



### DESCRIPTION

APZ 3240 is based on a high precision oil-free capacitive ceramic sensor with ranges starting at 40 mbar for measuring liquid levels as low as 40 cm. Flush ceramic diaphragm makes it a perfect fit for the viscous, aggressive\* and abrasive media. Optionally, plastic pressure port is available for certain alkalis and acids. Oil-free dry pressure cell makes APZ 3240 suitable for environments with high oxygen levels and allows to measure gases with high O<sub>2</sub> concentrations.

### SPECIFICATIONS

Pressure ranges: 40 mbar to 70 bar

Basic accuracy:  $\pm 0.25\%$

Sensor: high precision ceramic capacitive

Pressure port: stainless steel, PVC, PVDF Flush diaphragm

Outputs: 4...20 mA, HART®, RS-485 / Modbus RTU;

Pressure port: G 1 1/2"

Pressure port materials: stainless steel (for abrasive media); PVDF, PVC (for aggressive media);

Media temperature: -20...+125 °C\*\*

Ambient temperature: -40...+85 °C\*\*

Optional: field housing with/without graphics display

### APPLICATIONS

Certain alkalis and acids

Aggressive media\*

Viscous media Sewage, waste water, sludge

Abrasive media

Oxygen

Precise level monitoring in tanks

\* Please consult the manufacturer for particular media compatibility

\*\* Plastic pressure port offers reduced temperature range

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		Overpressure, bar	Burst pressure, bar	Pressure range, bar		Overpressure, bar	Burst pressure, bar
Gauge	Absolute			Gauge	Absolute		
0...0.04	-	4	5	0...1.6	0...1.6	18	22
0...0.06	-	4	5	0...2.5	0...2.5	25	31
0...0.10	-	4	5	0...4.0	0...4.0	25	31
0...0.16	-	6	7	0...6.0	0...6.0	40	50
0...0.25	0...0.25	6	7	0...10	0...10	40	50
0...0.40	0...0.40	6	7	0...20	0...20	40	50
0...0.60	0...0.60	6	7	0...40	0...40	60	80
0...1.0	0...1.0	10	12	0...70	0...70	105	120

Gauge pressure transmitters with URL from 0.4 bar up are resistant to underpressure of 1 bar.

Gauge pressure transmitters with URL from 0.16 bar up are resistant to underpressure of 0.5 bar.

Gauge pressure transmitters with URL from 0.1 bar up are resistant to underpressure of 0.3 bar.

PERFORMANCE	P > 0.1 bar	P ≤ 0.1 bar
Accuracy, % of span*	≤ ±0.25 (standard) / 0.20 (optional for stainless steel housing)	≤ ±0.5 (standard)
Temperature effect (% of span / 10 °C)	≤ ±0.2	≤ ±0.3
Compensated range	-20...+80 °C	
Power supply effect	≤ ±0.05% of span / 10 V	
Load resistance effect	≤ ±0.05% of span / kOhm	
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...+125 °C (depends on pressure port and seal materials)
Ambient temperature	-40...+85 °C
Storage temperature	-40...+85 °C
Vibration resistance	10 g RMS, 20–2000 Hz
Shock resistance	100 g / 11 ms
Service life	> 100 x 10 <sup>6</sup> cycles

### MECHANICAL SPECIFICATIONS

Pressure port material	stainless steel 316L (1.4404) (-20...+125 °C) PVDF (-20...+70 °C, up to 20 bar) PVC (-10...+50 °C, up to 10 bar)
Housing material	stainless steel 316L (1.4404) (-20...+125 °C) PVDF (-20...+70 °C, up to 20 bar) PVC (-10...+50 °C, up to 10 bar)
Seal	FKM (-20...+125 °C); EPDM (-20...+125 °C); NBR (-20...+100 °C);
Diaphragm	ceramics Al <sub>2</sub> O <sub>3</sub> 96%
Wetted parts	Diaphragm, pressure port, seal
Pressure port	G1 1/2" DIN 3852

Electrical connection	Ingress protection	Cross section	Cable diameter
DIN 43650A (4 pin)	IP65	1.5 mm <sup>2</sup>	6...8 mm
Binder 723 (5 pin)	IP67	0.75 mm <sup>2</sup>	6...8 mm
M12x1 (5 pin)	IP67	0.75 mm <sup>2</sup>	6...8 mm
Buccaneer (4 pin)	IP68	1.5 mm <sup>2</sup>	6...8 mm
Cable gland, M12x1.5	IP67	0.14 mm <sup>2</sup>	5 mm
Cable gland, stainless steel	IP68	0.14 mm <sup>2</sup>	7.5 mm
Field housing, cable gland M20x1.5	IP67	1.5 mm <sup>2</sup>	7...10 mm

### DIGITAL DISPLAY (only for field housing version)

Display type	OLED 128x64 pixels (30x16 mm)
Displayed units	bar, mbar, MPa, kPa, Pa, psi, mmHg, mWc, ftH <sub>2</sub> O, %, mA, user
Displayed values range	-1999...9999
Display accuracy	0.1 % of span ± 1 digit
Settling time	< 1 s (with damping disabled)
Damping	0.3...30 s (programmable)

## ELECTRICAL SPECIFICATIONS

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

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

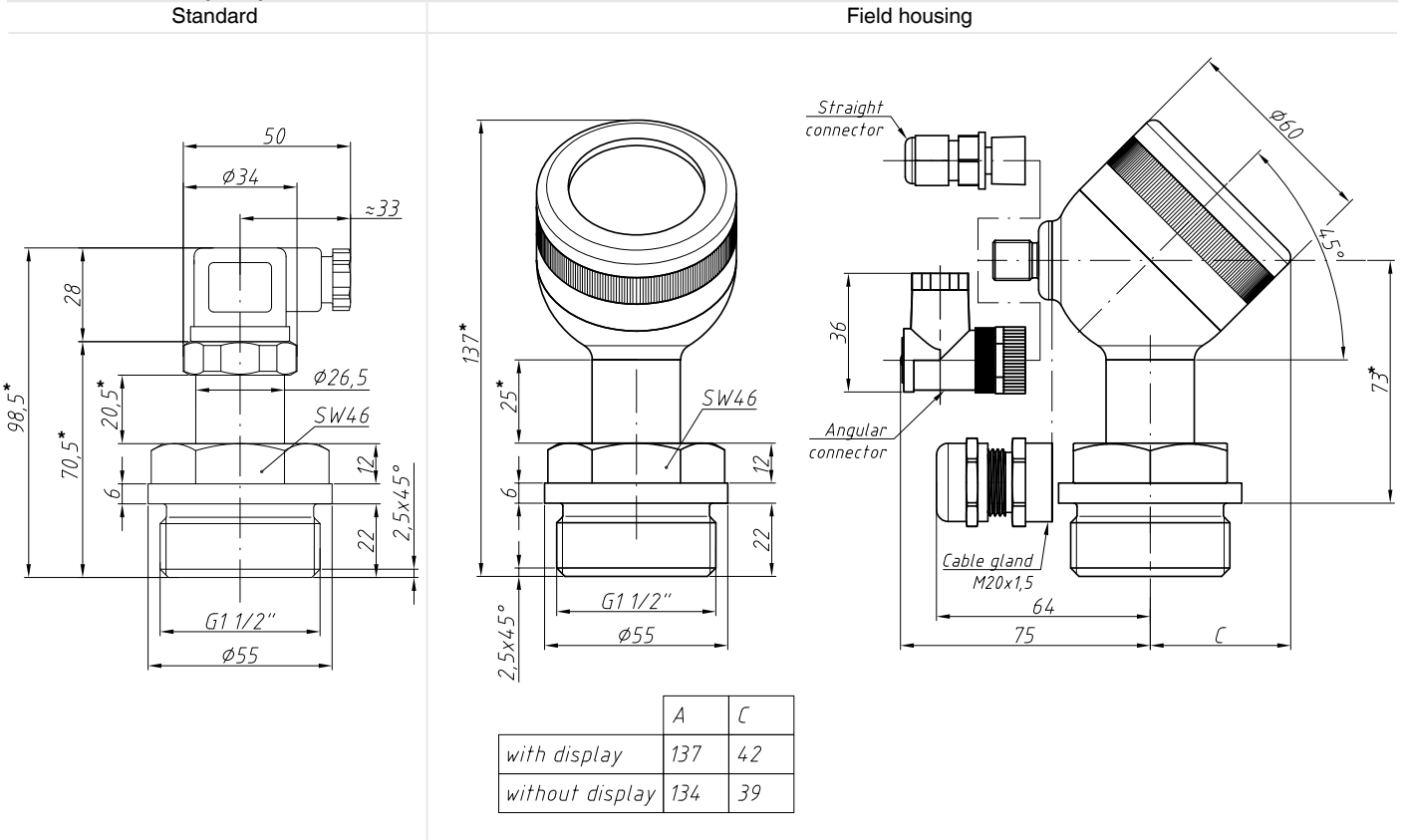
## ELECTRICAL CONNECTIONS / PIN ASSIGNMENT

Circuits	DIN 43650	M12x1	Binder 723	Buccaneer	Cable gland	Field housing with M20x1.5 cable gland
2-wire / HART®	power +	1	3	1	white	2
	power -	2	4	2	brown	3
	shield	GND	4	5	4	yellow-green
RS-485 4-wire	power +	-	3	-	white	-
	power -	-	1	1	brown	-
	A	-	4	4	yellow	-
	B	-	5	5	green	-
	shield	-	2	2	-	yellow-green

## ELECTRICAL CONNECTIONS, DIMENSIONS (mm)

DIN 43650A (IP65)	Cable gland M12x1.5 (IP67)	M12x1 straight connector (IP67)	M12x1 angular connector (IP67)
Binder 723 (IP67)	Buccaneer (IP68)	Stainless steel cable gland (IP68)	

## DIMENSIONS (mm)



\* Housing of pressure transmitter with RS485 / ModbusRTU output signal is 34 mm longer.  
 Housing of pressure transmitter with HART® output signal is 42 mm longer.

**ORDERING CODE**

APZ 3240		-X	-X	-XXXX	-X	-XX	-X	-XXX	-X	-X	-XX
<b>MEASUREMENT TYPE</b>											
Gauge		G									
Absolute (consult sales)		A									
<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							
0.04	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						
40	4001	400	4002	4000	4003						
70	7001	700	7002	7000	7003						
Other	XXXX	Other	XXXX	Other	XXXX						
<b>ACCURACY</b>											
		0.25 (P > 0.1 bar) (standard)			C						
		0.50 (P ≤ 0.1 bar) (standard)			D						
		0.20 (P > 0.1 bar) (optional for stainless steel housing)			B						
		Other (specify when ordering)			X						
<b>ELECTRICAL CONNECTION</b>											
		DIN 43650A			10						
		Binder 723			20						
		M12x1, straight connector			30						
		M12x1, angular connector			31						
		Cable gland M12x1.5 + cable 2 m			40						
		Stainless steel cable gland + cable 4 m			41						
		Buccaneer			50						
		Field housing without display, cable gland M20x1.5			60						
		Field housing with display, cable gland M20x1.5			67						
		Field housing with display, straight connector M12x1			64						
		Field housing with display, angular connector M12x1			65						
		Other (specify when ordering)			XX						
<b>OUTPUT SIGNAL</b>											
		4...20 mA / 2-wire (standard)			A						
		4...20 mA / HART®			H						
		RS-485 / Modbus RTU			M						
		Other (specify when ordering)			X						
<b>PRESSURE PORT</b>											
		G1 1/2" DIN 3852			765						
		Other (specify when ordering)			XXX						

## ORDERING CODE (CONTINUED)

	APZ 3240	-X	-X	-XXXX	-X	-XX	-X	-XXX	-X	-X	-XX
<b>SEALS</b>											
								FKM (-20...+125 °C, standard)	F		
								NBR (-20...+100 °C)	N		
								EPDM (-20...+125 °C)	E		
								Other (specify when ordering)	X		
<b>HOUSING MATERIAL</b>											
								Stainless steel 316L	A		
								PVC (-10...+50 °C, up to 10 bar)	P		
								PVDF (-20...+70 °C, up to 20 bar)	F		
								Other (specify when ordering)	X		
<b>VERSION</b>											
									Standard		00
									Other (specify when ordering)		XX

Example: APZ 3240-G-B-1001-C-10-H-765 -F-A-00

## ACCESSORIES

				
DZ 10 Pressure snubber	ZCON 100 Zero trim and range selection device	ANZ 200 Plug-in display for transmitters with 4-20 mA output	PZ 1024 Power supply unit	BZ 05 / BZ 10 Dry air junction box for submersible transmitters