



Marine & Offshore

Certificate number: 59339/A0 BV

File number: AP4868

Product code: 4502H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**Hirschmann Automation and Control GmbH**  
Neckartenzlingen - GERMANY

*for the type of product*

**NETWORK COMMUNICATION SYSTEMS**

Ethernet Rail Switch  
BRS 20/30/40/50

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships  
EC Code: 31/41

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 27 Jan 2025**

**For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 27 Jan 2020,

Dirk Hoefner



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

The **BRS 20/30/40/50** series are Ethernet Switches for mounting on DIN-Rail.

#### 1.1 - Variants:

Digit	Attribute	Identification	Feature
1 to 3	Product Name	BRS	Rail Switch without Gigabit-Port
4	Data rate	2 3 4 5	100 Mbit/s 100/1000 Mbit/s 1000 Mbit/s 1000/2500 Mbit/s
5	Hardware Type	0	Standard
6	Hyphen	-	
7 and 8	Number of 100 Mbit/s Ports	00 04 05 06 08 09 10 11 12	0 x 10/100 Mbit/s Ethernet Ports 4 x 10/100 Mbit/s Ethernet Ports 5 x 10/100 Mbit/s Ethernet Ports 6 x 10/100 Mbit/s Ethernet Ports 8 x 10/100 Mbit/s Ethernet Ports 9 x 10/100 Mbit/s Ethernet Ports 10 x 10/100 Mbit/s Ethernet Ports 11 x 10/100 Mbit/s Ethernet Ports 12 x 10/100 Mbit/s Ethernet Ports
9 and 10	Number of 1000 (2500) Mbit/s Ports	00 04 08 12	0 x 100/1000 Mbit/s Ethernet Ports 4 x 100/1000 Mbit/s Ethernet Ports 8 x 100/1000 Mbit/s Ethernet Ports 8 x 100/1000 Mbit/s + 4 x 1000/2500 Mbit/s Ethernet Ports or 12 x 100/1000 Mbit/s
11 and 12	1. + 2. Uplink Port	99 M2 M4 S2 S4 E2 L2 G2 Z6 MM NN VV UU EE LL GG ZZ OO 2Q	not configurable 1 x Multimode / SC (100 MBit/s) 1 x Multimode / ST (100 MBit/s) 1 x Singlemode / SC (100 MBit/s) 1 x Singlemode / ST (100 MBit/s) 1 x Singlemode Plus / SC (100 MBit/s) 1 x Singlemode LH / SC (100 MBit/s) 1 x Singlemode LH / SC 200km 1 x SFP Slot (100 MBit/s) 2 x Multimode / SC (100 MBit/s) 2 x Multimode / ST (100 MBit/s) 2 x Singlemode / SC (100 MBit/s) 2 x Singlemode / ST (100 MBit/s) 2 x Singlemode Plus / SC (100 MBit/s) 2 x Singlemode LH / SC (100 MBit/s) 2 x Singlemode LH / SC 200km (100MBit) 2 x SFP Slot (100 MBit/s) 2 x SFP Slot (100/1000 MBit/s) 2 x SFP Slot (1000/2500 MBit/s)
13 and 14	3. + 4. Uplink Port	99 M2 M4 S2 S4 E2 L2 G2 Z6 ZZ OO 2Q	not configurable 1 x Multimode / SC (100 MBit/s) 1 x Multimode / ST (100 MBit/s) 1 x Singlemode / SC (100 MBit/s) 1 x Singlemode / ST (100 MBit/s) 1 x Singlemode Plus / SC (100 MBit/s) 1 x Singlemode LH / SC (100 MBit/s) 1 x Singlemode LH / SC 200km 1 x SFP Slot (100 MBit/s) 2 x SFP Slot (100 MBit/s) 2 x SFP Slot (100/1000 MBit/s) 2 x SFP Slot (1000/2500 MBit/s)
15	Hyphen	-	

16	Temperature range	S C T E	Standard, 0 ... +60 °C Standard with Conformal Coating, 0 ... +60 °C Extended, -40 ... +70°C Extended with Conformal Coating -40 ... +70°C
17	Voltage range	T F	2 x 24V DC 2 x 24V DC ... 48V DC/ 24V DC
18	Housing	C E	IP30 Plastic IP40 Metal

**Accessories:** Auto Configuration Adapter: ACA22-USB-C (EEC)  
Software Version: 08.x

## **2. DOCUMENTS AND DRAWINGS:**

- 837-827-X01 dated 02.10.18; 837-828-XXX dated 28.01.19; 942-170-999 dated 22.09.17
- Installation BRS20/30/40/50/60 Release 04 dated 04/2019; SQP HiOS Software 08.0.00 dated 01.08.2019

## **3. TEST REPORTS:**

Hirschmann Automation and Control GmbH:

- PTR\_94242002\_PS\_Navy\_1v0 dated 2019-07-18; PTR\_94242002\_PE\_Navy\_1v0 dated 2019-07-18;
- PTR\_94242002\_EMN\_Navy\_1v0 dated 2019-07-18

TELUS- Testlabor für Umweltsimulation GmbH:

- 132ea/19 dated 05th April 2019; 502e/18 dated 16th October 2018

## **4. APPLICATION / LIMITATION:**

- 4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - Bureau Veritas Environmental Category, **EC Code: 31/41**
- 4.4 - The equipment fulfils the EMC requirements for installation in Bridge and Deck Zone by using ferrit core 74277255 on power supply cable.
- 4.5 - Only Hardware and Firmware successfully tested together in compliance with the regulations as referred to in page one, according to the declaration of the manufacturer is covered by this certificate.
- 4.6 - Depending on the Application, Factory Acceptance and On-board Tests are to be performed in accordance with requirements for Category II or III Equipment.
- 4.7 - Equipment is to be supplied with manual(s) for installation, use and maintenance.

## **5. PRODUCTION SURVEY REQUIREMENTS:**

- 5.1 - The above mentioned products are to be supplied by **Hirschmann Automation and Control GmbH** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **Hirschmann Automation and Control GmbH** has to make the necessary arrangements to have its works recognized by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

**Hirschmann Automation and Control GmbH**  
Stuttgarter Str. 45 - 51  
72654 Neckartenzlingen  
GERMANY

## **6. MARKING OF PRODUCT:**

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number

## **7. OTHERS:**

- 7.1 - It is the responsibility of **Hirschmann Automation and Control GmbH** to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

\*\*\* END OF CERTIFICATE \*\*\*