

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Network and Communication Components**

with type designation(s)

Industrial Ethernet Firewall Eagle 20/30; Rail Switch RSP20, 25, 30, 35; Rail Switch RSPE, RSPM

Issued to

**Hirschmann Automation and Control GmbH
Neckartenzlingen, Baden-Württemberg, 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.****Location classes:****Temperature D***
Humidity B
Vibration A
EMC B
Enclosure A***see Application/Limitation**This Certificate is valid until **2022-12-07**.Issued at **Hamburg** on **2019-10-04**DNV GL local station: **Augsburg**Approval Engineer: **Heinz Scheffler**for **DNV GL**

Joannis Papanuskas
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: **262.1-020866-4**
 Certificate No: **TAA00000B7**
 Revision No: **3**

Product description

Industrial Ethernet Firewall EAGLE 20/30

The devices support switched ETHERNET networks that conform to the IEEE 802.3 standard. The devices are mounted by snapping them onto the DIN rail.

The product designation of the device is made from combining the desired product characteristics in accordance with the following structure / nomenclature

Nomenclature EAGLEaa-bbccddeefgghijj

Position	Characteristic	Characteristic value	Description
6 ... 7 (aa)	Product	20 30	Router without gigabit ports Router with gigabit ports
8	(hyphen)	-	
9 ... 10 (bb)	Number of 10/100 Mbit/s ports	04	4 * 10/100 Mbit/s Ethernet ports
11 ... 12 (cc)	Number of 100/1000 Mbit/s ports	00	0 * 100/1000 Mbit/s Ethernet ports
		02	2 * 100/1000 Mbit/s Ethernet ports
13 ... 15 (ddd)	Configuration of the uplink ports	206	2 * SFP slot for 100/1000 Mbit/s F/O connection
		999	Not present
16 ... 17 (ee)	Configuration of the other ports	TT	All the other port are RJ45 sockets for twisted pairs
18 (f)	Cellular phone interface	9	Not present
19 ... 20 (gg)	WAN port	99	Not present
21 (h)	Temperature range	S	Standard 0°C ... 60°C
		T	Extended -40°C ... 70°C
		E	Extended with conformal coating -40°C ... 70°C
22 ... 23 (ii)	Operating voltage	CC	2 voltage inputs for redundant voltage supply Rated voltage range 24 ... 48V DC
		K9	1 voltage input Rated voltage range 110 ... 230V AC, 50 ... 60Hz Rated voltage range 60 ... 250V DC
24 ... 25 (jj)	Certifications		Not relevant for this certificate

Software release: 01.x, 02.x, 03.x

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Rail Switch RSPE, Rail Switch Media Module RSPM

The RSPE 30/32/35/37 devices are mounted by snapping them onto DIN rail. The devices work without a fan. By using media modules, up to 16 additional Fast Ethernets ports on a RSPM basic device are possible. The RSPM media modules are designed for exclusive use in a RSPE basic device. The product designation of the device is made from combining the desired product characteristics in accordance with the following structure / nomenclature

Productcode RSPE

Position	Characteristic	Characteristic value	Description
1 ... 4	Product	RSPE	Rail Switch Power Enhanced
5	Data rate	3	10/100/1000 Mbit/s ports
6	Hardware type	0	Standard
		2	Standard with PoE or PoE+
		5	Extended redundancy
		7	Extended redundancy with PoE or PoE+
7	(hyphen)	-	
8 ... 9	Number of 10/100 Mbit/s ports	24	24 * 10/100Mbit/s Ethernet ports
10 ... 11	Number of 10/100/1000 Mbit/s ports	04	4 * 10/100/1000Mbit/s Ethernet ports
12 ... 14	Configuration of uplink ports	407	4 * Combo ports for 10/100/1000Mbit/s connections
15 ... 17	Configuration of other ports	T99	8 * RJ45 sockets for 10/100Mbit/s twist pair connections, 2 * free slots for media module
18	(hyphen)	-	
19	Temperature range	S	Standard 0°C ... +60°C
		T	Extended -40°C ... +70°C
		E	Extended with conformal coating -40°C ... +70°C
20 ... 21	Supply voltage	CC	2 voltage inputs for redundant power supply
			Rated voltage 24 ... 48V DC Voltage range incl. maximum tolerances: 18...60V DC
		K9	1 voltage input
			Rated voltage 110 ... 230V AC, 50 ... 60Hz Voltage range incl. maximum tolerances: 88...265V AC, 47...63Hz
		KK	2 voltage inputs for redundant power supply
			Rated voltage 110 ... 230V AC, 50 ... 60Hz Voltage range incl. maximum tolerances: 88...265V AC, 47...63Hz
		PP	2 voltage inputs for redundant power supply
			When using with PoE powered devices: Rated voltage 48V DC Voltage range incl. maximum tolerances: 47...57V DC When using with PoE+ powered devices: Rated voltage 54V DC Voltage range incl. maximum tolerances: 53...57V DC Without using PoE: Rated voltage 24...48V DC Voltage range incl. maximum tolerances: 19...60V DC

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Position	Characteristic	Characteristic value	Description
		XX	Any letter, depending on approvals and/or declarations
24 ... 25	Software packages	XX	Any letter, depending on software package
26 ... 27	Customer specific version	HH S	Standard Standard
28	HW configuration	M P H D	Fast MRP (Media Redundancy Protocol) PRP (Parallel Redundancy Protocol) HSR (High availability Seamless Redundancy) DLR (Device Level Ring)
29	SW configuration	X	Any letter, depending on SW configuration
30 ... 31	Software level	2S 2A 3S	HiOS Layer 2 Standard HiOS Layer 2 Advanced HiOS Layer 3 Standard
32 ... 36	Software version	03.x. 04.x. 05.x 06.x 07.x 08.x	SW version 03.x SW version 04.x SW version 05.x SW version 06.x SW version 07.x SW version 08.x
37 ... 38	Maintenance	XX	Any letter, depending on maintenance

Productcode RSPM

Position	Characteristic	Characteristic value	Description
1 ... 4	Product	RSPM	Rail Switch Media Modul
5	Data rate	2	10/100 Mbit/s ports
6	Hardware type	0	Standard
		2	Standard with PoE or PoE+
7	(hyphen)	-	
8 ... 10	Port configuration Part A	4Z6 4T1	4 * SFP slots for 100Mbit/s F/O connections 4 * RJ45 sockets for 10/100Mbit/s twisted pair
11 ... 13	Port configuration Part B	4Z6 4T1	4 * SFP slots for 100Mbit/s F/O connections 4 * RJ45 sockets for 10/100Mbit/s twisted pair
14	Temperature range	S T E	Standard 0°C ... +60°C Extended -40°C ... +70°C Extended with conformal coating -40°C ... +70°C
15 ... 16	Approvals / Declarations	Z9 XX	CE, FCC, EN61131, EN60950-1 Any letter, depending on approvals and/or declarations
17 ... 18	Customization	HH	Hirschmann Standard
19	Hardware configuration	S	Standard
20	Software configuration	9	without configuration
21 ... 25	Software version	99.9	without software
26 ... 27	Maintenance	99	No maintenance version

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Industrial Ethernet Rail Switch Power RSP20, RSP25, RSP30, RSP35

The device name corresponds to the product code:

- The devices RSP20 and RSP25 are Fast Ethernet switches
- The devices RSP30 and RSP35 are Gigabit Ethernet switches.

The device is mounted by latching in place on a DIN rail and work without a fan.

The product designation of the device is made from combining the desired product characteristic in accordance with the following structure / nomenclature

Nomenclature aaaaaabbccddeeffgghhijjkkllllmm

Position	Characteristic	Characteristic value	Description
1 ... 6(a)	Product	RSP20	Rail Switch Power, 10/100 Mbps, Standard
		RSP25	Rail Switch Power, 10/100 Mbps, Enhanced Redundancy
		RSP30	Rail Switch Power, 10/100/1000 Mbps, Standard
		RSP35	Rail Switch Power, 10/100/1000 Mbps, Enhanced Redundancy
7 ... 8(b)	No. of Ports Fast Ethernet	08	8x10/100 Mbps Ethernet Ports
		11	11x10/100 Mbps Ethernet Ports
9 ... 10(c)	No of Ports Gigabit Ethernet	00	0x10/100/1000 Mbps Ethernet Ports
		03	3x10/100/1000 Mbps Ethernet Ports
11 ... 12(d)	Uplink Port Configuration	3Z6	all SFP Slot (100Mbps)
		3O6	all SFP Slot (1000Mbps)
13 ... 14(e)	Port Configuration	TT	all Twisted Pair /RJ45
		ZT	4x SFP slot (100Mbps); remains Twisted Pair / RJ45
15(f)	Temperature range	S	Standard 0°C up to 60°C
		T	Extended -40°C up to 70°C
		E	Extended -40°C up to 70°C inclusive conformal coating
16 ... 17(g)	Voltage range	CC	2 voltage inputs for redundant power supply Rated voltage: 24...48 V DC Voltage range incl. maximum tolerances: 18...60 V DC
		K9	1 voltage input Rated voltage: 110...230 V AC, 50...60Hz Voltage range incl. maximum tolerances: 88...265 V AC, 47...63 Hz
		KK	2 voltage inputs for redundant power supply Rated voltage: 110...230 V AC, 50...60Hz Voltage range incl. maximum tolerances: 88...265 V AC, 47...63 Hz
18 ... 19(h)	Approvals	Z9	CE; FCC; EN61131
		XX	Any letter, depending on approvals
20 ... 21(i)	Redundancy Configuration	HS	Hirschmann Standard

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		HM	Hirschmann Fast MRP (Media Redundancy Protocol)
		HP	Hirschmann PRP (Parallel Redundancy Protocol)
		HH	Hirschmann HSR (High availability Seamless Redundancy)
		HD	Hirschmann DLR (Device Level Ring)
		HN	Hirschmann NAT (Network Address Translation)
		XM XS, XM, XH, XD, XN, XM	Hirschmann Fast MRP (Media Redundancy Protocol) X = any letter, for customized version.
22(j)	Software Configuration	H	Standard
		X	X = any letter for customized configuration
23 ... 24(k)	Software Level	2S	HiOS Layer 2 Standard
		2A	HiOS Layer 2 Advanced
		3S	HiOS Layer 3 Standard
25 ... 29(l)	Software version	03.x	SW version 03.x.
		04.x	SW version 04.x.
		05.x	SW version 05.x.
		06.x	SW version 06.x.
		07.x	SW version 07.x.
		08.x	SW version 08.x.
30 ... 31(m)	Maintenance version	xx	Any letter, depending on maintenance

Application/Limitation

Location classes Temperature D: -40°C, 16h

Equipment for installation outside a distance of 5 m from a standard or a steering magnetic compass.

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNVGL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNVGL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

If the control system is intended for remote software maintenance the functionality shall be part of the system documentation as required in DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

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Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNVGL for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

Type Approval documentation

See ANNEX

Place of Production

See ANNEX

Tests carried out

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition November 2015.

Marking of product

The products to be marked with:

- device name
- manufacturer name
- serial number.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the 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

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ANNEX

- Type Approval documentation (hidden)
- Place of Production (hidden)

Type Approval documentation Industrial Ethernet Firewall Eagle 20/30

Test reports Hirschmann no.:

TRP_95310040_PS01_1v0	(23.07.2012)
TRP_95310040_PE01_1v0	(23.07.2012)
TRP_95310040_S01_1v0	(23.07.2012)
TRP_95310040_S02_1v0	(23.07.2012)
TRP_95310040_B_021202e	(15.03.2012)

Test report TELUS no.: 120e/13 (15.03.2013)

User Manual: Installation Industrial Security Router EAGLE 20/30 (Release 08, 04/2015)

Description of modification software, release 01.x to 02.x (23.10.2014)

Description of modification software, release 02.x to 03.x (23.10.2015)

PTR_95310030_EMC01_2v0	(21.01.2017)
PTR_95310030_EMC01_2v0	(21.07.2017)
PTR_95310030_PS01_2v0	(21.07.2017)
PTR_95310030_S01_2v0	(21.07.2017)

Rail Switch RSPE, Rail Switch Media Module RSPM

Test reports Hirschmann no.:

TRP_95312009_PS01_1v0	(01.08.14),
TRP_95312009_PE01_1v0	(01.08.14)
TRP_95312009_S01_1v0	(01.08.14)
TRP_95312009_S02_1v1	(13.08.14)
TRP_95312009_EMC01_1v1	(13.08.14),
TRP_95312009_EMC01_1v2	(10.09.14),
TRP_95312009_EMC02_1v0	(14.08.14),

Test report TELUS no.: 343e/14 (21.07.14);

Installation Manual RSPE 30/32/35/37 Release 12 10/2015,

Installation Manual RSPM Release 12 10/2015,

Reference Manual HiOS-2A RSPE Release 6.0 03/2016,

Reference Manual HiOS-2S RSPE Release 6.0 03/2016,

Reference Manual HiOS-3S RSPE Release 6.0 03/2016

Änderungsbeschreibung SW-Release 03.x auf 04.x (12.09.2014)

Änderungsbeschreibung SW-Release 04.x auf 05.x (05.06.2016)

Änderungsbeschreibung SW-Release 05.x auf 06.x (05.06.2016)

Änderungsbeschreibung SW-release 06.x auf 07.x (24.11.2017)

SQP_HiOS_Software_08.0.00_1v0_Final.docx

HiOSRelease_Info_07_to_08.docm

Part lists RSPE „Grundgeräte“: 837640405 Z02S03, 837640605 Z02S03, 837641205 Z01S01, 837643005, 837643205

Part lists RSPE „alternative Stromversorgungen im Grundgerät“: 837594005 Z03S03, 837595201, 837647001, 837648005 Z03S04

Part lists „Modulare Einschübe“: 837642005Z01S01, 837642205 Z01S02, 837643005 Z01S01, 837643205 Z01S02, 837644005 Z01S02

PTR_95312009_EMC01_3v0	(15.03.2017)
PTR_95312009_PE01_3v0	(28.03.2017)
PTR_95312009_PS01_3v0	(22.03.2017)

Industrial Ethernet Rail Switch Power, RSP20, RSP25, RSP30, RSP35

Test reports Hirschmann no.:

TRP_95310030_PS01_1v0	(23.03.12),
TRP_95310030_PS02_1v0	(14.08.14),

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TRP_95310030_PE01_1v0 (19.04.12),
TRP_95310030_PE02_1v0 (14.08.12),
TRP_95310030_S01_1v0 (24.05.12),
TRP_95310030_S02_1v1 (23.05.12),
TRP_95310030_EMCO2_1v1 (14.08.14),
TRP_95310040_PE02_1v0 (20.11.14),
TRP_95310040_EMCO11_1v0 (12.06.14),
TRP_95310040_EMCO2_1v0 (20.11.14)
Test report TELUS no.: 286e/16 (16.06.16), 535e/14 (30.11.14);
User Manual RSP 20/25/390/35 Release 13 01/2016
Change history (18.07.16)
Part list RSP 942053999 (19.07.16)
Drawing no. 942-053-999 (Rev. 07, 26.10.15)
Further documents
Änderungsbeschreibung SW-release 03.x auf 04.x (12.09.2014)
Änderungsbeschreibung SW-release 04.x auf 05.x (05.06.2016)
Änderungsbeschreibung SW-release 05.x auf 06.x (05.06.2016)
Änderungsbeschreibung SW-release 06.x auf 07.x (24.11.2017)
SQP_HiOS_Software_08.0.00_1v0_Final.docx
HiOSRelease_Info_07_to_08.docm
PTR_95310030_EMCO1_2v0 (21.01.2017)
PTR_95310030_EMCO1_2v0 (21.07.2017)
PTR_95310030_PS01_2v0 (21.07.2017)
PTR_95310030_S01_2v0 (21.07.2017)

Place of Production

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