

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Pilot Lamp

with type designation(s)
Lamp Module

Issued to

BARTEC GmbH
BAD MERGENTHEIM, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **2016-12-31**.

Issued at **Høvik** on **2015-10-05**

DNV GL local station: **Augsburg**

Approval Engineer: **Nicolay Horn**

for **DNV GL**

.....
Marit Laumann
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

I Lamp module with connection cable for installation on panel (front installation) Type 07-3353-*/****

Technical data:

Rated insulation voltage:	300V
Rated operating voltage:	AC 12V to 250V, DC 12V to 60V, AC/DC 12V to 24 V
Lamp:	LED, red, green, yellow, white, blue.
Ex protection class:	II 2G Ex d IIC T6
Ambient Temperature:	-40 °C to +50 °C (-55 °C on request), +60 °C (AC/DC 12V to 24V)
IP protection class:	IP67 in conjunction with actuating element Type 05-0003-****/****
Enclosure material:	Thermoplastic
Certification:	PTB 97 ATEX 1065 X

1) See application /limitation

II Lamp module for installation on panel (front installation) with cover for connection cable Type 07-3353-5*/**** 1)

Technical data:

Rated insulation voltage:	300V
Rated operating voltage:	AC 12V to 250V, DC 12V to 60V, AC/DC 12V to 24 V
Lamp:	LED, red, green, yellow, white, blue.
Ex protection class:	II 2G Ex d e IIC T6 Gb, II 2 D Ex tb IIIC T80°C Db IP66
Ambient Temperature:	-55 °C to +50 °C (-55 °C on request), +60 °C (AC/DC 12V to 24V)
IP protection class:	IP66 in conjunction with actuating element Type 05-0003-****/****
Enclosure material:	Thermoplastic
Certification:	PTB 11 ATEX 1010 X, IECEx PTB 11.0025X

1) See application /limitation

III Lamp module with terminals for panel-mounted installation Type 07-3353-1*/****, Type 07-3353-4*/****

Technical data:

Rated insulation voltage:	300V
Rated operating voltage:	AC 12V to 250V, DC 12V to 60V, AC/DC 12V to 24 V
Lamp:	LED, red, green, yellow, white, blue.
Ex protection class:	II 2G Ex d e IIC Gb / I M2 Ex d e I Mb II 2 G Ex d e ia IIC Gb / I M2 Ex d e ia I Mb
Ambient Temperature:	-55 °C to +50 °C, +60 °C (AC/DC 12V to 24V)
IP protection class:	IP67 in conjunction with actuating element Type 05-0003-****/****,
Enclosure material:	Thermoplastic
Certification:	PTB 97 ATEX 1064 U, IECEx PTB 10.0014 U

IV Lamp module with terminals for rail-mounted installation.Type 07-3351-1*/****

Technical data:

Rated insulation voltage:	300V
Rated operating voltage:	AC 12V to 250V, DC 12V to 60V, AC/DC 12V to 24 V
Lamp:	LED, red, green, yellow, white, blue.
Ex protection class:	II 2G Ex d e IIC Gb/ I M2 Ex d e I Mb or II 2 G Ex d e ia IIC Gb / I M2 Ex d e ia I Mb
Ambient Temperature:	-55 °C to +50 °C, +60 °C (AC/DC 12V to 24V)
IP protection class:	IP67 in conjunction with actuating element Type 05-0003-****/****,
Enclosure material:	Thermoplastic
Certification:	PTB 97 ATEX 1064 U, IECEx PTB 10.0014 U

For details: See manufacturer datasheet.

Job Id: **262.1-013587-2**
Certificate No: **E-14377**

Application /Limitation

The Ex class shown can only be regarded as information and can not replace the requirement for Ex certificate case by case.

Lamp modules delivered with cables above 3 meters must be certified / reviewed case by case.

Type Approval documentation

Technical Info:

BARTEC datasheets 03-0330-0192A-07/10-BCS-200866/4, .../5, ...& 6.
03-0330-0828-10/2014-BCS-374342/1, /2, 03-0330-0826-10/2014-BCS-374340/1, /2

Test reports /certificates:

PTB EC-Type Eximination Certificate nos. PTB 97 ATEX 1064 U and PTB 97 ATEX 1065 X PTB 11 ATEX 1010 X, IECEx PTB 11.0025X, IECEx PTB 10.0014 U.

Tests carried out

Type tests in accordance with EN 50014, EN 50018, EN 50019, IEC 60079-0, IEC 60079-1, IEC 60079-7 & IEC 60079-11. Shock test in accordance with IEC 60068-2-27.

Marking of product

BARTEC - Type designation - Ratings (if applicable)

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the survey are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Assessment to be performed at least every second year.

END OF CERTIFICATE