

**DESCRIPTION**

ALZ 3824 is a precision submersible hydrostatic level transmitter with detachable probe, allowing quick and easy removal for service or replacement. High quality silicon piezoresistive sensor, electronic module with an active temperature compensation technology, plastic housing and a hydrometric cable with the ventilation tube make ALZ 3824 an outstanding choice for the applications where better accuracy is required.

**SPECIFICATIONS**

Ranges: 1 mH<sub>2</sub>O up to 100 mH<sub>2</sub>O

Basic accuracy: ±0.1%

Probe: Ø35 mm, plastic, detachable from the cable for easy service

Outputs: 4...20 mA; 0...20 mA; 0...10 V; RS-485 / Modbus RTU

Sensor: silicon piezoresistive

Media temperatures: -20...+70 °C

Optional: HART®

**APPLICATIONS**

Water, wastewater

Fuels, oils

Tanks, wells

Pump protection

Laboratory equipment

## TECHNICAL SPECIFICATIONS

### MEASURING RANGES

Pressure range, bar	Level, mH <sub>2</sub> O	Overpressure, bar	Pressure range, bar	Level, mH <sub>2</sub> O	Overpressure, bar
0...0.10	1.0	1.0	0...1.6	10	6.0
0...0.16	1.6	1.0	0...2.5	25	6.0
0...0.25	2.5	1.0	0...4.0	40	15
0...0.40	4.0	1.0	0...6.0	60	15
0...0.60	6.0	3.0	0...10	100	30
0...1.0	10	3.0			

### PERFORMANCE

Accuracy, % of span*	≤ ±0.1
Temperature effect, (% of span / 10 °C)	≤ ±0.02
Compensated range	-20...+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%)	≤ 1 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
Vibration resistance	10 g RMS, 25–2000 Hz
Shock resistance	100 g / 11 ms
Service life	> 100 x 10 <sup>6</sup> cycles

### MECHANICAL SPECIFICATIONS

Housing	PVC
Seal	FKM; EPDM; NBR
Diaphragm	stainless steel 316L (1.4435)
Cable external jacket	PVC, PUR, FEP
Ingress protection	IP69K

## ELECTRICAL SPECIFICATIONS

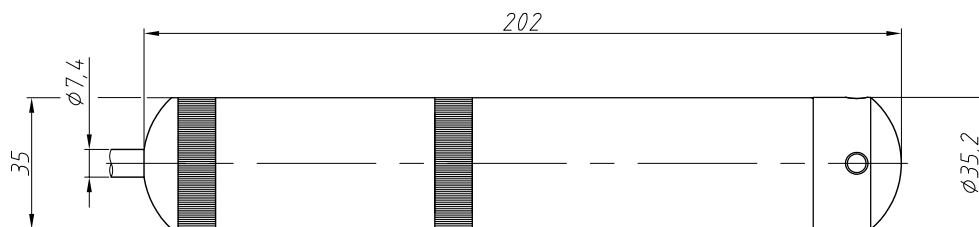
Output signal	Power supply, $U_s$	Load resistance, R	Power consumption
4...20 mA / 2-wire	12...36 V	$\leq [(U_s - 12 \text{ V}) / 0,02 \text{ A}] \text{ Ohm}^*$	$\leq 26 \text{ mA}$
4...20 mA / HART®			
4...20 mA / 3-wire	12...36 V	$\leq 500 \text{ Ohm}$	
0.5...4.5 V / 3-wire	5 V / 6...15 V		$\leq 2 \text{ mA} / \leq 7 \text{ mA}$
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 3824		-X	-XXXX	-X	-X	-XXXX	-X	-X	-XX
<b>UNIT OF MEASUREMENT</b>									
bar		B							
kg/cm <sup>2</sup>		S							
mH <sub>2</sub> O		W							
kPa		H							
Other (specify when ordering)		X							
<b>UPPER RANGE LIMIT (URL)</b>									
bar, kg/cm <sup>2</sup>		mH <sub>2</sub> O		kPa					
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				
<b>ACCURACY</b>									
0.1% (P > 0.1 bar) standard				A					
0.2% (P ≤ 0.1 bar) standard				B					
Other (specify when ordering)				X					
<b>CABLE EXTERNAL JACKET</b>									
				PVC	P				
				PUR	U				
				FEP	T				
				Other (specify when ordering)	X				
<b>CABLE LENGTH</b>									
any length in meters (e.g., 010M means 10 meters)						XXXM			
<b>OUTPUT SIGNAL</b>									
				4...20 mA / 2-wire	A				
				4...20 mA / 3-wire	B				
				0.5...4.5 V / 3-wire	R				
				RS-485 / Modbus RTU	M				
				4...20 mA / HART®	H				
				Other (specify when ordering)	X				

## ORDERING CODE (CONTINUED)

	ALZ 3824	-X	-XXXX	-X	-X	-XXXX	-X	-X	-XX
<b>SEALS</b>									
							FKM	F	
							NBR	N	
							EPDM	E	
							Other (specify when ordering)	X	
<b>VERSION</b>									
								Standard	00
								Other (specify when ordering)	XX

Example: ALZ 3824-W-6000-A-P-010M-A-F-00

## ACCESSORIES

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