

# TYPE APPROVAL CERTIFICATE

## This is to certify:

**That the Enclosure for Electrical Equipment**

with type designation(s)  
**KF**

Issued to

**Gustav Hensel GmbH & Co.KG**  
**Lennestadt, 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.**

**Enclosure protection 66/67**  
**Vibration class**

This Certificate is valid until **2019-09-08**.

Issued at **Høvik** on **2015-09-09**

for **DNV GL**

DNV GL local station: **Essen Business Support**

Approval Engineer: **Andreas Kristoffersen**

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**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.

Job Id: **262.1-004143-5**  
Certificate No: **TAE00000EE**

## Product description

Cable junction boxes for indoor or outdoor use, with and without terminals, impact resistant, UV-resistant, saltwater proof, halogen free, silicon free, according to IEC 60670-22.

Type : KF xxxx X  
Enclosure class : IP 66/67  
Rated insulation voltage : AC/DC 690V  
Impact protection class : IK 09  
Enclosure material : Polycarbonate (PC 5)

### Cable connection box

| Type designation | Colour   |
|------------------|----------|
| KF 0202 G        | RAL 7035 |
| KF 0200 G        | RAL 7035 |
| KF 0202 B        | RAL 9011 |
| KF 0200 B        | RAL 9011 |
| KF 0200 H        | RAL 7035 |
| KF 0200 C        | RAL 9011 |
| KF 0402 G        | RAL 7035 |
| KF 0404 G        | RAL 7035 |
| KF 0400 G        | RAL 7035 |
| KF 0402 B        | RAL 9011 |
| KF 0404 B        | RAL 9011 |
| KF 0400 B        | RAL 9011 |
| KF 0400 H        | RAL 7035 |
| KF 0400 C        | RAL 9011 |
| KF 0604 G        | RAL 7035 |
| KF 0606 G        | RAL 7035 |
| KF 0600 G        | RAL 7035 |
| KF 0604 B        | RAL 9011 |
| KF 0606 B        | RAL 9011 |
| KF 0600 B        | RAL 9011 |
| KF 0600 H        | RAL 7035 |
| KF 0600 C        | RAL 9011 |
| KF 1006 G        | RAL 7035 |
| KF 1010 G        | RAL 7035 |
| KF 1006 B        | RAL 9011 |
| KF 1010 B        | RAL 9011 |
| KF 1000 B        | RAL 9011 |
| KF 1000 H        | RAL 7035 |
| KF 1000 C        | RAL 9011 |
| KF 1610 G        | RAL 7035 |
| KF 1616 G        | RAL 7035 |
| KF 1600 G        | RAL 7035 |
| KF 1610 B        | RAL 9011 |
| KF 1616 B        | RAL 9011 |
| KF 1600 B        | RAL 9011 |
| KF 1600 H        | RAL 7035 |
| KF 1600 C        | RAL 9011 |
| KF 2525 G        | RAL 7035 |
| KF 2500 G        | RAL 7035 |
| KF 2525 B        | RAL 9011 |
| KF 2500 B        | RAL 9011 |
| KF 2500 H        | RAL 7035 |

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|           |          |
|-----------|----------|
| KF 2500 C | RAL 9011 |
| KF 3500 H | RAL 7035 |
| KF 3500 B | RAL 9011 |
| KF 3500 C | RAL 9011 |
| KF 5000 G | RAL 7035 |
| KF 5000 B | RAL 9011 |
| KF 5000 H | RAL 7035 |
| KF 5000 C | RAL 9011 |

## **Type Approval documentation**

### **Tests carried out**

Tests according to IEC 60670-22: Heat ageing test, Insulation resistance and electric strength test, UV-test, Resistance to heat test and resistance to corrosion test. Glow wire test (IEC 60695-2-11). IP-test (IEC 60529). Mechanical Strength (IK code IEC 62262).

### **Marking of product**

Hensel – type designation - Size

### **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 periodical assessment 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.

Periodical assessment shall be performed at least every second year.

END OF CERTIFICATE