



# 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](http://www.iecex.com)

Certificate No.: **IECEx CML 20.0071X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-03-15

Applicant: **Status Instruments**  
Status Business Park  
Gannaway Lane  
Tewkesbury  
Gloucestershire  
GL20 8FD  
United Kingdom

Equipment: **SCH55 Series Connection Head/Junction Box**

Optional accessory:

Type of Protection: **Flameproof and Dust Protected or Intrinsically safe**

Marking: Ex db IIC T6 Gb Ex db IIC T5 Gb Ex db IIC T4 Gb Ex ia IIC T4 Ga  
Ex tb IIIC T85°C Db Ex tb IIIC T100°C Db Ex tb IIIC T135°C Db Ex ia IIIC T135°C Da  
Ta = -40°C to +65°C Ta = -40°C to +80°C Ta = -40°C to +85°C Ta = -40°C to +85°C

Approved for issue on behalf of the IECEx  
Certification Body:

**H M Amos MIET**

Position:

**Certificate Manager**

Signature:  
(for printed version)

Date:

15th March, 2021

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Certificate issued by:

**Eurofins E&E CML Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





# IECEx Certificate of Conformity

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Manufacturer: **Status Instruments**  
Status Business Park  
Gannaway Lane  
Tewkesbury  
Gloucestershire  
GL20 8FD  
**United Kingdom**

Additional  
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 60079-1:2014-06** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0

**IEC 60079-11:2011** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

**IEC 60079-31:2013** Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
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:

[GB/CML/ExTR20.0270/00](#)

Quality Assessment Report:

[GB/TRC/QAR10.0001/09](#)



# IECEX Certificate of Conformity

Certificate No.: **IECEX CML 20.0071X**

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Date of issue: 2021-03-15

Issue No: 0

## **EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

The SCH55 Series Connection Head / Junction Box is a general purpose flameproof and dust protected enclosure intended for use as a standalone junction box or for use with temperature or level sensors including RTDs, Thermocouples, Thermistors, Temperature Fuses/ Switches and Level Float Switches.

The SCH55 Series housing is a cylindrical enclosure manufactured from either ADC12 aluminium or 316 stainless steel and includes a threaded cover that may include an optional silicone cemented toughened soda lime glass window. The threaded cover is secured with an M5 grub screw and has a nitrile O-ring. The enclosure incorporates two M20 x 1.5 side entries and one 1/2" BSPP bottom entry. The base has both an internal and external M5 x 8mm earth connection as well as two external mounting holes.

**See Annex for full description and Conditions of Manufacture**

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

**See Annex for Specific Conditions of Use**

## **Annex:**

[Certificate Annex IECEx CML 20.0071X Issue 0\\_1.pdf](#)

**Annexe to:** IECEx CML 20.0071X Issue 0  
**Applicant:** Status Instruments Ltd  
**Apparatus:** SCH55 Series Connection Head/Junction Box



## Description

The SCH55 Series Connection Head / Junction Box is a general purpose flameproof and dust protected enclosure intended for use as a standalone junction box or for use with temperature or level sensors including RTDs, Thermocouples, Thermistors, Temperature Fuses/Switches and Level Float Switches.

The SCH55 Series housing is a cylindrical enclosure manufactured from either ADC12 aluminium or 316 stainless steel and includes a threaded cover that may include an optional silicone cemented toughened soda lime glass window. The threaded cover is secured with an M5 grub screw and has a nitrile O-ring. The enclosure incorporates two M20 x 1.5 side entries and one 1/2" BSPP bottom entry. The base has both an internal and external M5 x 8mm earth connection as well as two external mounting holes.

The sensor elements are encapsulated within a fabricated protective sheath filled with magnesium or aluminium oxide powder and sealed with resin epoxy, alternatively they are constructed from mineral insulated cable. All sensors will be directly connected to the enclosure using a threaded fitting or via a flexible cable and cable gland arrangement.

The SCH55 Series enclosure can be fitted with either terminal blocks, temperature transmitters or temperature indicators or a combination thereof.

When the enclosure is being used within intrinsically safe environments it can be fitted with separately certified intrinsically safe devices or terminals and marked for 'Ex ia' applications. These applications are to be supplied by a separately certified barrier.

### Electrical ratings:

#### Flameproof applications:

- Terminals - Maximum of 3W (combined total)
- Transmitter or indicator module – Input parameters as per device fitted, up to a maximum of 3W.

#### Intrinsically safe applications:

| Maximum Entity Parameters.  |       |                                                                         |        |
|-----------------------------|-------|-------------------------------------------------------------------------|--------|
| Single thermocouple circuit |       | 2 or more thermocouple circuit (per circuit), combined total of 3W Max. |        |
| Ui =                        | 30Vdc | Ui =                                                                    | 30 Vdc |
| Ii =                        | 100mA | Ii =                                                                    | 100 mA |
| Pi =                        | 900mW | Pi =                                                                    | 900mW  |

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|                                                                                                                                                                                                                                          |                                 |      |                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------|---------------------------------|
| Ci =                                                                                                                                                                                                                                     | 2 nF/m x length of sensor       | Ci = | 2 nF/m x length of sensor       |
| Li =                                                                                                                                                                                                                                     | 20 $\mu$ H/m x length of sensor | Li = | 20 $\mu$ H/m x length of sensor |
| Uo =                                                                                                                                                                                                                                     | 1.2 V                           | Uo = | 1.2 V                           |
| Io =                                                                                                                                                                                                                                     | 50 mA                           | Io = | 50 mA                           |
| Po =                                                                                                                                                                                                                                     | 25 mW                           | Po = | 25 mW                           |
| The capacitance and inductance or inductance/resistance ratio (L/R) of the hazardous area cables shall not exceed the values calculated from the C, L and L/R values permitted by the barrier, minus any Ci and Li of the sensor wiring. |                                 |      |                                 |

| Maximum Entity Parameters                                                                                                                                                                                                                                   |                                 |                                                                  |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------------------------------------------------------|------------------------------------------|
| Terminals/RTD's (per circuit), combined total of 3W Max.                                                                                                                                                                                                    |                                 | Transmitter / Indicator (Max inputs as per certificate), 3W Max. |                                          |
| Ui =                                                                                                                                                                                                                                                        | 30V                             | Ui =                                                             | As per transmitter/indicator certificate |
| Ii =                                                                                                                                                                                                                                                        | 100mA                           | Ii =                                                             | As per transmitter/indicator certificate |
| Pi =                                                                                                                                                                                                                                                        | 900mW                           | Pi =                                                             | As per transmitter/indicator certificate |
| Ci =                                                                                                                                                                                                                                                        | 2 nF/m x length of sensor       | Ci =                                                             | As per transmitter/indicator certificate |
| Li =                                                                                                                                                                                                                                                        | 20 $\mu$ H/m x length of sensor | Li =                                                             | As per transmitter/indicator certificate |
| The capacitance and inductance or inductance/resistance ratio (L/R) of the hazardous area cables shall not exceed the values calculated from the C, L and L/R values permitted by the barrier, minus any Ci and Li of the transmitter and/or sensor wiring. |                                 |                                                                  |                                          |

## Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

### General (All applications)

- i. 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. A copy of the separately certified transmitter/indicator certificate and instructions shall be provided with/make available for the equipment (if fitted).
- ii. A copy of the instructions shall be supplied with the equipment.

### **Intrinsically Safe Applications**

- iii. The sensor circuit shall undergo an electric strength test at 500Vac test to earth for 1 minute in accordance with IEC 60079-11, clause 6.3.13. Not applicable when galvanic isolation is used.

### **Flameproof Applications**

- iv. A routine overpressure test at a minimum pressure of 18 bar shall be carried out on each cemented window/welded probe arrangement for at least 10 s in accordance with IEC 60079-1:2014, clause 15.2.3. No damage or deformation of the enclosure shall be observed, and no leakage from the welded or cemented joints shall be observed.

Note: These tests are not applicable for the solid cover, non-welded probe assemblies of welded probe assemblies which are primarily secured by other means, as these have met the exemption overpressure requirements.

### **Specific Conditions of Use**

The following conditions relate to safe installation and/or use of the equipment.

#### **General (All applications)**

- i. 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. A copy of the separately certified transmitter/indicator certificate and instructions shall be provided with/make available for the equipment (if fitted).
- ii. Although the probe sensor may be installed in a location outside the ambient temperature range, the installer/user shall ensure the enclosure is located in an area within the marked ambient temperature range.  
  
Cable entries and branching temperatures may reach 15°C above the ambient temperature, cable and entry devices shall be suitable for these temperatures. Cable glands shall be suitable for the application, e.g., Flameproof / Dust protected and have a minimum IP rating of IP64.
- iii. For dust applications, under certain extreme circumstances, the non-metallic paint incorporated on the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. This is particularly important if the equipment is installed in a Zone 20 location. In addition, the equipment shall only be cleaned with a damp cloth. This is particularly important if the equipment is installed in a Zone 20 location.
- iv.

### **Intrinsically Safe Applications**

- v. When equipment is provided with an aluminium enclosure and installed in a Zone 0, the equipment shall be installed such that the risk of impact or abrasion of the aluminium enclosure is avoided. The user shall check for damage to the exterior paint finish and replace should signs of damage be observed.
- vi. When marked for intrinsically safe applications, the capacitance and inductance or inductance/resistance ratio (L/R) of the hazardous area cables shall not exceed the values calculated from the C, L and L/R values permitted by the barrier, minus any  $C_i$  and  $L_i$  of the transmitter and/or sensor wiring. Longer probe arrangements may incorporate a combination of the sensors and cable, when this is the case, the sensor  $C_i$  and  $L_i$  shall be calculated as follows:
- $C_i = 2\text{nF/m} \times \text{length of sensor} + 200\text{pF/m} \times \text{length of wire}$
  - $L_i = 20 \mu\text{H/m} \times \text{length of sensor} + 1\mu\text{H/m} \times \text{length of wire}$

### **Flameproof Applications**

- vi When supplied as an empty enclosure for user connections, the internal layout and free volume shall comply with IEC 60079-1, Annex D for the IIC applications (40% of each cross-sectional area remains free).

### **Components covered by Ex Certificates issued to older editions of Standards**

None