RAAD VOOR ACCREDITATIE

Dutch Accreditation Council RvA
PO Box 2768 NL-3500 GT Utrecht

The Dutch Accreditation Council RvA, by law appointed as
the national accreditation body for The Netherlands,
hereby declares that accreditation has been granted to:

Intermes B.V.
Calibration Laboratory
Hengelo

The organisation has demonstrated to be able to generate technical valid results in a competent way and work according to a management system.

This accreditation is based on an assessment against the requirements as laid down in ISO/IEC 17025:2005.

The accreditation covers the activities as specified in the authorized annex bearing the registration number.

The accreditation is valid provided that the organisation continues to meet the requirements.

The accreditation with registration number:

K 018

is granted on 22 December 2016

This declaration is valid until
1 December 2020

The accreditation has been granted for the first time on
15 September 1980

The Chief Executive

Ir. J.C. van der Poel

Annex to declaration of accreditation (scope of accreditation)
Normative document: EN ISO/IEC 17025:2005
Registration number: **K 018**

of **Intermes B.V.**
Calibration Laboratory

This annex is valid from: **08-11-2018** to **30-11-2020** Replaces annex dated: **01-11-2017**

HCS code	Measured quantity, Instrument, Measure	Frequency	CMC[1]	Remarks	Location
LF 0 0	DC / LF				
LF 1 0	Direct voltage				HLO
	0 mV – 200mV		1.0 •10^{-5}•U, minimum 0.1 µV	Measuring (1)	
	0.2 V – 2 V		7•10^{-6}•*U*	Measuring (1)	

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HCS code	Measured quantity, Instrument, Measure	Frequency	CMC[1]	Remarks	Location
	2 V – 20 V		$5 \cdot 10^{-6} \cdot U$	Measuring (1)	
	20 V – 200 V		$7 \cdot 10^{-6} \cdot U$	Measuring (1)	
	200 V – 1000 V		$5 \cdot 10^{-6} \cdot U$	Measuring (1)	
	0 mV – 220 mV		$2.0 \cdot 10^{-5} \cdot U$, minimum 1.5 µV	Generate (1)	
	0.22 V – 2,2 V		$7 \cdot 10^{-6} \cdot U$	Generate (1)	
	2.2 V – 22 V		$1.0 \cdot 10^{-5} \cdot U$	Generate (1)	
	22 V – 220 V		$1.5 \cdot 10^{-5} \cdot U$	Generate (1)	
	220 V – 1100 V		$1.0 \cdot 10^{-5} \cdot U$	Generate (1)	
LF 2 0	Direct current				HLO
	1 µA – 200 µA		$1 \cdot 10^{-4} \cdot I$, minimum 0.5 nA	Measuring (1)	
	200 µA – 20 mA		$3 \cdot 10^{-5} \cdot I$	Measuring (1)	
	20 mA – 200 mA		$5 \cdot 10^{-5} \cdot I$	Measuring (1)	
	0.2 A – 2 A		$2.0 \cdot 10^{-4} \cdot I$	Measuring (1)	
	2 A – 20 A		$2.0 \cdot 10^{-4} \cdot I$	Measuring (1)	
	0 µA – 220 mA		$1.0 \cdot 10^{-4} \cdot I$, minimum 0.5 nA	Generate compliance < 0,5 V (1)	
	0.22 A – 2.2 A		$1 \cdot 10^{-4} \cdot I$	Generate compliance < 0.5 V (1)	
	2.2 A – 20 A		$2.0 \cdot 10^{-4} \cdot I$	Generate compliance < 2 V (1)	
	20 A – 1000 A		$5 \cdot 10^{-3} \cdot I$	Generate, with coils	
LF 3 0	Alternating voltage				HLO
	10 mV – 100 mV	20 Hz – 20 kHz	$1.2.10^{-3} \cdot U$	Measuring (1)	
	10 mV – 100 mV	20 kHz – 100 kHz	$4.10^{-3} \cdot U$	Measuring (1)	

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HCS code	Measured quantity, Instrument, Measure	Frequency	CMC[1]	Remarks	Location
	100 mV – 200 mV	20 Hz – 20 kHz	3.10^{-4}• *U*	Measuring (1)	
	100 mV – 200 mV	20 kHz – 100 kHz	4.10^{-4}• *U*	Measuring (1)	
	0.2 V – 2 V	20 Hz – 10 kHz	$1.0•10^{-4}•U$	Measuring (1)	
	0.2 V – 2 V	10 kHz – 100 kHz	$5•10^{-4}•U$	Measuring (1)	
	2 V – 20 V	20 Hz – 10 kHz	$1.5•10^{-4}•U$	Measuring (1)	
	2 V – 20 V	10 kHz – 100 kHz	$3•10^{-4}•U$	Measuring (1)	
	20 V – 200 V	20 Hz – 10 kHz	$1.0•10^{-4}•U$	Measuring (1)	
	20 V – 200 V	10 kHz – 100 kHz	$2.0•10^{-4}•U$	Measuring (1)	
	200 V – 1000 V	55 Hz – 10 kHz	$1.5•10^{-4}•U$	Measuring (1)	
	200 V – 1000 V	10 kHz – 30 kHz	$1.5•10^{-3}•U$	Measuring (1)	
	1 kV – 100 kV	50 Hz	$1.0•10^{-3}•U$	Measuring (1)	
	2.2 mV – 22 mV	40 Hz – 20 kHz	$5•10^{-4}•U$	Generate (1)	
	22 mV – 220 V	40 Hz – 20 kHz	$1.0•10^{-4}•U$	Generate (1)	
	220 V – 1100 V	40 Hz – 1 kHz	$1.0•10^{-4}•U$	Generate (1)	
LF 4 0	Alternating current				HLO
	10 µA – 100 µA	55 Hz – 1 kHz	$4•10^{-3}•I$	Measuring (1)	
	100 µA – 2 mA	55 Hz – 1 kHz	$1.5•10^{-4}•I$	Measuring (1)	
	2 mA – 20 mA	55 Hz – 1 kHz	$5•10^{-4}•I$	Measuring (1)	
	20 mA – 200 mA	55 Hz – 1 kHz	$1.0•10^{-4}•I$	Measuring (1)	
	0.2 A – 2 A	55 Hz – 300 Hz	$3•10^{-4}•I$	Measuring (1)	
	0.2 A – 2 A	300 Hz – 1 kHz	$2.0•10^{-4}•I$	Measuring (1)	
	2 A – 20 A	55 Hz – 1 kHz	$4•10^{-4}•I$	Measuring (1)	
	20 A – 600 A	50 Hz	$6•10^{-4}•I$	Measuring (1)	
	100 µA – 220 mA	40 Hz – 1 kHz	$2.0•10^{-4}•I$	Generate (1)	
	0.22 A – 2.2 A	40 Hz – 1 kHz	$3•10^{-4}•I$	Generate (1)	
	2.2 A – 20 A	40 Hz – 440 Hz	$1.0•10^{-3}•I$	Generate (1)	
	20 A – 1000 A	45 – 60 Hz	$5•10^{-3}•I$	Generate, with coils	

HCS code	Measured quantity, Instrument, Measure	Frequency	CMC[1]	Remarks	Location
	20 A – 200 A	60 – 440 Hz	$7.5 \cdot 10^{-3} \cdot I$	Generate, with coils	
LF 6 1	Resistance				HLO
	100 µΩ - 1 mΩ		$3 \cdot 10^{-4} \cdot R$	Measuring (1)	
	1 mΩ - 100 mΩ		$1.5 \cdot 10^{-4} \cdot R$	Measuring (1)	
	100 mΩ - 1 Ω		$5 \cdot 10^{-5} \cdot R$	Measuring (1)	
	1 Ω – 2 Ω		$3.0 \cdot 10^{-5} \cdot$R	Measuring (1)	
	2 Ω – 2 kΩ		$1.0 \cdot 10^{-5} \cdot R$	Measuring (1)	
	2 kΩ – 20 kΩ		$5 \cdot 10^{-6} \cdot R$	Measuring (1)	
	20 kΩ – 2 MΩ		$1.0 \cdot 10^{-5} \cdot R$	Measuring (1)	
	2 MΩ - 20 MΩ		$3 \cdot 10^{-5} \cdot R$	Measuring (1)	
	20 MΩ - 200 MΩ		$1.0 \cdot 10^{-4} \cdot R$	Measuring (1)	
	200 MΩ – 2 GΩ		$1.5 \cdot 10^{-3} \cdot R$	Measuring (1)	
	0 Ω		70 µΩ	Generate (1)	
	100 µΩ, 1 mΩ, 10 mΩ		$1 \cdot 10^{-4} \cdot R$	Generate (1)	
	100 mΩ		$4 \cdot 10^{-5} \cdot$R	Generate (1)	
	1 Ω, 1.9 Ω		$8 \cdot 10^{-5} \cdot R$	Generate (1)	
	10 Ω		$2.5 \cdot 10^{-5} \cdot R$	Generate (1)	
	19 Ω, 100 Ω , 190 Ω, 1 kΩ, 1.9 kΩ, 10 kΩ , 19 kΩ, 100 kΩ, 190 kΩ		$2.0 \cdot 10^{-5} \cdot R$	Generate (1)	
	1 MΩ, 1.9 MΩ		$3 \cdot 10^{-5} \cdot$R	Generate (1)	
	10 MΩ		$4 \cdot 10^{-5} \cdot$R	Generate (1)	
	19 MΩ, 100 MΩ		$6 \cdot 10^{-5} \cdot R$	Generate (1)	

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HCS code	Measured quantity, Instrument, Measure	Frequency	CMC[1]	Remarks	Location
LF 6 5	LF Capacity				HLO
	2 nF, 10 nF, 20 nF, 200 nF	1 kHz	$1.0 \bullet 10^{-3} \bullet C$	Generate (1) only sine-shaped signals	

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Remarks:

R = reading accuracy of the instrument

Temperature conditions for electrical calibrations is nominal 23 °C; temperature conditions for geometrical and torque calibrations is nominal 20 °C , temperature conditions for pressure and temperature calibrations is nominal 21 °C

$p_e = p - p_{amb}$: p_e is overpressure, p_{amb} is ambient pressure

This list of calibrations is , unless otherwise stated, applicable for calibrations performed inside the Intermes laboratory.
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(1) Calibrations performed at customers' premises.