



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX QPS 24.0013X** Page 1 of 4 [Certificate history:](#)
Status: **Current** Issue No: 1 [Issue 0 \(2024-04-12\)](#)
Date of Issue: 2024-08-12
Applicant: **Daily Thermetrics Corporation**
9600 W. Gulf Bank Road
Houston, TX 77040
United States of America
Equipment: **RTD's and Thermocouples Assembly, model MP360EHZ**
Optional accessory:
Type of Protection: **Increased safety "eb"**
Marking: **IECEX QPS 24.0013X**
Ex eb IIC T6/T5/T4 Gb
Ta = -40 °C to + 60 °C / 75 °C / 80 °C
IP66
Umax = 42.4 V dc SELV or PELV

Approved for issue on behalf of the IECEx
Certification Body:

D, Adams P.Eng.

Position:

Manager, Hazardous Locations Department [Ex Equipment]

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

QPS
Evaluation Services Inc.
81 Kelfield St
Unit 8
Toronto, Ontario M9W 5A3
Canada





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Manufacturer: **Daily Thermetrics Corporation**
9600 W. Gulf Bank Road
Houston, TX 77040
United States of America

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[CA/QPS/ExTR24.0012/00](#)

[CA/QPS/ExTR24.0012/01](#)

Quality Assessment Reports:

[US/UL/QAR11.0003/08](#)

[US/UL/QAR11.0003/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

RTD's and Thermocouples Assembly model MP360EHZ consists of parts and components as follow:

- Base TC or RTD Probe

Manufactured by Daily Thermetrics Corp., Model 220HZ or CT221HZ, Ex eb IIC Gb, Umax = 30 V dc, IECEX QPS 19.0023U, IEC 60079-0:2017, IEC 60079-7:2015.

- Enclosure

STAHL 8150/1-***-***-***-3321-*** refers to size of enclosure;

IECEX: Ex db eb ia mb op pr IIC, IIB, IIA T6, T5, T4, T3 Gb, Ex tb IIC T80 °C, T95 °C, T130 °C, T135 °C Db, IECEX PTB 09.0048, IEC 60079-0:2017, IEC 60079-1:2014-06, IEC 60079-11:2011, IEC 60079-18:2017, IEC 60079-28:2015, IEC 60079-31:2013, IEC 60079-7:2017.

Installed per Certification Instruction: 8150 0 000 061 0-00 2020-08-19, a letter from R. STAHL to Daily Thermetrics permitting drill and punch holes considering enclosures walls/sides all 5 sides only excluding the cover.

- Terminal blocks:

1. Phoenix contact type MKTD TC type terminals pairs, IECEX KEM 06.0027U, IEC 60079-0:2017, IEC60079-7:2017;
2. Weidmuller WDU 2.5 TC type terminals are pairs, IECEX ULD 14.0005U, IEC 60079-0:2011, IEC 60079-7:2006.

- Cable gland

OSCG/EXBF-A, Ex db/Ex eb/Ex tb, IECEX PRE 18.0074X, IEC60079-0:2017, IEC 6007-7:2017, IEC 60079-1:2014 and IEC 60079-31:2013.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Grounded junctions are not capable of withstanding the 500 V rms between the measurement circuit and ground. This must be taken into account during installation.
2. The assembly is tagged with design pressure and temperature. These values shall not be exceeded. Specifically, during normal operation, the maximum operating temperatures of any component of the sensor assembly must not exceed the designed temperature indicated on the product. The probe must not be exposed to a pressure higher than indicated on the product.
3. For an ambient conditions over 70 °C and up to 80 °C, a cable with thermostability of its insulation of minimum 80 °C / 90 °C shall be used. Special attention shall be given to the source of heating the equipment is intended to be attached to, because it can contribute such to elevate the local ambient temperature for the cable. The end user shall read and follow the User Manual where this concern is given them to attention.
4. Metal sheath containing thermocouple and/or RTD wires and flexible metal conduit containing extension/lead wires must be protected against impact in final assembly.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Update the IOM with new applicant address.
- Update the applicant address in the certificate, and Marking labels.

Annex:

[X1427-2R1 Annex.pdf](#)



QPS Evaluation Services Inc.

Testing, Certification and Field Evaluation Body
Accredited in Canada, the USA, and Internationally

ANNEX 1, Date: 2024-8-12

Certificate No.: IECEX QPS 24.0013X Issue No.: 1

Applicant:

Daily Thermetrics Corporation
9600 W Gulf Bank Rd,
Houston, TX
77040. USA

Electrical Apparatus: **RTD's and Thermocouples Assembly model MP360EHZ**

While thermocouples and RTDs are passive sensors that do not generate heat, they may transfer heat from process-wetted areas. Rated materials and components such as the epoxy seal or insulation, gaskets cable glands terminal blocks must remain below maximum allowable temperatures. Proper lagging extension is determined by using maximum operating conditions, shown in Table 4, Table 5 and Table 6 of DTC-IOM-MP360EHZ-HAZLOC. The user may verify proper lagging extension via temperature measurement after installation, while no hazardous gas is not present.

Epoxy End Seal Model and Manufacturer	Continuous Operating Temperature (COT)	Service Temperature Range	Minimum Distance from Process Temp (Tp) -40 °F < Tp < 572 °F -40 °C < Tp < 300 °C	Minimum Distance from Process Temp (Tp) -273 °F < Tp < -40 °F or 572 °F < Tp < 2100 °F, -169 °C < Tp < -40 °C or 300 °C < Tp < -1149 °C
2651-40FR with Catalyst 9 by STYCAST	-40 °C to +150 °C	-40 °C to +110 °C	3.0 inch [76.2 mm]	10.0 inch [254.0 mm]
EP1340 by RESINLAB	-40 °C to +150 °C	-40 °C to +130 °C	3.0 inch [76.2 mm]	10.0 inch [254.0 mm]
EP1330 by RESINLAB	-40 °C to +150 °C	-40 °C to +130 °C	3.0 inch [76.2 mm]	10.0 inch [254.0 mm]
Duralco 4703 by CONTRONICS Corp.	-40 °C to +343 °C	-40 °C to +130 °C	3.0 inch [76.2 mm]	10.0 inch [254.0 mm]

Table 4 - Temperature Ratings for Epoxy End Seals

Extension/Lead Wire				
Size	Insulation Thickness	Insulation Material	COT	Services Temperature Range
16-24 AWG	0.20 mm	Teflon	-200 °C to +200 °C	-40 °C to +130 °C

Table 5 - Temperature Ratings for Non-Metallic Components

Model and Manufacturer.	Continuous Operating Temperature (COT)	Service Temperature Range
OS-EXBF-A	-60 °C to +110 °C	-40 °C to +110 °C
Stahl 8150	-60 °C to +135 °C	-40 °C to +135 °C
Phoenix Contact Type MTKD	-50 °C to +110 °C	-40 °C to +110 °C
Phoenix Contact Type UT 2.5	-60 °C to +110 °C	-40 °C to +110 °C
Weidmuller WDU 2.5 TC TYPE	-60 °C to +110 °C	-40 °C to +110 °C

Table 6 - Temperature ratings for Cable glands, Enclosure and Terminals Blocks

Tcode	Tambient	Trise + Tambient	°C Transferred from Process
T6	-40 °C to +60 °C	65 °C	< 20 °C
T5	-40 °C to +75 °C	80 °C	< 20 °C
T4	-40 °C to +80 °C	85 °C	< 50 °C

Table 7 – Relationship between T-Code and Ambient Temperature & Temperature transferred from the process by the conduction.

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81 Kelfield Street, Units 7-9, Toronto, ON M9W 5A3, Canada, Ph: 416-241-8857 Fax: 416-241-0682
6600 TransCanada Highway, Suite 750, Pointe Claire, QC H9R 4S2, Canada Ph: 514-693-2808
7700 Hub Parkway, Unit 1, Cleveland, OH 44125 Ph: 216-377-3191 Fax: 216-377-3192
Web Site www.qps.ca and www.qpscification.com
Toll Free: 1- 877-746-4777