Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) # EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 02 ATEX 1071 U

(4) Component: Empty housing Type GR.. - ...L... ...CN

(5) Manufacturer: KILLARK, Div of Hubbel Inc. (Delaware)

(6) Address: St. Louis MO 63115 USA

(7) This component and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 02-12230.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 50 014:1997 + A1 + A2 **EN 50 018:2000**

(10) The sign "U" placed behind the certificate number indicates that this certificate should not be confounded with certificates issued for equipment or protective systems. This Component Certificate only serves as a basis for the issuing of certificates for equipment or protective systems.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified component in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.

(12) The marking of the component shall include the following:

Ex II 2 G EEx d IIC

Zertifizierungsstelle Explosionsschutz

By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, January 17, 2003

(13) # SCHEDULE

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1071 U

(15) Description of component

The empty housing type GR.. - ...L... ...CN consists of the flame-proof housing made of cast aluminum with threaded holes for direct flame-proof cable entries and alternatively with a sight glass. The empty housing serves to mount switches and control devices. Connection is through direct flame-proof cable entries.

Electrical data

Rated voltage ..... max. 690 V
Conductor size AWG ..... max. 120 mm^2 (4/0)

Maximum power loss for use in temperature class

Housing Type	T6	T5
GRB	30 W	40 W
2GRB	35 W	55 W
4GRB	45 W	65 W
GRE	55 W	85 W
GRM	75 W	115 W
3GRM	90 W	130 W
5GRM	95 W	140 W
GRK	100 W	145 W
4GRK	145 W	205 W
GRL	120 W	170 W
GRH	160 W	225 W
4GRH	190 W	265 W
8GRH	230 W	330 W
GRHC	180 W	255 W
4GRHC	220 W	310 W
8GRHC	245 W	355 W
GRHA	215 W	300 W
4GRHA	240 W	345 W
8GRHA	270 W	395 W

Rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values complying with the appropriate standards the manufacturer specifies the final limiting values dependent on power supply specifications, operating mode, utilization category, etc.

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

SCHEDULE TO EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1071 U

(16) Test report PTB Ex 02-12230

(17) Special conditions for safe use

The empty housing may also be connected by means of suitable cable entries or conduit systems which meet the requirements of EN 50018, sections 13.1 and 13.2, and for which a separate examination certificate has been issued.

Openings not used shall be closed in compliance with EN 50018, section 11.

This EC type-examination certificate as well as any future supplements thereto shall at the same time be regarded as supplements for Component Certificate PTB No. Ex- 97.D.1013 U.

(18) Essential health and safety requirements

The tests and the favorable results these have produced reveal that the empty housing meets the requirements of directive 94/9/EC as well as those of the standards quoted on the cover sheet.

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, January 17, 2003

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1071 U

(Translation)

Equipment: Empty housing Type GR..-...L... ...CN

Marking: ⟨Ex⟩ **II 2 G EEx d IIC**

Manufacturer: Killark, Div. of Hubbell Inc. (Delaware)

Address: St. Louis, MO 63113
USA

Description of supplements and modifications

Into the empty housing type GR..-...L... ...CN can be built in - separately certified - push button pilot lights type series GOB4 and GOL4 and pilot light type series GOB3 and GOL3.

These push button pilot lights and pilot lights are approved for the gas group IIB + H_2.
The marking changes to read:

⟨Ex⟩ **II 2 G EEx d IIB + H_2**

Following points are changed on the enclosure:

a) The conduit opening may be plugged with Killark cup, cupx, GO-8177 or plug series; or other approved threaded hole plugs.
b) Changing of the conduit openings
c) Changing of the operator openings
d) Addition of G series operators.

Shock protection, protection against solid bodies, and protection against ingress of water — IP56 according to EN 60529 as a minimum

Test report: PTB Ex 03-13343

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, February 02, 2004

PHYSIKALISCH-TECHNISCHE BUNDESANSTALT 30

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 02 ATEX 1071 U

(Translation)

Equipment: Empty housing Type GR..-...L... ...CN

Marking: ⟨Ex⟩ **II 2 G EEx d IIC or EEx d IIB + H_2**

Manufacturer: Killark, Div. of Hubbell Inc. (Delaware)

Address: St. Louis, MO 63113
USA

Description of supplements and modifications

The type designation of the empty housing type GR..-...L... ...CN is supplemented. Alternatively it can be read: type GR..-...L... ...CEN.

The empty housing may also be used in areas in which explosive atmospheres produced by dust/air mixtures may occur.
The marking will be supplemented to:

⟨Ex⟩ II 2 G EEx d IIC or EEx d IIB + H_2
⟨Ex⟩ II 2 D IP 66

Protection against foreign bodies
and ingress of liquids: ..... IP 66 according to EN 60529

Applied standards

EN 50281-1-1:1998

Test report: PTB Ex 05-15015

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, June 24, 2005

Dr.-Ing. U. Klausmeyer
Direktor und Professor