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Harmonized standards applied: LST EN 1434-1:2016, LST EN 1434-2:2016, LST EN 1434-4:2016, LST EN 1434-5:2016.

The measuring instrument must correspond with the following specifications:

1 Design of the instrument

1.1 Construction

The resistance temperature sensor pair TP5 is a sub-assembly of a heat meter. The temperature sensors have a permanently connected signal leads and are intended for direct mounting. Mechanical design of the temperature sensors – type DS according to LST EN 1434-2. The sensors have two-wire connection. The length of cables can be 1.5; 3 or 5 m.

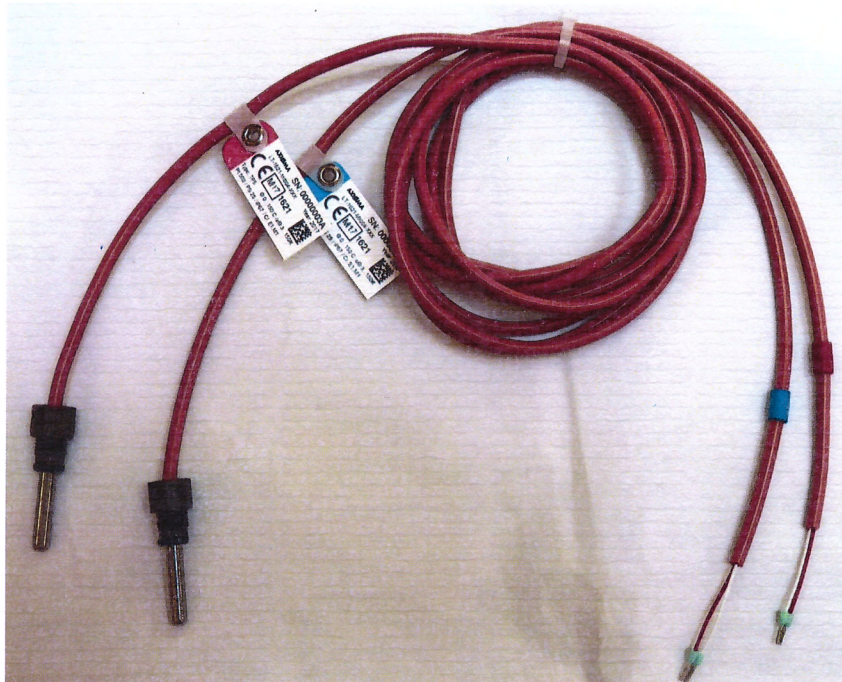


Fig.1. Temperature sensor pair TP5

1.2 Measurand sensor

Platinum resistance thermometer with Pt 500 sensor and resistance characteristics according to LST EN 60751.

1.3 Measurand processing

None.

1.4 Indication of the measurement results

The output signal in the form of resistance is transferred to the heat meter calculator, which displays the values of temperatures in inlet and outlet and values of temperature differences.

1.5 Optional equipment and functions subject to MID requirements

None.



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1.6 Technical documentation

Platinum resistance temperature sensors TP5. Technical description and user manual PLTP5V02, 22-11-2017.

Design and dimensions of the temperature sensor TP5. Drawing 1523.00.00.SB, 01-2018.

Other reference documents, on which basis this certificate is issued, are stored in a file LEI-12-MP-066.17.

1.7 Integrated equipment and functions not subject to MID

Double pair – temperature sensor pair with additional temperature sensor, which is paired with inlet temperature sensor.

2 Technical data

2.1 Rated operating conditions

2.1.1 Measurand

Temperature difference, which is directly related to the heating energy, measured by the calculator.

2.1.2 Measurement range

- limits of temperature Θ : 0 °C to 150 °C;
- limits of temperature differences $\Delta\Theta$: 3 K to 150 K.

2.1.3 Maximum permissible error

$$E_t = \pm (0,5 + 3\Delta\Theta_{\min}/\Delta\Theta), \%$$

where: $\Delta\Theta_{\min}$ - the lower limit of the temperature difference, K;
 $\Delta\Theta$ - the measured temperature difference, K.

2.1.4 Environmental conditions/ Influence quantities

Ambient temperature	:	5 °C to 55 °C;
Humidity	:	condensing;
Installations	:	indoor;
Mechanical environment	:	class M1;
Electromagnetic environment	:	class E1.

2.2 Other operating conditions

Minimum immersion depth	:	20 mm;
Thermal response time $\tau_{0,5}$:	< 10 s;
Maximum admissible working pressure PS	:	25 bar.

3 Interfaces and compatibility conditions

The heat meter calculator must be intended for the connection of the temperature sensors Pt 500.



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4 Requirements on production, putting into use and utilization

4.1 Requirements on production

At the end of the manufacturing process the temperature sensor pair shall be tested according to the requirements of the LST EN 1434-5. Errors of the temperature sensor pair shall not exceed the maximum permissible errors described in Annex VI (MI-004) of the Directive 2014/32/EU.

4.2 Requirements on putting into use

The temperature sensor pair must be installed in accordance with the requirements of technical description listed in section 1.6.

4.3 Requirements for consistent utilization

No special requirements identified.

5 Control of the measuring process after tasks of the instrument in use

5.1 Documentation of the procedure

None.

5.2 Special equipment of hardware or software

None.

5.3 Identification of hardware and software

Identification of hardware: see Fig.1 and Fig. 3 of this appendix.

5.4 Calibration-adjustment procedure

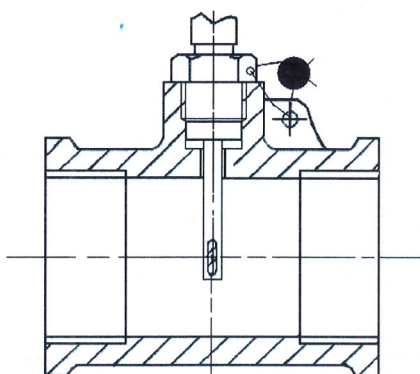
The tests of the temperature sensor pair should be carried out according to requirements of LST EN 1434-5.

6 Security measures

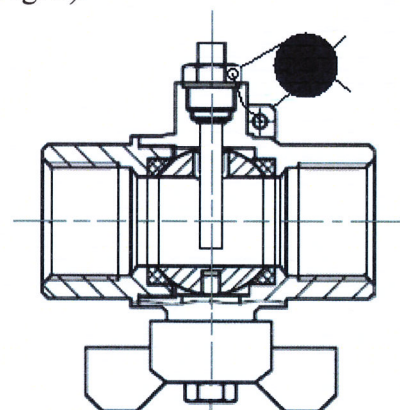
6.1 Sealing

The marking label of the each sensor is permanently connected to the sensor cable (Fig. 1).

The temperature sensors must be sealed with hanged seal of heat supplier to ensure that after the temperature sensors have been installed, it is not possibility of dismantle, remove or altering the sensors without evident damage on the sensors or the seal (Fig. 2).



a) in three-way fitting



b) in ball valve

Fig. 2. Sealing of the temperature sensors after installation



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6.2 Data logger

Not applicable.

7 Marking and inscriptions

7.1 Information to be borne by and to accompany the measuring instrument

On the type label of the temperature sensors shall contain at least the following information:

- EU-type examination certificate number (LT-1621-MI004-027 Rev.1);
- name of the manufacturer or this trade mark;
- type designation;
- Pt - designation of the temperature sensor;
- year of manufacture and serial number*;
- limits of temperature;
- limits of temperature differences;
- the maximum admissible working pressure PS, in bar;
- electromagnetic class;
- mechanical class.

Note: * - serial number of temperature sensor consists of eight digits and the letter. The pair or double pair has the same number and the different letters:

„XXXXXXXXXA“- temperature sensor is used for mounting in inlet pipe. Field in the label is red.

„XXXXXXXXXB“- temperature sensor is used for mounting in outlet pipe. Field in the label is blue.

„XXXXXXXXXC“- additional temperature sensor of the double pair. Field in the label is blue.

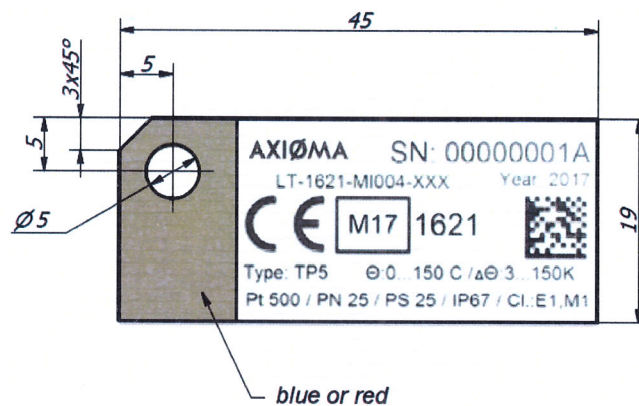


Fig. 3. Marking label of the temperature sensor

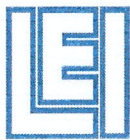
7.2. Conformity marking

In addition, the label of the temperature sensor should contain the following marking:

- „CE“ marking;
- metrology marking, consisting of the capital letter „M“ and the last two digits of the year of its affixing, surrounded by a rectangle;
- identification number of the notified body, which carried out the conformity assessment.

8 List of the drawings attached to the certificate

Design and dimensions of the temperature sensor TP5. Drawing N1.1523.00.00.SB, 01-2018.



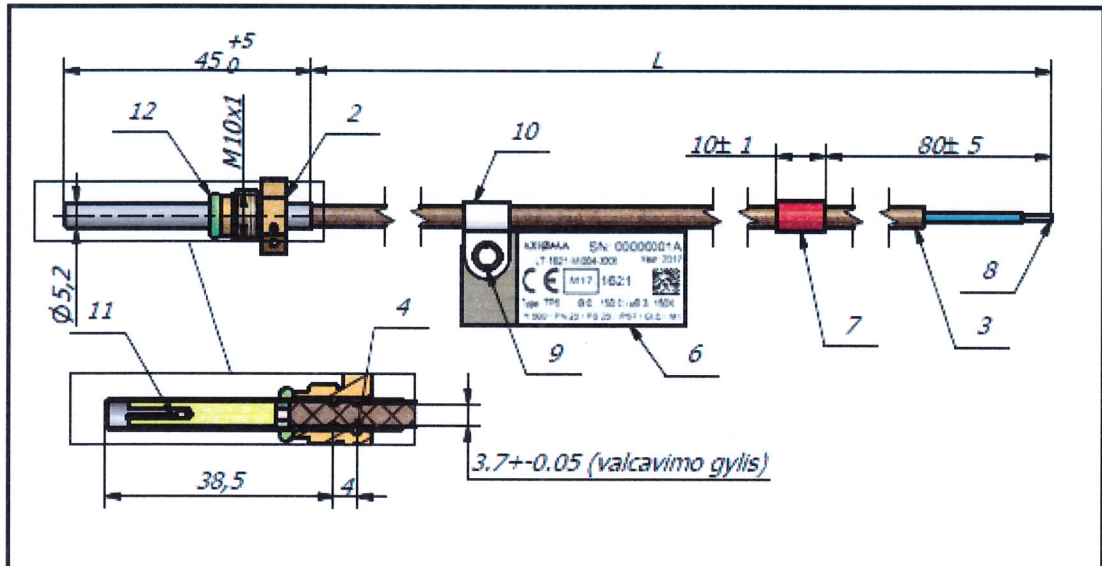
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9 Certificate history

Issue	Date and reference No.	Description
1	2	3
LT-1621-MI004-027	05-12-2016, No. LEI-12-MP-047.16	Type examination certificate first issued
LT-1621-MI004-027 Revision 1	24-01-2018, No. LEI-12-MP-066.17	1. Manufacturer's name AB „Axis Industries” changed to UAB „Axioma LEZ”. 2. On the temperature sensor label, the brand name QALCO has been changed to AXIOMA. 3. New drawing N1.1523.00.00.SB of the temperature sensor, issued 01-2018. 4. The document PLTP5V01, issued 06-04-2016, has been replaced by the document PLTP5V02, issued 21-11-2017.



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For	Pozi	Žymėjimas	Pavadinimas	Kiekis	NVS kodas
A4	1	N1.1523.00.01	TP5 temperatūros jutiklio gilzė	1	AGG000110
A4	2	N1.1523.00.02	Veržlė TP5-M10x1	1	
A4	3	N1.1523.00.04	Kabelis (SIHF 2x0.25....D4.2)	1	ELK001400
A4	4	N1.1523.00.05	Kaištis 1,5x10	1	
A4	5	N1.1523.01.01-03	SMP PL5 v03	1	SE0005719
A4	6	N7.100.03.01-02	Etiketė TP5	1	
	7		Termovamzdeli 6.4mm; L-10mm; raudonas (mėlynas)	1	SE0001604
	8		Antgalis laidui 0,5-6mm	2	EAN000011
	9		Kniedė žalvarinė HO66	1	TVKN00138
	10		Laikiklis etiketei	1	EUP000467
	11	Jumo PCA 1.2010.5L	Termosensorius PCA1.2010.5L	1	SE0004157
	12	Max temp 150 C	O-žiedas 4,3x2,4	1	
			Galimi variantai:		
A4	2	N1.1523.00.02-01	Veržlė plastmasinė M10x1 (komplektas)	1	EDV000670

1. *Informacinis matmuo
2. Techninius reikalavimus surinkimui žiūr. surinkimo darbo instrukciją TP5_01101.
3. Kabelio ilgis "L" nurodomas užsakyme: 1,5m; 3m; 5m.
4. Veržlė 2 ir o-ring 12 nemontuojami, kai komplektuojama su plastmasine veržle.

					N1.1523.00.00.SB				
					Termperatūros jutiklis TP5	Raidė		Masė	Mastelis
Pak	Lapas	Dokum.Nr	Parašas	Data					1:1
Atliko	Poška			2018.01					
Tikrino									
N.kontr.									
T.kontr.						Lapas 1		Lapų 1	
Suderinta	Balčikonis					UAB AXIOMA LEZ			
Tvirtino	Bagdonas								

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