	B	green (black)
	ground	yellow-green
HART®	power +	white
	power -	brown
	ground	yellow-green

DIMENSIONS (mm)



ORDERING CODE

ALZ 3742		-X	-XXXX	-X	-X	-XXXX	-X	-X	-X	-XX
UNIT OF MEASUREMENT										
	bar	B								
	kg/cm ²	S								
	mH ₂ O	W								
	kPa	H								
	Other (specify when ordering)	X								
UPPER RANGE LIMIT (URL)										
bar, kg/cm ²		mH ₂ O		kPa						
0.04	0040	0.4	0400	4.0	4000					
0.06	0060	0.6	0600	6.0	6000					
0.10	0100	1.0	1000	10	1001					
0.16	0160	1.6	1600	16	1601					
0.25	0250	2.5	2500	25	2501					
0.40	0400	4.0	4000	40	4001					
0.60	0600	6.0	6000	60	6001					
1.0	1000	10	1001	100	1002					
1.6	1600	16	1601	160	1602					
2.5	2500	25	2501	250	2502					
4.0	4000	40	4001	400	4002					
6.0	6000	60	6001	600	6002					
10	1001	100	1002	1000	1003					
Other	XXXX	Other	XXXX	Other	XXXX					
ACCURACY										
		0.25% (P > 0.1 bar) (standard)		C						
		0.50% (P ≤ 0.1 bar) (standard)		D						
		Other (specify when ordering)		X						
CABLE EXTERNAL JACKET										
		PVC		P						
		PUR		U						
		FEP		T						
		Other (specify when ordering)		X						
CABLE LENGTH										
		Any length in meters (e.g., 010M means 10 meters)		XXXXM						
OUTPUT SIGNAL										
		4...20 mA / 2-wire (standard)		A						
		0.5...4.5 V / 3-wire, U _s = 5 V		R						
		0.5...4.5 V / 3-wire, U _s = 6...15 V		K						
		RS-485 / Modbus RTU		M						
		4...20 mA / HART®		H						
		Other (specify when ordering)		X						

ORDERING CODE (CONTINUED)

	ALZ 3742	-X	-XXXX	-X	-X	-XXXX	-X	-X	-X	-XX
SEALS										
							FKM	F		
							NBR	N		
							EPDM	E		
							Other (specify when ordering)	X		
HOUSING MATERIAL								PVC	P	
								PVDF	F	
								Other (specify when ordering)	X	
VERSION									Standard	00
									Other (specify when ordering)	XX

Example: ALZ 3742-W-6000-D-P-010M-A-F-P-00

ACCESSORIES

				
Anchoring clamp for submersible transmitter	PZ 1024 Power supply unit	BZ 05 / BZ 10 Dry air junction box for submersible transmitters		