



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 CSA 22.0005X** Page 1 of 5 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2022-02-25

Applicant: **BARTEC BENKE GmbH**
Borsigstraße 10, 21465 Reinbek
Germany

Equipment: **5674-100 Channel Card (Ex i)**

Optional accessory:

Type of Protection: **[Ex ia op is]**

Marking: **[Ex ia op is IIC Ga]**

Approved for issue on behalf of the IECEx
Certification Body:

Dorin Stochitoiu

Position:

Technical Oversight Specialist

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:

CSA Group
178 Rexdale Boulevard
Toronto, Ontario M9W 1R3
Canada





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Manufacturer: **BARTEC BENKE GmbH**
Borsigstraße 10, 21465 Reinbek
Germany

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 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

[IEC 60079-28:2015](#) Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

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 Report:

[CA/CSA/ExTR22.0006/00](#)

Quality Assessment Report:

[DE/TUN/QAR12.0009/09](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The 5674-100 Channel Card (Ex i) will be used in the HYGROPHIL F 5674 Moisture Analyzer as an Analog to Digital converter. The Moisture Analyzer is intended for measuring the humidity of gases in pipes, vessels or tanks with the associated humidity sensor. A maximum of three sensors can be connected to the Moisture Analyzer, three Channel Card are required for this.

The Channel Card transforms the Ex i-signals of the temperature and pressure (PT100 and 0... 20mA) from a Moisture Sensor to a digital signal. This signal is transmitted to the HYGROPHIL F 5674 Moisture Analyzer via an I²C interface.

The humidity is measured optically with the sensor. A fiber optic cable supplies the sensor with intrinsically safe light. The LED for the light supply of the sensor is also installed on the card.

The channel card has the following connections:

- Digital data bus with 24V DC supply
- intrinsically safe connector for PT100
- intrinsically safe connector for 0-20 mA (active or passive input)
- intrinsically safe fiber optic cable connector

Safety-related maximum voltage 250V

SPECIFIC CONDITIONS OF USE: YES as shown below:

Equipment is intended to be permanently installed in a non-hazardous area only within a Hy-F 5674 enclosure.



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Equipment (continued):

Safety data – Port “RTD” (PT100 input) [Ex ia IIC Ga]			
Terminals	4 (I+), 3 (IN+), 2 (IN-), 1 (GND)		
Max. voltage U_o	6.7V		
Max. current I_o	30mA		
Max. power P_o	50mW		
Max. resistance R	230 Ω		
Internal capacitance C_i	2.5 μ F		
Internal inductance L_i	0.3mH		
Max. connectable capacitance C_o	15.4 μ F		
Max. connectable inductance L_o	38 mH		
if capacitance and inductance are present at the same time:			
C_o	0.3 μ F	0.2 μ F	0.1 μ F
L_o	0.01mH	0.1mH	0.15mH

Safety data – Port “0-20mA” (Analog Input) [Ex ia IIC Ga]			
Case: Passive 0..20mA sensor connected			
Terminals	4 (+24V), 2 (IN+), 1 (IN-)		
Max. voltage U_o	28V		
Max. current I_o	93mA		
Max. power P_o	0.65W		
Max. resistance R	300 Ω		
Internal capacitance C_i	negligible small (between I.S. wires)		
Internal inductance L_i	negligible small		
Max. connectable capacitance C_o	83 nF		
Max. connectable inductance L_o	3 mH		
if capacitance and inductance are present at the same time:			
Max. connectable capacitance C_o	83nF		
Max. connectable inductance L_o	0.2mH		
Case: Active 0..20mA sensor connected (external I.S. circuit)			
Terminals	2 (IN+), 3 (IN-)		
Max voltage U_o	28 V		
Max current I_o	0 mA		
External I.S. voltage U_i	30 V		



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External I.S. current I_i	120mA
External I.S. capacitance C_i	0nF
External I.S. inductance L_i	0 μ H