



AP 108

This sensor is suitable for temperature measurements of media with slow temperature changes. Sensor sheath made of heat-resistant and creep-resistant steel enables temperature measurement of e.g. Burned gases and exhaust gases in furnaces.

Specification

Temperature range / sensing element

-40÷700°C	J	class 2
-40÷1200°C	K	class 2
-40÷1200°C	N	class 2

Measuring insert

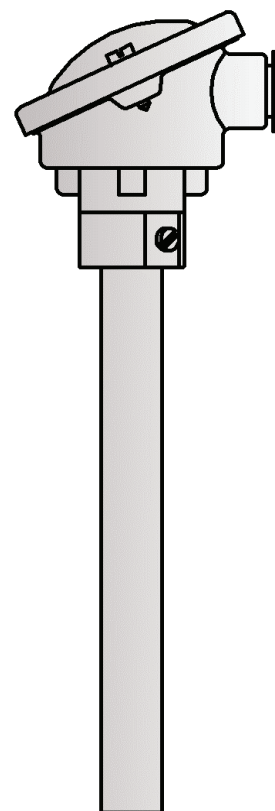
- mineral insulated W2 1 or 2 J, K, N ø6mm
- control hole for 4mm for thermocouple

Thermowell

- material: steel 1.4841 max. temp. 1150°C
- material: steel 1.4762 max. temp. 1200°C
- material: steel 15Cr25T max. temp. 1000°C
- length min. [mm]: 300
- max. [mm]: 3000

Connection head

AA, IP53, -40÷100 °C
DAAW, IP65, -40÷100 °C (for transmitter)



Other parameters acc. to requirements

Options

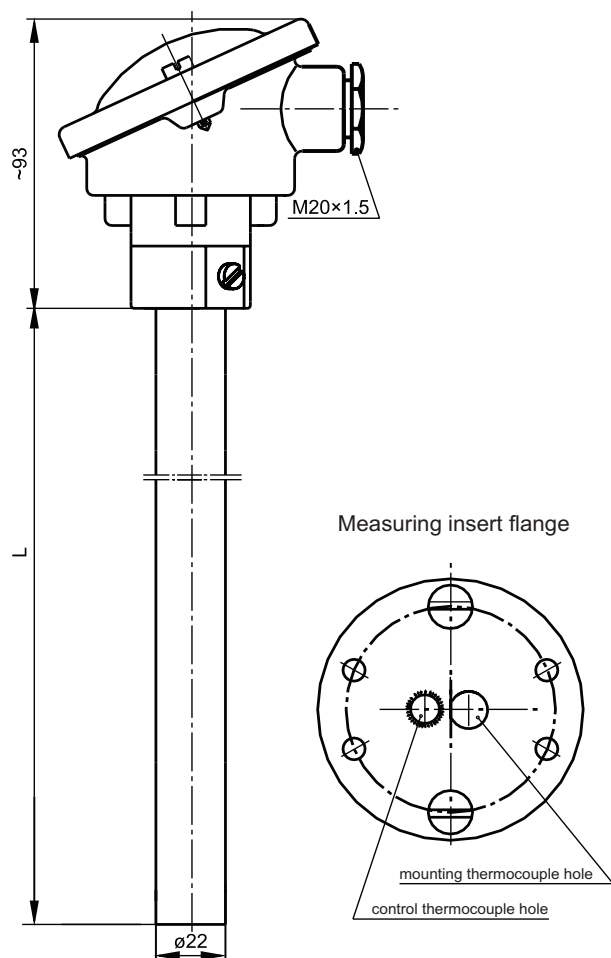
Temperature transmitter application

Temperature transmitter with standard 4÷20mA, 0÷10V output signals and with the HART or PROFIBUS communication protocols can be mounted in the connection head. Transmitter installation is carried out in the high cover of a connection head. Temperature transmitters are mounting into DAAW connection head.

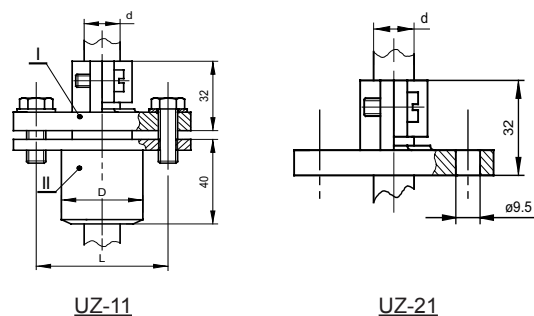
Non-standard design

Immersion length, shape and material of the sheath, head type and the measuring insert parameters can be customized per client request.

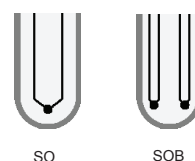
Calibrations performed by Limatherm Sensor Sp. z o.o. are confirmed with the Calibration Certificate of the Accredited Laboratory for Temperature Measurements.



Mounting fittings



Thermocouple hot junction types



Standard length

Immersion length L [mm]	Measuring insert length L _w [mm]
500	535
710	745
1000	1035
1400	1035
2000	2035

Tolerance for thermocouple classes acc. to PN-EN 60584

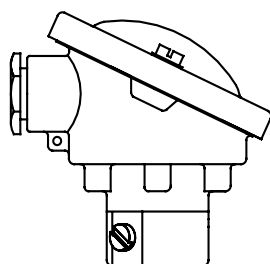
Thermocouple type	Class 1		Class 2	
	Range of application [°C]	Tolerance [°C]	Range of application [°C]	Tolerance [°C]
J Fe-CuNi	from -40 to +375 from +375 to +750	±1,5 ±0,004 t	from -40 to +333 from +333 to +750	±2,5 ±0,0075 t
K NiCr-NiAl N NiCrSi-NiSi	from -40 to +375 from +375 to +1000	±1,5 ±0,004 t	from -40 to +333 from +333 to +1200	±2,5 ±0,0075 t

|t| - absolute value of temperature

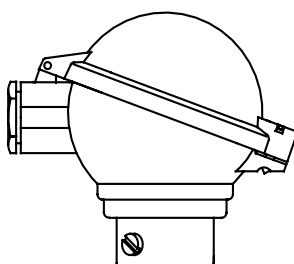
Connection head types

Connection head type AA in standard.

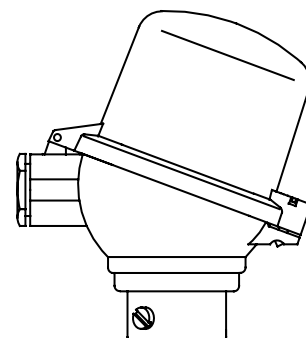
Possibility to mount the connection head of different type.



AA



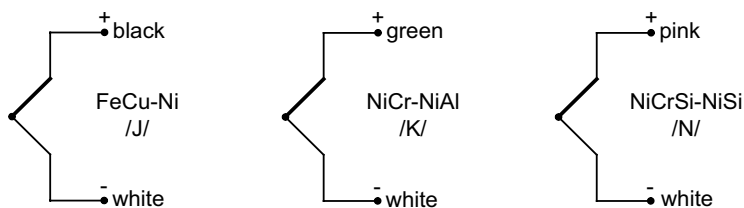
DA



DAAW

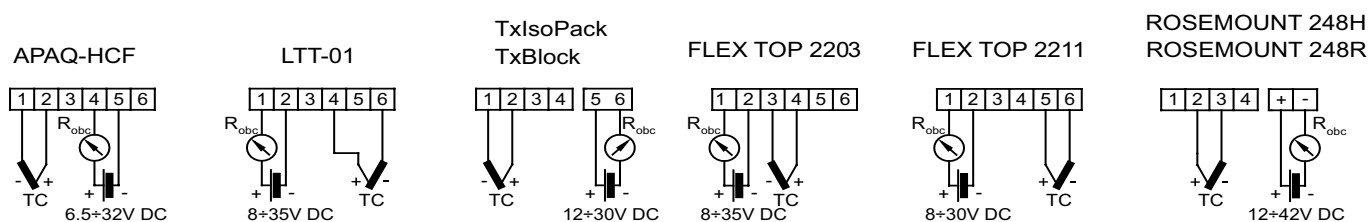
Connection schemes

TC (thermocouple)



In double sensors one of thermocouples is additionally marked out.

Transmitters



Product code

Sensor version	
no designation	single
2	double
AP	with transmitter
Sensing element	
TJ	thermocouple Fe-CuNi /J/
TK	thermocouple NiCr-NiAl /K/
TN	thermocouple NiCrSi-NiSi /N/
	other parameters acc. to requirements
Thermowell length	
500	500mm
710	710mm
1000	1000mm
1400	1400mm
2000	2000mm
	other parameters acc. to requirements
Accuracy	
1 or 2	for thermocouple
Thermowell material	
1.4841	creep-resistant steel
1.4762	heat-resistant steel
15Cr25T	heat-resistant steel
	other parameters acc. to requirements

		Transmitter type (optionally)	
6		Tx	head mounted transmitter TxBlock
			other parameters acc. to requirements
		Temperature range of transmitter	
7		(0÷100°C)	transmitter configured for temperature range 0÷100°C
			other parameters acc. to requirements

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Ordering example: PTTKUO-15-500-1-1.4762 single sensor with thermocouple NiCr-NiAl /K/, class 1, material steel 1.4762, diameter 22mm, with inspection hole ø4mm, sheath length L=500mm