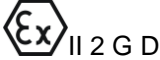





EU Type Examination Certificate

Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

Manufacturer	Daily Thermetrics Corporation
Address	5700 Hartsdale Drive Houston, Texas 77036 USA
Component Markings	Base RTD and Thermocouple probe Model 210HZ  II 2 G D Ex db IIC Gb, or Ex eb IIC Gb, IP66 U _{max} = 30 V dc Model 220HZ & Model CT221HZ  II 2 G D Ex eb IIC Gb IP66 U _{max} = 30 V dc
Description	The complete model nomenclature and description are given in ANNEX below
Conditions of manufacture	The following conditions are required of the manufacturing process for compliance with the certification. 1. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
Schedule of Limitations:	The following conditions relate to safe installation and/or use of the equipment. 1. The Epoxy plug should be periodically examined for degradation. If any degradation is observed, the base probe shall be replaced. 2. Metal sheath containing thermocouple and/or RTD wires and flexible metal conduit containing extension/lead wires must be protected against impact in final assembly. 3. Epoxy plug as well as the extension/lead wires shall be away from the process fluid per manufacturer's instructions. Care must be given to ensure that heat and/or cooling transfer does not interfere with the temperature rating of the epoxy seal and/or extension/lead wire insulation. 4. When sensors are installed in direct contact with process fluid at pressure greater than atmospheric, the maximum allowable



pressure shall be calculated on a case by case basis per manufacturer's instructions.

- 5. Grounded junctions are not isolated, so special considerations shall be given during installation.

Certificate Issue # 00
Certificate History Initial release
Associated Report ATX35603-4

The component is specified in the description of this certificate and the documents to which it refers.

QPS Europe BV, Berg en Dalseweg 122, 6522BW Nijmegen, Notified Body Number 2876, The Netherlands, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The 'U' suffix after the certificate number indicates that the component is subject to Schedule of Limitations

This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacturer of the equipment or component and are separately certified.

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

Standard	Edition
EN IEC 60079-0	2018
EN 60079-1	2014
EN IEC 60079-7	2015/ A1:2018

The following documents describe the equipment or component defined in this certificate:
Issue 00

Drawing No	Sheets	Rev	date	Title
DTC-SENSOR-ATEX/IEC	1 to 10	1	Feb/10/2020	MODELS 210HZ, 220HZ, CT221HZ SCHEDULE DRAWINGS
DTC-IOM-SENSOR-HAZLOC	1 to 16	A	January 9, 2020	Installation and Operating Manual – Hazardous Area

Issued By: Rob Kohuch, Certification Manager

Signature:

Date: January 29, 2021



ANNEX

The base probe models

- Model 210HZ: TC or RTD probe - Ex db or Ex eb component,
- Model 220HZ: TC or RTD probe with extension wire and optional conduit protection - Ex eb component, and
- Model CT221HZ: TC probe with mineral insulated (MI) cable, extension wire and optional conduit protection –

Ex eb component serves for the measurement of process fluid temperatures using TC's (Thermocouples) or RTD's (Resistance Temperature Detectors) encased in a metal sheath that is packed with MgO or MI insulation. The thermocouple or RTD wires pass through the MgO or MI insulation and, either exit out at an epoxy plug located at the end of the stainless steel tubular sheath where they are brazed to the extension/lead wires and insulated with a teflon insulation, or are brazed with the extension/lead wires inside a so called transition housing which is then potted with the epoxy. A flexible metal conduit is optional but when it is provided it is potted with the transition housing.

All models are designed to be able to have direct contact with pressures greater than atmospheric. Thermocouples and RTD's are passive sensors that do not generate heat by themselves, but can transfer heating or cooling from the process they are sensing.

Service temperatures for the two non-metallic materials: I) epoxy seal, and II) extension/lead wire insulation, and their COT values are as follow:

- Epoxy seal:

Model and Manufacturer	COT	Service temperature range
2651-40FR with Catalyst 9 by STYCAST	-40°C to +130°C	-40°C to +110°C
EP1340 by RESINLAB	-40°C to +150°C	-40°C to +130°C
EP1330 by RESINLAB	-40°C to +150°C	-40°C to +130°C
Duralco 4703 by COTRONICS Corp.	-40°C to +343°C	-40°C to +130°C

- Extension/lead wires

Size	Insulation thickness	Insulation material	COT	Service temperature range
16-24 AWG	0.20 mm	Teflon	-200°C to +200°C	-40°C to +130°C