



(1) **EU-Type Examination Certificate**

- (2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**
- (3) Certificate number: **SEV 14 ATEX 0107**
- (4) Product: Dual-channel meter for precise humidity and temperature measurement Rotronic HygroFlex-EX
- (5) Manufacturer: Rotronic AG
- (6) Address: Grindelstrasse 6, 8303 Bassersdorf, Switzerland
- (7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- (8) Eurofins, notified body No. 1258, 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 product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report no 21CH-00668.X04
- (9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018
EN IEC 60079-7:2015/A1:2018
EN 60079-11:2012
EN 60079-18:2015+A1:2017
EN 60079-26:2015
EN 60079-31:2014

Except in respect of those requirements listed at item 18 of the schedule.

- (10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate. The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.
- (11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- (12) The marking of the product shall include the following:



See Appendix

Eurofins Electric & Electronic Product Testing AG
Notified Body ATEX

Martin Plüss
Product Certification

(13)

Appendix

(14)

EU-Type Examination Certificate no. SEV 14 ATEX 0107

(15) **Description of product**

The Rotronic HygroFlex Ex device is a dual-channel meter for precise humidity and temperature measurement in an explosive atmosphere, where an ex classification is required. It consists of a measuring sensor and signal converter. The connected sensor is encapsulated in a stainless steel sensor tube and is designed for use in Zone 0/20. The transmitter itself is only designed for use in Zone 1/21 or Zone 2/22. The transmission signal is composed of two two-channel current loop interfaces, where the signal is formed in an accurate flow of each 4 to 20mA. Between the measurement circuit on the secondary side and the primary side is a galvanic separation.

Classification of installation and use:	stationary
Ingress protection:	IP66
Rated ambient temperature range (°C):	-10 °C ≤ Tamb ≤ +60 °C with LCD
	-40 °C ≤ Tamb ≤ +60 °C without LCD
	-40 °C ≤ Tamb ≤ +60 °C for sensor part (T5)
	-40 °C ≤ Tamb ≤ +85 °C for sensor part (T4)
Rated ambient temperature range (°C) for Ex Components:	N/A

Part number code:


HygroFlex Transmitter:
 HF520-EX-WxxxDxxx
 HF520-EX-WxxxXxxx
 HF520-EX-DxxxDxxx
 HF520-EX-DxxxXxxx

Sensor:


HC2-IMxxx-EX
 HC2-IExxx-EX
 HC2-SM-EX
 HC2-LDPxxx-EX

Marking:

Sensor:

 II 1/2G Ex ia IIC T5...T4 Ga/Gb
 II 1/2D Ex ia IIIC T80 °C...T110 °C Da/Db

Transmitter:

 II 2(1)G Ex eb mb [ia Ga] IIC T5 Gb
 II 2(1)D Ex tb [ia Da] IIIC T80 °C Db

Full system:

 II 1/2G Ex ia/eb mb IIC T5...T4 Ga/Gb
 II 1/2D Ex ia/tb IIIC T80 °C...T110 °C Da/Db

Rating:

Um = 28 V DC

Supply circuit sensor

Type of protection Intrinsic Safety Ex ia IIC.

Maximum output voltage	Uo	≤	6.6 V
Maximum output current	Io	≤	82 mA
Maximum output power	Po	≤	485 mW
Capacitance	Co	=	22 μF
Inductance	Lo	=	2 μH

Sensor circuit:
HC2-LDPxxx-EX

Type of protection Intrinsic Safety Ex ia IIC.

Maximum input voltage	Ui	≤	6.6 V
Maximum input current	Ii	≤	82 mA
Maximum input power	Pi	≤	485 mW
Internal Capacitance	Ci	=	19 μF
Internal Inductance	Li	=	0

Sensor circuit:
all other sensors

Type of protection Intrinsic Safety Ex ia IIC.

Maximum input voltage	Ui	≤	6.6 V
Maximum input current	Ii	≤	82 mA
Maximum input power	Pi	≤	485 mW
Internal Capacitance	Ci	=	15 μF
Internal Inductance	Li	=	0

(16) **Report number** 21CH-00688.X04

(17) **“Special conditions for safe use” / “Schedule of limitations”**

None

(18) **Essential health and safety requirements**

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
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None

(19) **Drawings and Documents**

See test report “Manufacturer’s Documents”