

Date

Reference

2021-03-26

2019/2871

## Scope of accreditation

### Calibration laboratory according to SS-EN ISO/IEC 17025:2018

Pentronic AB

Västervik

Accreditation number

0076

Gunnebo

A000508-001

## Electricity and Magnetism

<i>Technology area</i>	<i>Parameter</i>	<i>Method</i>	<i>Material</i>	<i>Measure</i>	<i>Best measuring ability (CMC) +/-</i>	<i>Technique</i>	<i>Field</i>
Current	DC	Inhouse method; 1.31, edition 1.3	Current showing	0,001 – 2mA	40mA		No
	DC	Inhouse method; 1.31, edition 1.3	Current showing	2 – 20mA	400mA		No

## Temperature

<i>Technology area</i>	<i>Parameter</i>	<i>Method</i>	<i>Material</i>	<i>Measure</i>	<i>Best measuring ability (CMC) +/-</i>	<i>Technique</i>	<i>Field</i>
Temperature	Resistance	Inhouse method; 2.50 utg 2.0	Resistanstermometer	0,01 °C	0,0016 °C	Water	No
	Resistance	Inhouse method; 2.50 utg 2.0	Resistanstermometer	156,5985 °C	0,003 °C	Indium	No
	Resistance	Inhouse method; 2.50 utg 2.0	Resistanstermometer	231,928 °C	0,004 °C	Tin	No
	Resistance	Inhouse method; 2.50 utg 2.0	Resistanstermometer	29,7646 °C	0,002 °C	Gallium	No
	Resistance	Inhouse method; 2.50 utg 2.0	Resistanstermometer	-38,8344 °C	0,002 °C	Quicksilver	No
	Resistance	Inhouse method; 2.50 utg 2.0	Resistanstermometer	419,527 °C	0,005 °C	Zinc	No
	Resistance	Inhouse method; 2.50 utg 2.0	Resistanstermometer	660,323 °C	0,008 °C	Aluminium	No

## Appendix 1

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<i>Technology area</i>	<i>Parameter</i>	<i>Method</i>	<i>Material</i>	<i>Measure</i>	<i>Best measuring ability (CMC) +/-</i>	<i>Technique</i>	<i>Field</i>
Temperature	Contact	Inhouse method; 2.60 Utg 1.7	Resistanstermometer	200 – 550 °C	0,02 °C		No
	Contact	Inhouse method; 2.60 Utg 1.7	Resistanstermometer	550 – 650 °C	0,1 °C		No
	Contact	Inhouse method; 2.60 Utg 1.7	Resistanstermometer	-80 – 200 °C	0,015 °C		No
	Contact	Inhouse method; 3.60 Utg 1.9	Thermocouple	1100 – 1200 °C	1 °C		No
	Contact	Inhouse method; 3.60 Utg 1.9	Thermocouple	550 – 650 °C	0,1 °C		No
	Contact	Inhouse method; 3.60 Utg 1.9	Thermocouple	650 – 1100 °C	0,7 °C		No
	Contact	Inhouse method; 3.60 Utg 1.9	Thermocouple	-80 – 550 °C	0,07 °C		No
	Contact	Inhouse method; 5.11 utg 1.0	Temperature sensors	-200 – 850 °C	0,015 °C		No
	Contact	Inhouse method; 5.50 utg 1.5	Temperature sensors	0,01 °C	0,0016 °C	Water	No
	Contact	Inhouse method; 5.50 utg 1.5	Temperature sensors	156,5985 °C	0,003 °C	Indium	No
	Contact	Inhouse method; 5.50 utg 1.5	Temperature sensors	231,928 °C	0,004 °C	Tin	No
	Contact	Inhouse method; 5.50 utg 1.5	Temperature sensors	29,7646 °C	0,002 °C	Gallium	No
	Contact	Inhouse method; 5.50 utg 1.5	Temperature sensors	-38,8344 °C	0,002 °C	Quicksilver	No
	Contact	Inhouse method; 5.50 utg 1.5	Temperature sensors	419,527 °C	0,005 °C	Zinc	No
Contact	Inhouse method; 5.50 utg 1.5	Temperature sensors	660,323 °C	0,008 °C	Aluminium	No	

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<b>Technology area</b>	<b>Parameter</b>	<b>Method</b>	<b>Material</b>	<b>Measure</b>	<b>Best measuring ability (CMC) +/-</b>	<b>Technique</b>	<b>Field</b>
Temperature	Contact	Inhouse method; 5.50 utg 1.5	Temperature sensors	961,78 °C	0,1 (med t/e) °C	Silver	No
	Contact	Inhouse method; 5.60 Utg 1.8	Temperature sensors	1100 – 1200 °C	1 °C		No
	Contact	Inhouse method; 5.60 Utg 1.8	Temperature sensors	200 – 550 °C	0,02 °C		No
	Contact	Inhouse method; 5.60 Utg 1.8	Temperature sensors	550 – 650 °C	0,1 °C		No
	Contact	Inhouse method; 5.60 Utg 1.8	Temperature sensors	650 – 1100 °C	0,7 °C		No
	Contact	Inhouse method; 5.60 Utg 1.8	Temperature sensors	-80 – 200 °C	0,015 °C		No
	Non-contact thermometry	Inhouse method; 5.81 utg 1.1	Temperature sensors	0 – 200 °C	2 °C		No
	Non-contact thermometry	Inhouse method; 5.83 utg 1.5	Temperature sensors	-10 – 550 °C	3 °C		No
	Contact	Inhouse method; 6.20 Utg 1.5	Blockkalibrator	>200 – 650 °C	0,2 °C		No
	Contact	Inhouse method; 6.20 Utg 1.5	Blockkalibrator	>650 – 1100 °C	1 °C		No
	Contact	Inhouse method; 6.20 Utg 1.5	Blockkalibrator	-80 – 200 °C	0,1 °C		No
	Contact	Inhouse method; 7.10 Utg 1.1	Temperature sensors	-200 – 1750 °C	0,1 °C		Yes
	Contact	Inhouse method; 7.40 Utg 1.0	Temperature sensors	400 – 650 °C	0,2 °C		Yes
	Contact	Inhouse method; 7.40 Utg 1.0	Temperature sensors	650 – 1200 °C	1 °C		Yes
	Contact	Inhouse method; 7.40 Utg 1.0	Temperature sensors	-80 – 400 °C	0,1 °C		Yes

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<i>Technology area</i>	<i>Parameter</i>	<i>Method</i>	<i>Material</i>	<i>Measure</i>	<i>Best measuring ability (CMC) +/-</i>	<i>Technique</i>	<i>Field</i>
Temperature	Contact	Inhouse method; 7.60 Utg 1.0	Temperature sensors	400 – 650 °C	0,2 °C		Yes
	Contact	Inhouse method; 7.60 Utg 1.0	Temperature sensors	650 – 1200 °C	1 °C		Yes
	Contact	Inhouse method; 7.60 Utg 1.0	Temperature sensors	-80 – 400 °C	0,1 °C		Yes
	Non-contact thermometry	Inhouse method; 7.80 Utg 1.1	Temperature sensors	-10 – 550 °C	5 °C		Yes
	Resistance	Intern method; 2.85 utg 1.0	Temperature sensors	-200 - 850 °C	0,015 °C		No
	Contact	Intern method; 3.84 utg 1.2	Temperature sensors	-200 - 1750 °C	0,1 °C		No
		Intern metod; 3.50 Utg 1.6	Thermocouple	156,5985 °C	0,07 °C	Indium	No
		Intern metod; 3.50 Utg 1.6	Thermocouple	231,928 °C	0,07 °C	Tin	No
		Intern metod; 3.50 Utg 1.6	Thermocouple	419,527 °C	0,1 °C	Zinc	No
		Intern metod; 3.50 Utg 1.6	Thermocouple	660,323 °C	0,1 °C	Aluminium	No
		Intern metod; 3.50 Utg 1.6	Thermocouple	961,78 °C	0,1 °C	Silver	No
	Contact	Intern metod; 3.50 Utg 1.6	Thermocouple	156,5985 °C	0,07 °C	Indium	No
	Contact	Intern metod; 3.50 Utg 1.6	Thermocouple	231,928 °C	0,07 °C	Tin	No
	Contact	Intern metod; 3.50 Utg 1.6	Thermocouple	419,527 °C	0,1 °C	Zinc	No
	Contact	Intern metod; 3.50 Utg 1.6	Thermocouple	660,323 °C	0,1 °C	Aluminium	No
	Contact	Intern metod; 3.50 Utg 1.6	Thermocouple	961,78 °C	0,1 °C	Silver	No
Contact	Intern metod; 5.21 utg 1.4	Temperature sensors	-200 – 1750 °C	0,07 °C		No	

Calibration and measurement capability, CMC, is the smallest uncertainty the calibration laboratory can provide, expressed as the expanded uncertainty having a coverage probability of approximately 95%.