

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Peripheral Equipment**

with type designation(s)

Han A, Han 1A, Han D/DD, Han E/EE/ES/ESS, Han-Com, Han-Modular, Han AV, Han Q, Han HC, Han Yellock, Han Hoods and Housings (Except Han INOX), Han INOX Hood and Housing

Issued to

HARTING Electric GmbH & Co. KG
Espelkamp, Nordrhein-Westfalen, Germany

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Type	Temperature	Humidity	Vibration	EMC	Enclosure
Han A	B	B	B	n/a	
Han 1A	B	B	B	n/a	
Han D/DD	B	B	B	n/a	
Han E/EE/ES/ESS	B	B	B	n/a	
Han-Com	B	B	B	n/a	
Han-Modular	B	B	B	n/a	
Han AV	B	B	B	n/a	
Han Q	B	B	B	n/a	
Han HC	B	B	B	n/a	
Han Yellock	B	B	B	n/a	
Han Hoods and Housings (Except Han INOX)	B	B	B	n/a	see P. 3, item 11
Han INOX Hood and Housing	C	B	A	n/a	see P. 3, item 11 g.

Issued at **Hamburg** on **2019-02-12**This Certificate is valid until **2024-02-11**.for **DNV GL**DNV GL local station: **Magdeburg**Approval Engineer: **Maik Gagern**

Arne Schaarmann
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

1. Han xA, Han Brid F.O., CU, Quintax, RJ45 C, USB and FireWire
2. Han 1A
3. Han x D, Han x DD
4. Han x E, Han x EE, Han x ES, Han x ESS
5. Han-Com K x/x
6. Han Modular
7. Han AV
8. Han Qx/x
9. Han HC Modular
10. Han Yellock
11. Han Hoods and Housing Type: Standard, Han M, Han EMC, Han EMC/B, Han HPR, Han-Drive, Han Easy Hood, Han-INOX, Han-Eco, Han Yellock

x: one (1) to three (3) digit number, according to number of contacts

Termination depending on contact type: axial screw, cage clamp, crimp, IDC, harax, quick lock, screw, or solder

1. Han xA, Han Brid F.O., Han Brid CU, Han Brid Quintax, Han Brid RJ45 C, Han Brid USB and Han Brid FireWire
2-48 contacts 10-16A / 48-500V wire gauge: 0.14-4mm²
Add. FireWire and USB acc. standards
2. Han 1A
2+PE, 3+PE, 4, 5+PE, 8, 12 0,5A-16A / 48-400V wire gauge: 0.08-4mm²
3. Han x D, Han x DD
7-216 contacts 10A / 250V wire gauge: 0.14-2.5mm²
4. Han x E, Han x EE, Han x ES, Han x ESS
6-92 contacts 16A / 500V wire gauge: 0.14-4mm²
5. Han-Com K x/x
2-36 contacts 10-200A / 160-2000V wire gauge: 2.5-70mm²
6. Han Modular
Module: No of contacts Current / Voltage Wire gauge
Han 40A-200A Modules 1-2 40-200A / 1000V 1.5-70mm²
Han C, CC, CD Modules 3-4 10-40A / 690-830V 0.14-25mm²
Han E. EE, ES, EEE Modules 5-20 16A / 400-500V 0.14-4mm²
Han HV Modules 2 16-40A / 2900-5000V 0.5-10mm²
Han DD, DDD 12-17 10A / 160-250V 0.14-2.5mm²
Han D-Sub 9 5A / 10V 0.08-0.52mm²
Han Quintax 1-8 5-10A / 50V 0.08-2.5mm²
Han Coax 1 10-16A / 50V 0.14-5.5mm²
Han GigaBit, MegaBit, Shielded 8-20 5A / 50V 0.08-0.52mm²
Han SC 4 fiber optical wires Ø 2,8mm
Han Pneumatic 2-3 up to 8bar / 116psi Ø 6 mm
Additional plastic modules Han USB, Han FireWire and Han RJ45
7. Han AV
Han x E AV, Han x ES AV, Han x D AV
6-64 contacts 10-16A / 250-500V wire gauge: 0.14-2.5mm²
8. Han Qx/x

2-17 contacts 10-40A / 250-690V

wire gauge: 1.5-10mm²

9. Han HC Modular
1-3 contacts

350-650A / 4000V

wire gauge: 120-240mm²

10. Han Yellock

Han-Yellock Quick Lock module: 5 contacts

20A / 500V

wire gauge: 1.5-2.5mm²

Han-Yellock PE contact chamber: 1 contact

20A / 500V

wire gauge: 2.5mm²

Han-Yellock Monoblock: 25-48 contacts

16A / 500V

wire gauge: 4mm²

1. Han Hoods and Housing Type: Standard, Han M, Han EMC, Han EMC/B, Han HPR, Han-Drive
Han Easy Hood, Han-INOX, Han-Eco, Han Yellock

a. Han Standard Hoods and Housings sizes from 3A to 48B

zinc die cast IP44/IP67

plastic IP67 UL94 V0

al. die cast IP65

b. Han 1A series

Housing plastic IP20, IP65 with single wire sealing

c. Han-Drive (motor application)

al. die cast IP65

d. Han M (higher environment requirements)

zinc die cast IP44/IP67

al. die cast IP65

e. Han EMC and Han EMC/B (high EMC requirements)

zinc die cast IP44/IP67

al. die cast IP65

f. Han HPR (harsh environment)

zinc die cast IP68/IP69K

al. die cast IP68/IP69K

g. Han-INOX (higher corrosion requirements)

stainless steel IP44/IP65/IP

h. Han-Eco (low weight)

plastic IP65 UL94 V0

i. Han-Modular Compact

zinc die cast IP65

j. Han-Modular Twin

al. die cast IP65

k. Han-Modular ECO

plastic IP20/IP65 UL94 V0

l. Han-Yellock and Han-Yellock Outdoor

al. and zinc IP67/IP68

m. Han 24 HPR EasyCon (harsh environment and EMC)

al. die cast IP68/IP69K

Application/Limitation

HARTING industrial connectors Han Series inserts with hoods and housings
Operating instruction of the manufacturer as well as the requirements of the application to be observed.
This applies especially to the requirements of the pneumatic.

Type Approval documentation

Tests carried out

DNV GL Class Guideline DNVGL-CG-0339, Edition Nov. 2016

Marking of product

Maker, Type Designation

Periodical assessment

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

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to 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 is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE