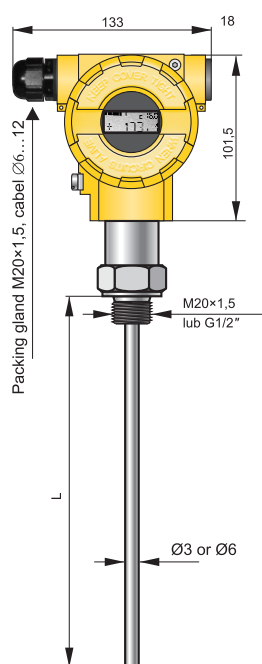




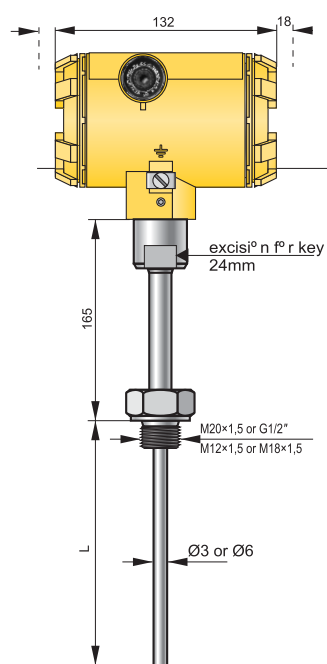
Smart temperature transmitter APT-2000ALW



- ✓ 4...20 mA output signal + HART protocol
- ✓ Programmable range, zero shift, characteristic and damping ratio with local panel keys
- ✓ ATEX Intrinsic safety , ATEX Explosion proof
- ✓ Resistant or thermocouple measuring element
- ✓ Accuracy 0.075%
- ✓ MID (Measuring Instruments Directive) – certificate acc. to 2004/22/WE directive and OIML R140:2007 recommendations.



APT-2000ALW/GB



APT-2000ALW/GN

Version

APT-2000ALW/GB

version with spring loaded sensor screwing in thermowell.

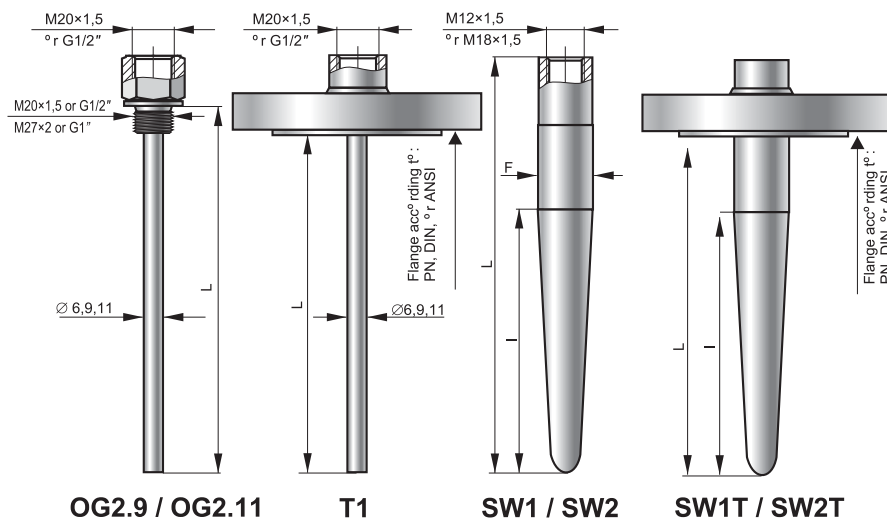
- standard version
- Exia version
- Exd version
- MID version

APT-2000ALW/GN

version with spring loaded sensor screwing in thermowell.

- standard version
- Exia version
- Exd version

Thermowell



OG2.9 / OG2.11

T1

SW1 / SW2

SW1T / SW2T

Technical data

Metrological parameters

Error (digital value)

$\pm (0,05 + 0,05\% \cdot z + 0,001 \cdot |t|) ^\circ\text{C}$ for sensor Pt100
 $\pm (0,5 + 0,05\% \cdot z) ^\circ\text{C}$ for sensor K it $\leq 375^\circ\text{C}$
 $\pm (0,5 + 0,05\% \cdot z + 0,002 \cdot (t-375)) ^\circ\text{C}$ for sensor K it
 $t > 375^\circ\text{C}$

Additional error for analog output $\pm 0,04\% \cdot z$

where:

|t| – absolute value of the measured temperature $^\circ\text{C}$

t – value of the measured temperature $^\circ\text{C}$

z – transmitter setting range $^\circ\text{C}$

Measuring range

Sensor type	Min set range	Nominal range
Pt100	10 $^\circ\text{C}$	-200...550 $^\circ\text{C}$
K	10 $^\circ\text{C}$	-40...550 $^\circ\text{C}$


Electrical parameters


Power supply 12...55 V DC (Ex 13,5...28 V)

Additional voltage drop when display illumination switched on 3 V

Output signal 4...20 mA + Hart protocol

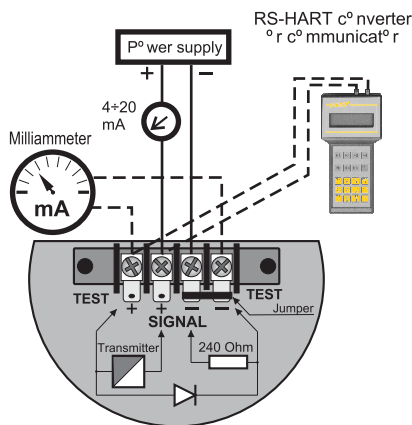
ATEX certificate

Ex ia  II 1/2G Ex ia IIC T4/T5/T6 Ga/Gb
 I M1 Ex ia I Ma dla (version with 316ss h^o using)
 II 1D Ex ia IIC T105 $^\circ\text{C}$ Da

Exd  I M2 Exd ia I Mb (version with 316ss h^o using)
 II 1/2G Exd/ia IIC T* Ga/Gb
 II 1/2D Ex.ia/t IIC T* Da/Db

T* – temperature class transmitter (for gas)
 or maximum surface temperature (for dust)

Electrical diagram



Resistance required for communication (HART) min. 240 Ω .

Load resistance

$$R[\Omega] = \frac{AS [V] - 12V^*}{0,0225A}$$

* – 15 V when display illumination switched on

Operating conditions

Ambient temperature -40...85 $^\circ\text{C}$
 for version with Ex ia -40...80 $^\circ\text{C}$
 for version with Ex d -40...75 $^\circ\text{C}$

Min. immersion length

L=100mm

Materials

Casing

Aluminium,
 316Lss- special version

Sensor material

321ss

Thermowell

according to table page.

Communication and configuration

The communication standard for data interchange with the transmitter is the Hart protocol.

Communication with the transmitter is carried out with:

- a KAP-03, KAP-03Ex communication,
- some other Hart type communication,
- a PC using an Hart/RS/Bluetooth converter and Raport 2 configuration software.

The data interchange with the transmitter enables the users to:

- ◆ identify the transmitter;
- ◆ configure the output parameters;
- ◆ read the currently measured temperature value of the output current and the percentage output current level;
- ◆ force an output current with a set value;
- ◆ calibrate the transmitter in relation to a model temperature.

Standard thermowell data

Thermowell type	Standard dimensions of thermowell			Thermowell material	Available process connection
	[mm]	L[mm]	l[mm]		
OG2.9	9x1	100, 160, 250, 400	-	316Lss	M20x1,5, M27x1 G", G', "NPT
OG2.11	11x2	100, 160, 250, 400	-	316Lss	M20x1,5, M27x1 G", G', "NPT
T1	11x2	100, 160, 250, 400	-	316Lss	Flange according to DIN and ANSI
SW1/SW2	18h7/24h7	140, 200	65, 65	15HM, 10H2M 316Lss	-
SW1T/SW2T	18h7/24h7	100, 140, 200	35, 65, 65	15HM, 10H2M 316Lss	Flange according to DIN and ANSI



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In technical collaboration with Aplisens S. A. - Poland