

# CERTIFICATE OF CALIBRATION

ISSUED BY DRUCK STANDARDS LABORATORY

CERTIFICATE NUMBER: [REDACTED]

DATE OF ISSUE: [REDACTED]



0221



## GE Druck

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Approved Signatory  
Name: L Weston  
Title: Deputy Technical Manager  
Signature [REDACTED]

Client: [REDACTED]

Client Ref: [REDACTED]

Our Ref: [REDACTED]

Date Received: [REDACTED]

SAMPLE  
CART

Item Submitted:

Manufacturer: GE Measurement & Control Solutions

Model: DPI611

Serial No: [REDACTED]

Condition On Arrival: Repaired

As Received Calibration: [REDACTED]

Environmental Conditions: Temperature: 20.1°C to 20.9°C

Relative Humidity: 42% to 45%

### Notes:

1) Adjustments were not performed.

The United Kingdom Accreditation Service (UKAS) is one of the signatories to the International Laboratory Accreditation Co-operation (ILAC) Arrangement for the mutual recognition of calibration certificates.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Program: PS931 V2.15 using file 74311.rec

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## Test Equipment Used

Description	Serial Number	Certificate Number
Electrical Standard	23069-16	0057332
Electrical Standard	24964-8	045760
Pressure Standard	62612	0060035

The Calibration was undertaken using the equipment listed above that has maintained traceability to National Standards in accordance with the requirements of UKAS and international standard ISO/IEC 17025

The readings are the results at the time of calibration only and they do not carry any implication regarding long term stability of the instrument being tested.

## Notes:

- 1) Prior to each calibration; The instrument was switched on and allowed to stabilise to laboratory conditions for a minimum of 1 hour; The calibration was set up as manufacturer's instructions and performed in accordance with laboratory procedure P004A.
- 2) Electrical Ranges; The instrument displays a digital indication corresponding to the generated or measured signals. Prior to each calibration the zero adjustment procedure was performed. The readings of the reference standard and the instrument under test were taken simultaneously via their external communication connections and read by a PC running the calibration software PS1126. Each certified reading is the average of ten readings taken at a one second interval. This averaging may show one more digit of resolution than the instrument's display. The expanded uncertainty column includes the contributions from the measurement of the generated DC signal and the instrument being calibrated.
- 3) Pressure Ranges: The instrument displays a digital indication corresponding to the applied pressure. With the instrument resting on its feet the pressurising medium was applied to the pressure port, the reference level was taken as the top face of this port. Prior to calibration: the pressure measuring system was purged over the calibration range to exercise the pressure sensor and to flush the system with the pressurising medium. The readings of the pressure standard and the instrument under test were taken simultaneously via their external communication connections and read by a PC running the calibration software PS1111. With the applied pressure stable, each certified reading is the average of twenty readings taken at two second intervals. This averaging may show one more digit of resolution than the instrument's display.
- 4) For each gauge range the zero adjustment procedure was performed in accordance with the manufacturer's operating instructions.
- 5) The SI unit of pressure is the Pascal (Pa). The conversion factors between the Pa and the pressure units used in this certificate are taken from British Standard BS350 and are shown on the following results pages. The expanded uncertainty column includes the contributions from the measurement of the generated pressure and the instrument being calibrated.

*STABLE*

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## AS RECEIVED

Calibrated Range: -30.0 to 30.0 Volts VoltageDC Channel 1

Applied By Standard	Indicated On Test Unit	Deviation	Expanded Uncertainty $\pm$
-30.00006 V	-30.0031	-0.0031	0.00035
-25.00005 V	-25.0024	-0.0024	0.00029
-10.00000 V	-10.0009	-0.0009	0.00014
-5.00000 V	-5.0004	-0.0004	0.00010
-0.00000 V	-0.0001	-0.0001	0.00022
5.00000 V	5.0004	0.0004	0.00011
9.99999 V	10.0010	0.0010	0.00013
25.00002 V	25.0024	0.0024	0.00026
30.00003 V	30.0026	0.0026	0.00031

## AS RECEIVED

Calibrated Range: -2000.0 to 2000.0 mV VoltageDC Channel 1

Applied By Standard	Indicated On Test Unit	Deviation	Expanded Uncertainty $\pm$
-2000.0020 mV	-2000.256	-0.254	0.0354
-1000.0019 mV	-1000.127	-0.125	0.0255
-200.0009 mV	-200.027	-0.026	0.0089
-100.0008 mV	-100.010	-0.009	0.0069
-0.0000 mV	-0.001	-0.001	0.0071
99.9992 mV	100.008	0.009	0.0101
199.9994 mV	200.023	0.024	0.0117
1000.0007 mV	1000.122	0.122	0.0241
1999.9996 mV	2000.230	0.230	0.0327

*SAMPLE*

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## AS RECEIVED

Calibrated Range: -55.0 to 55.0 mA CurrentDC Channel 1

Applied By Standard	Indicated On Test Unit	Deviation	Expanded Uncertainty ±
-54.9998 mA	-55.010	-0.010	0.0048
-49.9998 mA	-50.009	-0.009	0.0044
-39.9999 mA	-40.007	-0.007	0.0035
-29.9999 mA	-30.005	-0.005	0.0027
-19.9999 mA	-20.002	-0.002	0.0018
-10.0000 mA	-10.001	-0.001	0.0011
0.0000 mA	-0.000	-0.000	0.0008
10.0000 mA	10.001	0.001	0.0011
19.9999 mA	20.002	0.002	0.0018
29.9999 mA	30.005	0.005	0.0027
39.9998 mA	40.007	0.007	0.0035
49.9998 mA	50.008	0.009	0.0044
54.9998 mA	55.009	0.009	0.0048

## AS RECEIVED

Calibrated Range: 10.0 to 10.0 Volts VoltageDC Channel 2

Indicated on Standard	Applied By Test Unit	Deviation	Expanded Uncertainty ±
9.9994 V	10.000	-0.001	0.0001

## AS RECEIVED

Calibrated Range: 24.0 to 24.0 Volts VoltageDC Channel 2

Indicated on Standard	Applied By Test Unit	Deviation	Expanded Uncertainty ±
23.9990 V	24.000	-0.001	0.0002

*S.M.P.R.E*

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## AS RECEIVED

Calibrated Range: 0.5 to 24.0 mA CurrentDC Channel 1

Indicated on Standard	Applied By Test Unit	Deviation	Expanded Uncertainty $\pm$
0.4999 mA	0.500	-0.000	0.0004
4.9996 mA	5.000	-0.000	0.0004
9.9990 mA	10.000	-0.001	0.0008
14.9988 mA	15.000	-0.001	0.0012
19.9995 mA	20.000	-0.001	0.0018
23.9997 mA	24.000	-0.000	0.0021

*SMILE*

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## AS RECEIVED

Calibrated Range: -0.95 to 20.00 bar g, Medium: Air

1) Conversion factor: 1 bar = 100000 Pa

Applied By Standard	Indicated On Test Unit	Deviation	Expanded Uncertainty $\pm$
0.00000 bar	0.0000	0.0000	0.00051
-0.95000 bar	-0.9514	-0.0014	0.00106
0.00000 bar	0.0001	0.0001	0.00043
3.99985 bar	3.9989	-0.0009	0.00066
7.99927 bar	7.9979	-0.0014	0.00108
11.99897 bar	11.9979	-0.0011	0.00129
15.99872 bar	15.9982	-0.0006	0.00151
19.99824 bar	19.9980	-0.0002	0.00168
15.99872 bar	15.9975	-0.0012	0.00170
11.99898 bar	11.9970	-0.0020	0.00158
7.99928 bar	7.9968	-0.0024	0.00143
3.99986 bar	3.9979	-0.0020	0.00112
0.00000 bar	-0.0004	-0.0005	0.00104

*Signature*