



File <b>LR1427</b>
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## CERTIFICATE OF COMPLIANCE (ISO TYPE 3 CERTIFICATION SYSTEM)

Issued to	Daily Thermetrics Corporation
Address	9600 W Gulf Bank Rd, Houston, TX 77040, USA.
Project Number	LR1427-3R2
Product	Industrial Sensor Assembly 310HZ, 310FHZ and 310BHZ Series
Model Number	310HZ-1, 310HZ-2, 310HZ-3, 310HZ-4, 310HZ-5, 310HZ-6, 310HZ 7, 310HZ-8, 310HZ-9, 310HZ-10, 310HZ-11, 310HZ-12, 310FHZ and 310BHZ (Refer to Report No. LR1437-3R2 (Ex d) for the full model nomenclature)
Electrical Ratings	Umax = 42.4 V dc SELV or PELV; See IOM for process temperature and pressure limits
Markings	<p>i) Models 310HZ-*1**-*...****, 310HZ-*2**-*...****, 310HZ-*3**-*...****, 310FHZ-1**-*...****, 301FHZ-2**-*...****, 310FHZ-3**-*...****, 310BHZ-1**-*...****, 301BHZ-2**-*...**** and 310BHZ-3**-*...**** (Options in which the Pushna Model 1010, 1014 or 1016 enclosure is used for the connection box)</p> <p>Class I, Division 1, Groups B, C, D T6/T5/T4 Class I, Zone 1, AEx db IIC T6/T5/T4 Gb Ex db IIC T6/T5/T4 Gb Ta= -40 °C to +60°C /70°C /80°C; Type 4X; IP66</p> <p>ii) Models 310HZ-*4**-*...****, 310FHZ-4**-*...**** and 310BHZ-4**-*...****, (Option in which the Limatherm Model XD-AD enclosure is used for the connection box)</p> <p>Class I, Division 1, Groups A, B, C, D T6/T5/T4 Class I, Zone 1, AEx db IIC T6 ... T4 Gb Ex db IIC T6/T5/T4 Gb Ta= -40 °C to +60°C /70°C /80°C; Type 4X; IP66</p> <p>iii) Models 310HZ-*5**-*...****310FHZ-5**-*...**** and 310BHZ-5**-*...****, (an enclosure certified as 'Ex db' for use in Zone 1 classified area and/or Class I, Div. 1 for use in Class I, Division 1 classified area) Marking based on minimum degree of protection (the lowest rating) of each of the individual component of the assembly. See Annex page for COT, Tcode and Minimum Distance from Process Temp.</p>
Applicable Standards	CSA C22.2 No. 60079-0:2015 CSA C22.2 No. 60079-1:2016 CSA C22.2 No. 30-1986 (R2016), CSA C22.2 No. 60529:16 UL 60079-0:2013 UL 60079-1:2015 UL 1203 5th Ed. (2015) IEC/ANSI 60529-2004



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Factory/Manufacturing Location	Daily Thermetrics Corporation 9600 W Gulf Bank Road, Houston, TX , 77040 USA
Conditions of Certification	<ol style="list-style-type: none"> <li>1. Grounded junctions within models 310HZ, 310FHZ and 310BHZ are not capable of withstanding the 500 V rms between the measurement circuit and ground. This must be taken into account during installation.</li> <li>2. Industrial Sensor Assembly 310HZ, 310FHZ and 310BHZ Series must be either connected to a SELV or PELV system, or directly connected to an apparatus compliant with IEC 60950 series, IEC 610101-1, or equivalent. Product rating is given on the marking plate of each individual assembly as well as in the IOM and shall be respected.</li> <li>3. 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.</li> <li>4. The cable glands must be properly selected to suit the final application of the assembly and/or to maintain the protection method marked thereon.</li> <li>5. The Industrial Sensor Assembly 310HZ, 310FHZ and 310BHZ Series permits conduits entries to be added in the field and they must be installed within 18 inches (0.46 m) of the enclosure.</li> <li>6. 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.</li> <li>7. In the case when a generic enclosure model is used (different from the listed connection enclosure models), the equipment must be assembled with a certified 'Ex db' (Zone 1 application), or Class I, Div. 1 enclosure, approved to the edition(s) of standard(s) that are, at the time of placing the assembly on the market, currently in use. The enclosure shall be of simple geometry and with a volume &lt; 500 cm3.</li> <li>8. All threaded joints shall be properly tightened in order to maintain the declared ingress protection IP66 and/or Type 4 associated ingress protection.</li> </ol>

**Statement of Compliance:** The products identified in this Certificate and described in the Certification Report covered under the above referenced project number have been investigated and found to be in compliance with the relevant requirements of the above referenced standard(s). As such, they are eligible to bear the QPS Certification Mark shown below, in accordance with the provisions of QPS's Service Agreement.

**IMPORTANT NOTE:** In order to maintain the integrity of the QPS Mark(s), certification will be revoked if:

- (1) Compliance to the above-mentioned Standard(s), or those identified in future QPS Standard Update Notice – SUN (QSD 55) is not maintained, or,
- (2) If the product/equipment is modified after certification is granted without prior written consent by QPS



Issued By: Dave Adams, P. Eng.

Signature:

Date: September 5, 2024



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**Annex**

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]
EP 13970LC by RESINLAB	-40 °C to +150 °C	-40 °C to +130 °C	3.0 inch [76.2 mm]	10.0 inch [254.0 mm]

Table 1 - 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 2 - Temperature Ratings for Non-Metallic Components

Tcode	T <sub>ambient</sub>	T <sub>rise</sub> + T <sub>ambient</sub>	°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 3 – Relationship between T-Code and Ambient Temperature & Temperature transferred from the process by the conduction



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