

QPS Evaluation Services Inc

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

> File LR1339

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CERTIFICATE OF COMPLIANCE

(ISO TYPE 3 CERTIFICATION SYSTEM)

Rotronic AG Issued to

Address Grindelstrasse 6, CH-8303

Bassersdorf, Switzerland

LR1339-1R1 **Project Number**

Rotronics HydroFlex-EX Series Dual-Channel Humidity and Temperature Meter. Product

consists of a Signal Converter and up to two Measuring Sensors connected

either directly to the Signal Converter or remotely via cable.

HygroFlex Signal Converters (Transmitters) Model Number

HF520-EX-WxxxDxxx, HF520-EX-WxxxXxxx, HF520-EX-DxxxDxxx and

HF520-EX-DxxxXxxx

Measuring Sensors

HC2-IMxxx-EX, HC2-IExxx-EX, HC2-SM-EX and HC2-LDPxxx-EX

Overall System

HF520-EX-xxxxxxxx + and HC2-xx(xxxx)-EX

Note: Any combination of listed HygroFlex Signal Converter and Measuring

Sensor.

Signal Converter Ratings

Associated Apparatus, Provides IS circuits for Class I, Div 1, Groups ABCD T5

Class I, Division 2, Groups ABCD T5; Class II, Div 2, Groups EFG T80C

Ex e mb [ia Ga] IIC T5 Gb Ex tb [ia Da] IIIC T80°C Db

Class I, Zone 1, AEx e mb [ia Ga] IIC T5 Gb

Class II, Zone 20/21, AEx tb [ia Da] IIIC T80°C Db Rated: 10 - 28 Vdc, 2W Out1: 4-20mA / 2-Wire Current Loop

Out2: 4-20mA / 2-Wire Current Loop Tamb = $[-10 \degree C...+60 \degree C]$ with LCD Tamb = $[-40 \degree C...+60 \degree C]$ without LCD

Measuring Sensor

Intrinsically Safe, Ex ia, Class I, Div 1, Groups ABCD T5...T4

Class II, Groups EFG T80°C...T110°C

Ex ia IIC T5...T4 Ga/Gb

Ex ia IIIC T80°C....T110°C Da/Db

Class I, Zone 0, AEx ia IIC T5...T4 Ga/Gb

Class II, Zone 20/21, AEx ia IIIC T80°C...T110 °C Da/Db

Rated: 3.3Vdc, 20mW

Out: UART

Tamb = [-40 °C...+60 °C] only for T5 resp. T80 °C Tamb = [-40 °C...+85 °C] only for T4 resp. T110 °C

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Ratings - Continuation Full System

Class I, Div 1/2, Groups ABCD T5...T4, Class II, Div 1/2, Groups EFG

T80°C...T110°C

Ex e mb [ia Ga] IIC T5...T4 Ga/Gb Ex tb [ia Da] IIIC T80°C...T110°C Da/Db

Class I, Zone 0/1, AEx e mb [ia Ga] IIC T5...T4 Ga/Gb

Class II, Zone 20/21, AEx tb [ia Da] IIIC T80°C...T110°C Da/Db

Rated: 10 – 28 Vdc, 2W

Out1: 4-20mA / 2-Wire Current Loop Out2: 4-20mA / 2-Wire Current Loop Tamb = [-10 °C...+60 °C] with LCD Tamb = [-40 °C...+60 °C] without LCD

Tamb = $[-40 \, ^{\circ}\text{C...} + 85 \, ^{\circ}\text{C}]$ Sensor only for T4 resp. T110 $^{\circ}\text{C}$ Tamb = $[-40 \, ^{\circ}\text{C...} + 60 \, ^{\circ}\text{C}]$ Sensor only for T5 resp. T80 $^{\circ}\text{C}$

Applicable Standards <u>Canada</u>

CSA C22.2 No. 142-M1987 (R2009), CSA C22.2 No 157-92, CSA C22.2 No. 60079-0:11, CSA C22.2 No. 60079-7:11, CSA C22.2 No. 60079-11:11, CSA C22.2 No. 60079-18:12, CSA C22.2 No. 60079-26, CSA C22.2 No. 60079-31

<u>US</u>

UL 508 17th Edition, ANSI/ISA 60079-0 2009, ANSI/ISA 60079-7 2009, ANSI/ISA 60079-11 2012, ANSI/ISA 60079-18, ANSI/ISA 60079-26,

ANSI/ISA 60079-31

Factory/Manufacturing Location Same as Applicant

Statement of Compliance: The product(s) identified in this Certificate and described in the 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.



Issued By: Dave Adams, P. Eng.

Manager, Hazardous Locations [Ex Equipment] Department]

Signature: Date: November 1, 2016

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