



# 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)

### Ex COMPONENT CERTIFICATE

Certificate No.: **IECEX IBE 19.0029U** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-02-06

Applicant: **Hadler GmbH**  
Fritzlärer Straße 19  
34587 Felsberg-Neuenbrunslar  
Germany

Ex Component: LED Control Gear type 3 C 180\*8\*

*This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).*

Type of Protection: **Increased safety "ec"**

Marking: Ex ec IIC Gc

Approved for issue on behalf of the IECEx  
Certification Body:

**Alexander Henker**

Position:

**Deputy Head of department Certification Body**

Signature:  
(for printed version)

Date:

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](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**IBExU Institut für Sicherheitstechnik GmbH**  
Fuchsmühlenweg 7  
09599 Freiberg  
Germany





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Manufacturer: **Hadler GmbH**  
Fritzlarer Straße 19  
34587 Felsberg-Neuenbrunslar  
Germany

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 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

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:

[DE/IBE/ExTR19.0024/00](#)

Quality Assessment Report:

[DE/TUN/QAR14.0009/02](#)



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## Ex Component(s) covered by this certificate is described below:

The LED Control Gear type 3 C 180 \*8 \* is used for the supply of one or more LED modules in series connection.

The rated output current may be adjusted by a DALI interface or is set by the manufacturer.

### Technical data:

rated voltage input:	220...240 V (0 / 50...60 Hz)
permissible voltage input:	198...264 V AC or 176...275 V DC
rated voltage output:	maximum 325 V
nominal current output:	50...350 mA or 100...500 mA or 250...700 mA
nominal power output:	maximum 80 W

Further details are mentioned in the Annex to this certificate.

### SCHEDULE OF LIMITATIONS:

- The LED Control Gear has to be installed in a suitable and separately certified enclosure which complies with the requirements of IEC 60079-7 or IEC 60079-15 and fulfils degree of protection of at least IP54.
- The service temperature range at  $t_c$  -point may not exceed  $-40\text{ }^\circ\text{C}$  up to maximum  $+85\text{ }^\circ\text{C}$  or as given in Annex to this certificate.
- The maximum permitted service temperature at the terminals is  $+85\text{ }^\circ\text{C}$ .
- Creepage distances and clearances have to be considered depending on the rated voltage when assembled in an enclosure.

### Annex:

[Annex\\_IBE19.0029U.pdf](#)

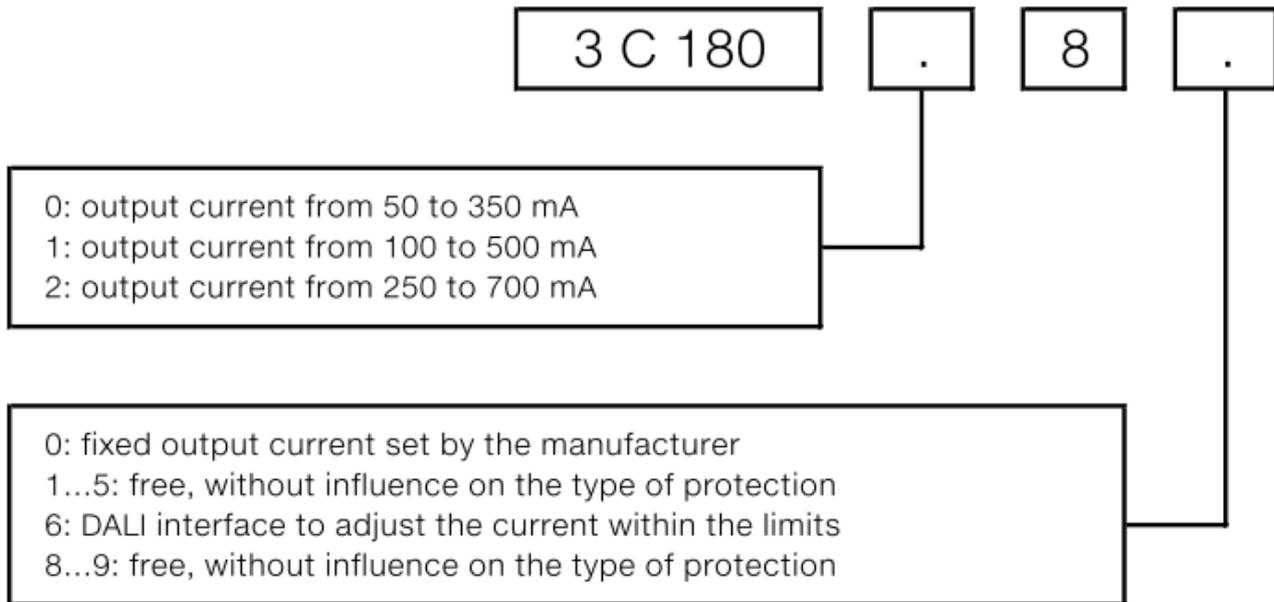
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Type code designation:



Additional information for the service temperature:

The service temperature range at  $t_c$ -point may not exceed either the values given in the following table

Type	service temperature range at $t_c$ -point
3 C 180 08 *	-40 °C up to +85 °C
3 C 180 18 *	-40 °C up to +80 °C
3 C 180 28 *	-40 °C up to +80 °C

Or

During AC operation the surface temperature of electrolytic capacitors shall not exceed 90 °C.  
 The surface temperature of all other components shall not exceed 105 °C  
 During DC operation the surface temperature of power semiconductors shall not exceed 115 °C.  
 All other components shall be maximum 105 °C.  
 The minimum permitted service temperature is -40 °C.  
 The maximum permitted service temperature at  $t_c$ -point is 90 °C.

In both cases, the maximum internal and external surface temperatures will comply with the requirements for temperature class T4 according to IEC 60079-0 clause 5.3.