ilac-MRA DANAK CAL Reg.No. 494

AMETEK® TEST & CALIBRATION INSTRUMENTS

# Certificate of Calibration

Metrology Calibration laboratory

Certificate no.: E 45264

## Device under test

| | | | |
|---|---|---|---|
| Description: | Compact Temperature Calibrator | | |
| Serial number: | **656874-00299** | Model: | CTC-155 A |
| Manufacturer: | AMETEK Denmark A/S | | |
| Range: | -39°C to 155°C-38,2°F to 311°F | | |
| Laboratory subject no: | **SA 72395** | | |
| Date of calibration: | **sep 22. 2017** | | |

## Customer information

| | | | |
|---|---|---|---|
| Client: | AMETEK Denmark A/S | Number: | 48168000 |
| Address: | Gydevang 32-34<br>3450 Allerød | Phone: | +45 4816 8000 |

## Remarks

The calibration was carried out with the laboratory reference sensor immersed 95 mm into the calibration insert for each temperature point. The insert hole where the reference probe was immersed, is equal to the probe diameter + 0,2 mm.
Standard insulation plug was mounted and present during the calibration
Contribution to reported combined uncertainties arises from unit stability and reference equipment including correction from immersion depth.

Calibrated by:

Ole Asklund Jørgensen
Calibration technician

Approved by:

Ole A. Jørgensen
Digitalt signeret af Ole A. Jørgensen
Dato: 2017.09.28 10:13:30 +02'00'

A summery of this report may be issued only when it is clearly stated that it is a summary and only if the full report is cacheable to the public, or if the summary has been approved by AMETEK Denmark A/S, Metrology Laboratory.



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## Calibration conditions

| | | | |
|---|---|---|---|
| Calibration procedure: | 126553 | | |
| Ambient temperature: | 23 ±2 °C | Reference id.: | Y007 |
| Relative humidity: | 30..85% | Reference id.: | Y007 |

## Reference equipment applied

| Description: | Manufacturer: | Model: | Id. number: |
|---|---|---|---|
| Reference sensor | AMETEK Denmark A/S | 162 CE | T142 |
| Resistance Bridge | AMETEK Denmark A/S | DTI 1000 B | E058 |
| Insert | AMETEK Denmark A/S | 129332 | IN180 |

| Set value | | Read value | | True value | | Deviation | | Uncertainty | |
|---|---|---|---|---|---|---|---|---|---|
| °C | °F | °C | °F | °C | °F | °C | °F | °C | °F |
| -25,00 | -13,00 | -25,00 | -13,00 | -25,012 | -13,022 | 0,012 | 0,022 | ±0,05 | ±0,09 |
| -15,00 | 5,00 | -15,00 | 5,00 | -14,991 | 5,016 | -0,009 | -0,016 | ±0,05 | ±0,09 |
| 0,00 | 32,00 | 0,00 | 32,00 | 0,013 | 32,023 | -0,013 | -0,023 | ±0,05 | ±0,09 |
| 50,00 | 122,00 | 50,00 | 122,00 | 50,013 | 122,023 | -0,013 | -0,023 | ±0,05 | ±0,09 |
| 100,00 | 212,00 | 100,00 | 212,00 | 100,015 | 212,027 | -0,015 | -0,027 | ±0,05 | ±0,09 |
| 155,00 | 311,00 | 155,00 | 311,00 | 155,008 | 311,014 | -0,008 | -0,014 | ±0,05 | ±0,09 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

The stated uncertainty is based on the entire set-up including object under test.

The reported uncertainty is based upon a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximate 95%. The uncertainty evaluation has been carried out in accordance with DANAK requirements.
The uncertainty is calculated following EA-4/02

**DANAK**

DANAK is the national accreditation body in Denmark in compliance with EU regulation No. 765/2008

*DANAK participates in the multilateral agreements for testing and calibration under European co-operation for Accreditation (EA) and under International Laboratorie Accreditation Cooperation (ILAC) based on peerevaluation. Accredited test reports and calibration certificates issued by laboratories accredited by DANAK are recognized cross border by members of EA and ILAC equal to test reports and calibration certificates issued by these members' accredited laboratories.*

*The use of the accreditation mark on test reports and calibration certificates or reference to accreditation, documents that the service is provided as an accredited service under the company's DANAK accreditation.*

*The calibration certificate is covered by DANAK accreditation and the multilateral agreements from EA and ILAC for calibration which ensures that measurements are traceable to the international system of units, SI.*



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