



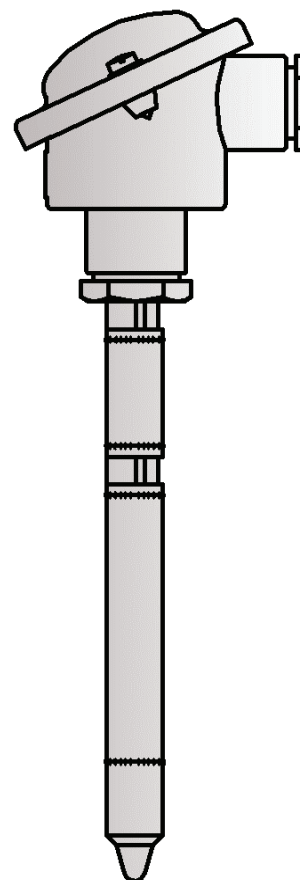
AP 108

Suitable for temperature measurement of rubber mix, the sensor is adequate for mounting in a door of rubber mixer. Special narrowed tip enhances speed of sensor reaction to temperature change. Sensor tip is additionally covered with a protective layer that increases abrasion resistance. Inside the sheath a flexible, mineral insulated measuring insert is included. It can be replaced without the need to disassemble the whole sensor.

Specification

Temperature range / sensing element		
-40÷300°C	K, J	class 2
Measuring insert		
– mineral insulated [mm]: ø3		
Thermowell		
<ul style="list-style-type: none"> – material: steel 1.4541 – special thermowell design enables sensor mounting in a door of rubber mixer – thermowell narrowed tip is covered with a protective layer to increase abrasion resistance 		
Connection head		
– BA, IP55, -40÷100°C		

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 directly on the measuring insert (in place of a terminal block) or in the high cover connection head.

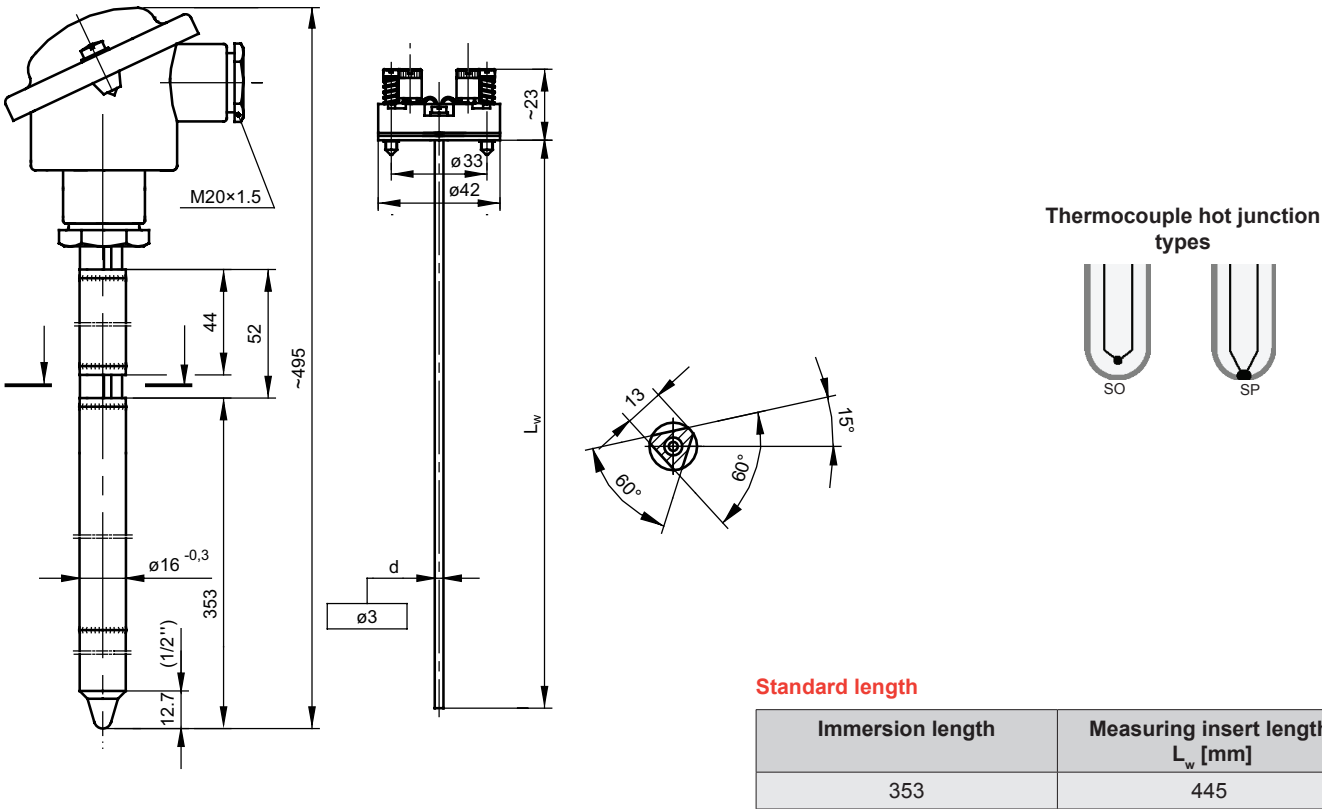
Local display application

The temperature sensor can be equipped with the connection head enabling the local LED display installation. The local display operates in current loop 4÷20mA. This version makes the local temperature reading and transmission of the analogue signal possible.

Non-standard design

Immersion length, process connection thread, shape and material of the thermowell, connection 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.



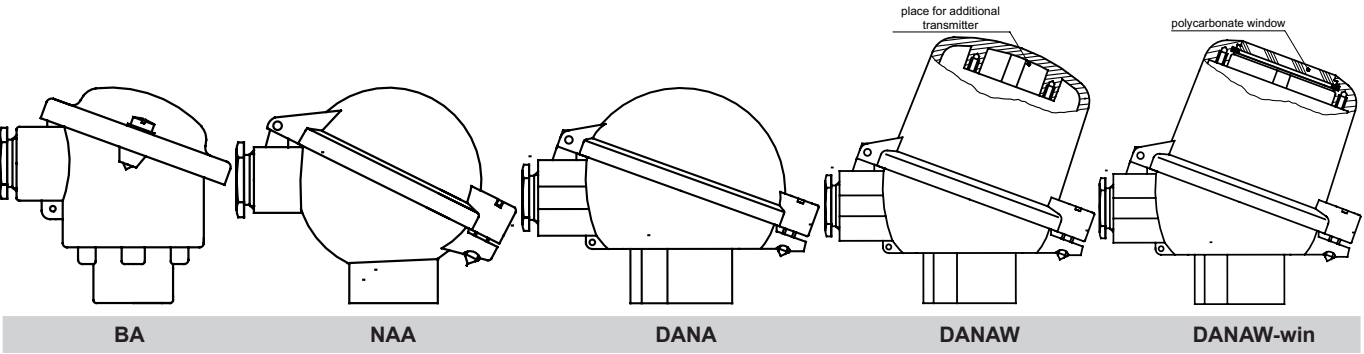
Tolerance for thermocouple classes acc. to PN-EN 60584

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	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

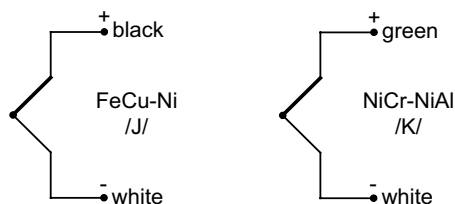
Connection head types

Connection head type BA in standard.
Possibility to mount the connection head of different type.



Connection schemes

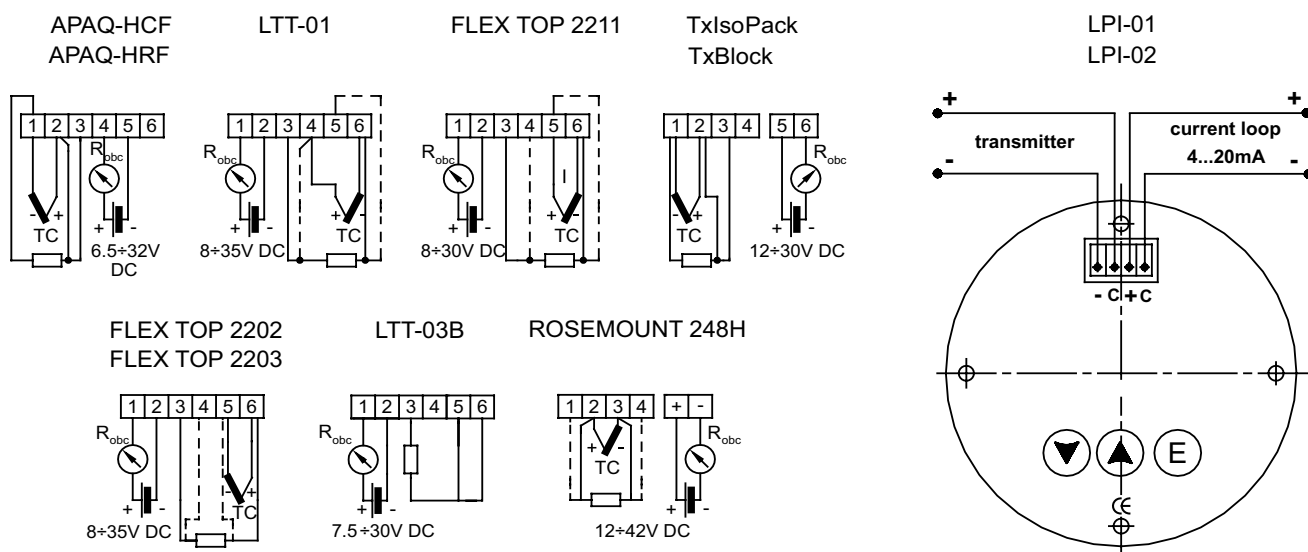
TC (thermocouple)



In double sensors one of thermocouples is additionally marked out.

Transmitters

Local LED display



Product code

		Sensor version	
1		AP	with transmitter
		APW	with display
		Sensing element	
2		TJ	thermocouple Fe-CuNi /J/
		TK	thermocouple NiCr-NiAl /K/
			other parameters acc. to requirements
		Thermocouple hot junction type	
3		SO	insulated hot junction
		SP	grounded hot junction
		Accuracy	
4		1 or 2	for thermocouple
		Transmitter type (optionally)	
5		Tx	head mounted transmitter TxBlock
			other parameters acc. to requirements
		Temperature range of transmitter	
6		(0÷100°C)	transmitter configured for temperature range 0÷100°C
			other parameters acc. to requirements

	1		2		3		4		5		6
TT		U-45	-		-		-		-		

Ordering example: **TTJU-45-SO-1** sensor with thermocouple Fe-CuNi /J/, class 1, insulated hot junction SO