Schedule of Accreditation

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United Kingdom Accreditation Service

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Accredited to ISO/IEC 17025:2005

Druck Ltd

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Fir Tree Lane **Groby** **Leicester** **LE6 0FH**	**Contact: Mr N Buckeridge** **Tel: +44 (0)116-231 7100** **Fax: +44 (0)116-231 7101** **E-Mail: sensing.grobyukas@ge.com** **Website: www.druck.com**

Calibration performed by the Organisations at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details		Activity	Location code
Address Fir Tree Lane Groby Leicester LE6 0FH	Contact: Mr N Buckeridge Tel: +44 (0)116-231 7100 Fax: +44 (0)116-231 7101 E-Mail: sensing.grobyukas@ge.com	Electrical Pressure Temperature Mass	UK
Address GE Sensing Italia Via Magenta 77 - Edificio 5 20017 RHO (MI) Italia	**Local contact** Mr A Allocca Tel. +39-02-93206.1	Pressure	Italy

Site activities performed away from the locations listed above:

Location details	Activity	Location code
Any customer premises	Pressure	Site

DETAIL OF ACCREDITATION

Measured Quantity Instrument or Gauge	Range	Best Measurement Capability Expressed as an Expanded Uncertainty (*k*=2)	Remarks	Location Code
PRESSURE				
<u>Gas pressure (absolute)</u>				
Calibration of pressure measuring instruments and gauges and "Pressure equivalent" calibration of Dead Weight Testers (pressure balances supplied with an associated mass set) and Effective area calibration of Dead Weight Testers	3.5 kPa to 7 MPa 7 MPa to 20 MPa 20 MPa to 40 MPa	0.0032% + 0.7 Pa 0.004% + 15 Pa 0.005% + 15 Pa	Calibration of pressure measuring devices with an electrical output may be undertaken.	UK & Site
<u>Gas pressure (gauge)</u>				
Calibration of pressure measuring instruments and gauges and "Pressure equivalent" calibration of Dead Weight Testers (pressure balances supplied with an associated mass set) and Effective area calibration of Dead Weight Testers	-100 kPa to -3.5 kPa -3.5 kPa to 3.5 kPa 3.5 kPa to 7 MPa 7 MPa to 20 MPa 20 MPa to 40 MPa	0.0032% + 0.6 Pa 0.8 Pa 0.0032% 0.0040% 0.005%		UK & Site
<u>Hydraulic pressure (gauge)</u>				
Calibration of pressure measuring instruments and gauges. "Pressure equivalent" calibration of Dead Weight Testers (Pressure balance with associated mass set). Effective area calibration of Dead Weight Testers.	0.5 MPa to 140 MPa 140 MPa to 500 MPa	0.0038% + 0.08 ppm/MPa + 1 Pa 0.0045% + 0.36 ppm/MPa	Absolute pressure calibrations can be undertaken using gauge pressure generation and the associated barometric pressure with the additional uncertainty of 15 Pa	UK & Site

Measured Quantity Instrument or Gauge	Range	Best Measurement Capability Expressed as an Expanded Uncertainty (*k*=2)	Remarks	Location Code
ELECTRICAL				
DC Resistance				
Sourcing specific values	1 mΩ 10 mΩ 20 mΩ 100 mΩ 1 Ω 10 Ω 50 Ω 100 Ω 1 kΩ 10 kΩ 100 kΩ 1 MΩ 10 MΩ 100 MΩ	1.7 % 0.17% 0.14% 170 ppm 22 ppm 14 ppm 16 ppm 13 ppm 14 ppm 14 ppm 12 ppm 17 ppm 31 ppm 210 ppm		UK
Measurement	Up to 20 Ω 20 Ω to 200 Ω 200 Ω to 2 kΩ 2 kΩ to 20 kΩ 20 kΩ to 200 kΩ 200 kΩ to 2 MΩ 2 MΩ to 20 MΩ 20 MΩ to 200 MΩ 2 GΩ	6 ppm + 130 μΩ 10 ppm 12 ppm 9 ppm 12 ppm 22 ppm 32 ppm 140 ppm 400 ppm		UK
DC Voltage				
Measurement	Up to 200 mV 200 mV to 1000 V	30 ppm + 2 μV 20 ppm		UK
Generation	Up to 200 mV 0.2 V to 2 V 2 V to 10 V 10 V to 20 V 20 V to 200 V 200 V to 1000 V	10 ppm + 2 μV 10 ppm + 2 μV 25 ppm + 10 μV 25 ppm + 11 μV 25 ppm + 0.2 mV 25 ppm + 1 mV		UK
DC Current				
Measurement	0.1 mA to 2 A	100 ppm		UK
Generation	Up to 200 μA 200 μA to 2 mA 2 mA to 20 mA 20 mA to 200 mA 200 mA to 2 A	30 ppm + 1 nA 25 ppm + 6 nA 31 ppm + 30 nA 25 ppm + 1 μA 90 ppm + 2 μA		UK
Frequency	1 Hz to 1 GHz	2.2 ppm	Measurement and measurement of repeatable waveform	UK

Measured Quantity Instrument or Gauge	Range	Best Measurement Capability Expressed as an Expanded Uncertainty (k=2)	Remarks	Location Code
Temperature indicators, calibration by electrical simulation				UK
Base metal thermocouples	-210°C to 1360°C	0.1°C	Excluding cold junction compensation	
Nobel metal thermocouples	-50°C to 2300°C	0.23°C	Excluding cold junction compensation	
Cold junction compensation	Ambient temperature 18°C to 30°C	0.4°C		
Resistance thermometers	-200°C to 840°C	0.2°C		
Temperature simulators, calibration by electrical simulation				
Base metal thermocouples	-210°C to 1360°C	0.07°C	Excluding cold junction compensation	
Nobel metal thermocouples	-50°C to 2300°C	0.15°C	Excluding cold junction compensation	
Cold junction compensation	Ambient temperature 18°C to 30°C	0.4°C		
Resistance thermometers	-200°C to 840°C	0.055°C		
MASS	Up to 1 g 10 g 100 g 200 g 500 g 1 Kg 2 Kg 5 Kg 10 Kg	0.08 mg 0.08 mg 0.15 mg 0.25 mg 2.5 mg 3 mg 3 mg 5 mg 10 mg	Intermediate values can be calibrated with an uncertainty equal to the uncertainty of the next higher nominal value.	UK
TEMPERATURE				
Resistance thermometers	-20 °C to –50 °C Below 0°C down to -20°C Ice point 0°C Triple Point of Water 0.01 °C Above 0°C up to 100°C above 100°C up to 250°C	0.16°C 0.03°C 0.01°C 0.009 °C 0.02°C 0.03°C	Calibration by comparison	UK
Electronic thermometers with prt, thermocouple or thermistor sensors	-20°C to 250°C	as above plus 1/2 resolution of indicator	Uncertainty will depend upon the performance of the sensor	UK
Metal block calibrators	0 °C to 250 °C	0.4 °C	Uncertainty will depend upon the performance of the block	UK

Measured Quantity Instrument or Gauge	Range	Best Measurement Capability Expressed as an Expanded Uncertainty (k=2)	Remarks	Location Code
GE Sensing Italia Pressure Capability				
Hydraulic pressure (gauge)				
Calibration of pressure indicating instruments and gauges	500 kPa to 6 MPa 6 MPa to 60 MPa	0.012% 0.025%	Calibration of pressure measuring devices with an electrical output may be undertaken	Italy
Gas pressure (gauge)				
Calibration of pressure indicating instruments and gauges	-98.5 kPa to 5.4 kPa 5.4 kPa to 200 kPa 346 kPa to 7.2 MPa	21 Pa 0.012% 0.01% + 6 ppm/MPa	Absolute pressure calibrations may be undertaken by associated barometric pressure measurement with an additional uncertainty of ± 15 Pa	Italy
Gas pressure (absolute)				
Calibration of pressure indicating instruments and gauges	3.5 kPa to 120 kPa	13 Pa + 0.008%		Italy
END				