

**DESCRIPTION**

ALZ 3740 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 stainless steel housing make ALZ 3740 a transmitter of choice for the viscous and abrasive media. For even better compatibility with aggressive media please refer to the similar model ALZ 3742 with the plastic housing.

SPECIFICATIONS

Ranges: 0.4 mH₂O up to 100 mH₂O
Basic accuracy: ±0.25%
Sensor: high precision ceramic capacitive
Probe: Ø40 mm, AISI 316L
Output signal: 4...20 mA; RS-485 / Modbus RTU;
Media temperatures: -20...+70 °C
Optional: Ex ia, HART®, Pt100 temperature sensor

APPLICATIONS

Viscous media
Abrasive media
Sewage, waste water, sludge
Precise level monitoring in tanks

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	0...20	200	50

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...+70 °C	0...+70 °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.

OPERATIONAL SPECIFICATIONS

Medium temperature (depends on seal)	-20...+70 °C
Ambient temperature	-20...+70 °C
Storage temperature	-20...+70 °C
Service life	> 100 x 10 ⁶ cycles

MECHANICAL SPECIFICATIONS

Housing	stainless steel 316L (1.4404) or stainless steel 904L (sea water resistant)
Seal	FKM; EPDM; NBR
Diaphragm	ceramics Al ₂ O ₃ 96 %
Cable external jacket	PVC, PUR, FEP
Ingress protection	IP69K

ELECTRICAL SPECIFICATIONS

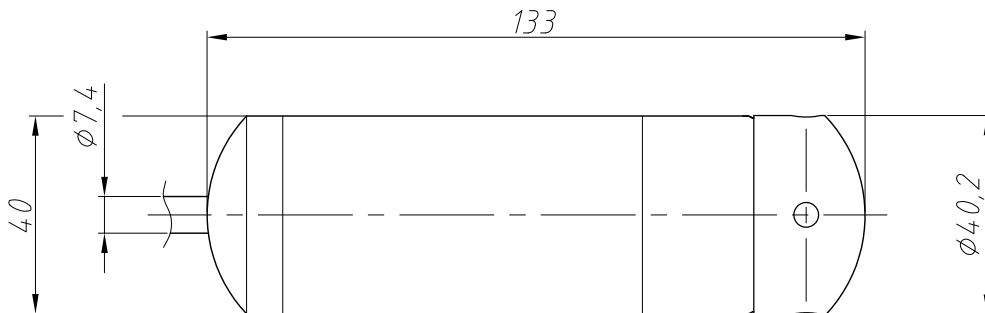
Output signal	Power supply, U_s	Load resistance, R	Power consumption
4...20 mA / 2-wire	12...36 V	$\leq [(U_s - 12 \text{ V}) / 0,02 \text{ A}] \text{ Ohm}^*$	$\leq 26 \text{ mA}$
4...20 mA / HART®			
0.5...4.5 V / 3-wire	5 V / 6...15 V		$\leq 2 \text{ mA} / \leq 7 \text{ mA}$
RS-485 / Modbus RTU	12...36 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
	power -	brown
	ground	yellow-green
3-wire	power +	white
	power -	brown
	signal +	green
	ground	yellow-green
Pt100 (optional)	T+	yellow
	T-	pink
	T-	gray
RS-485	power +	white
	power -	brown
	A	yellow
	B	green
	ground	yellow-green
HART®	power +	white
	power -	brown
	ground	yellow-green

DIMENSIONS (mm)



ORDERING CODE										
ALZ 3740		-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					
20	2001	200	2002	2000	2003					
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)						XXXM				
OUTPUT SIGNAL										
4...20 mA / 2-wire (standard)					A					
0.5...4.5 V / 3-wire					R					
RS-485 / Modbus RTU					M					
4...20 mA / HART® (up to 400 kPa)					H					
Other (specify when ordering)					X					

ORDERING CODE (CONTINUED)

ALZ 3740	-X	-XXXX	-X	-X	-XXXX	-X	-X	-X	-XX
SEALS									
							FKM	F	
							NBR	N	
							EPDM	E	
							Other (specify when ordering)	X	
HOUSING MATERIAL									
							Stainless steel 316L	A	
							Stainless steel 904L (sea water resistant)	B	
VERSION									
								Standard	00
								Pt100 temperature sensor (incompatible with RS-485 / Modbus RTU)	0T
								Other (specify when ordering)	XX

Example: ALZ 3740-W-6000-D-P-010M-A-F-A-00

ACCESSORIES

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