



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAA000012Y**  
Revision No:  
**4**

## This is to certify:

**That the Network and Communication Components**

with type designation(s)  
**MICE Switch Power MSP30/32/40/42 and Media Modules MSM20/22/24/40/42/46/50**

Issued to  
**Hirschmann Automation and Control GmbH**  
**Neckartenzlingen, Baden-Württemberg, Germany**

is found to comply with  
**DNV 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.**

### Location classes:

<b>Temperature</b>	<b>B</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A/B*</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>Required protection according to DNVGL Rules shall be applied upon installation onboard</b>

**\*see Application/Limitation**

Issued at **Hamburg** on **2023-05-02**

for **DNV**

This Certificate is valid until **2028-05-01**.

DNV local unit: **Augsburg**

Approval Engineer: **Heinz Scheffler**

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**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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



### Product description

The **MSP30/32/40/42** devices support switched ETHERNET networks that conform to the IEEE 802.3 standard. The devices are mounted by snapping them onto the DIN rail. Devices with customization = HX or MX: wall mounting installation.

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

### Nomenclature MSP

Position	Characteristic	Characteristic value	Description
1 ... 3	Product	MSP	MICE Switch Power
4	Data rate	3 4	10/100 Mbps and 10/100/1000 Mbps Ports 10/100/1000 Mbps and 1000/2500 Mbps Ports
5	Hardware type	0 2	Standard PoE or PoE+ capable
6	(hyphen)	-	
7 ... 8	Number of 10/100 Mbps ports	08 16 24	8 * 10/100 Mbps Ethernet ports 16 * 10/100 Mbps Ethernet ports 24 * 10/100 Mbps Ethernet ports
9 ... 10	Number of 10/100/1000 Mbpsports	04	4 * 10/100/1000Mbps Ethernet ports
11	Number of 10/100/1000/10000 Mbps ports	0	0 * 10/100/1000/10000 Mbps Ethernet ports
12	Temperature range	S T E	Standard 0°C ... +60°C Extended -40°C ... +70°C Extended with conformal coating 40°C+70°C
13	Voltage range	C P	24 ... 48 VDC PoE: 48 VDC, PoE+: 54 VDC
14 ... 15	Approvals / Declarations	Z9 XX	CE, FCC, EN61131, EN60950-1 Any letter, depending on approvals and/or declarations
16 ... 17	Software packages	XX	Any letter, depending on SW package
18 ... 19	Customization	HH HX MX	Hirschmann Standard Hirschmann Extreme Condition MAN Extreme Condition
20	Software configuration	X	Any letter, depending on SW configuration
21 ... 22	Software level	2A	HiOS Layer 2 Advanced

23 ... 27	Software version	3A 02.x 03.x 04.x 05.x 06.x 07.x 08.x 09.x	HiOS Layer 3 Advanced SW version 02.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 SW version 09.x
28 ... 29	Maintenance	XX	Any letter, depending on maintenance

The **MSM20/22/24/40/42/46/50** media modules support the option to choose various media to connect terminal devices and other infrastructure components.  
 The devices are mounted by snapping them onto the DIN rail.  
 Devices with customization = HX or MX: wall mounting installation.

**Nomenclature MSM**

Position	Characteristict	Characteristic value	Description
1 ... 3	Product	MSM	MICE Switch Media Modul
4	Data rate	2 4 5	10/100 Mbps ports 10/100/1000 Mbps ports 1000/2500 Mbps Ports
5	Hardware type	0 2 4 6	Standard PoE or PoE+ capable I/O capable PoE or POE+ capable with external power
6	(hyphen)	-	
7 ... 8	Port 1	T1 T5 M2 M4 S2 S4 L2 G2 C1 IO Q6 99	Twisted Pair (TX) / RJ45 Twisted Pair (TX) / M12 Multimode FX DSC (100 Mbps only) Multimode FX ST (100 Mbps only) Singlemode FX DSC (100 Mbps only) Singlemode FX ST (100 Mbps only) Singlemode Long Haul FX DSC Singlemode Long Haul FX DSC 200km (100 Mbps only) Combo port: Twiste Pair (TX) / RJ45 and Fiber Optic SFP Cage SFP Slot 1000/2500 Mbps Digital Input / output Empty
9 ... 10	Port 2	...	Same as position 7 ... 8
11 ... 12	Port 3	...	Same as position 7 ... 8
13 ... 14	Port 4	...	Same as position 7 ... 8

15	Temperature range	S T E	Standard 0°C ... +60°C Extended -40°C/70°C Extended with conformal coating -40°C/70°C
16 ... 17	Certificates and declarations	Z9 XX	CE, FCC, EN61131, EN60950-1 Any letter, depending on approvals and/or declarations
18 ... 19	Customization	HH HX MX	Hirschmann Standard Hirschmann Extreme Condition Only valid with Port T5 and MSP Backplane MAN Extreme Condition
20	Hardware configuration	9	Only valid with Port T5 and MSP Backplane No FPGA
21	Software configuration	E	Entry, without configuration
22 ... 26	Software version	99.9	No software
27 ... 28	Maintenance	99	No maintenance version

## Application/Limitation

### Location Class Vibration B:

- MSP 30/32: Customization = HX or MX
- MSM 20/40: Port 1...4 = T5 and Customization = HX or MX

The installation requirements for naval applications are to be observed.

## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 DNV 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 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.

## 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 DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer. The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, 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 DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

## **Type Approval documentation**

See ANNEX

## **Place of Production**

See ANNEX

## **Tests carried out**

Applicable tests according to class guideline DNV-CG-0339, August 2021.

## **Marking of product**

The products to be marked with:

- Model 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

## ANNEX

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

### Type Approval documentation

#### Test reports:

TRP\_95311011\_PS01\_1v1 (21.08.13); TRP\_95311011\_PE01\_1v0 (08.03.13); TRP\_95311011\_S01\_1v0 (11.03.13); TRP\_95311011\_EMC01\_2v0 (19.07.13); TRP\_95311011\_EMC02\_1v0 (10.07.13); TRP\_95314005\_PE01\_1v0 (28.10.14); TRP\_95314005\_EMC01\_1v0 (28.10.14); TRP\_95314005\_EMC02\_1v0 (24.11.14); 067e/13 (28.02.13); 536e/14 (29.0.14); 207e/17 (1105.2017); TRP\_95315009\_PS01\_1v0 (2016-09-29); TRP\_95315009\_PE01\_1v0 (2016-11-09); TRP\_95315009\_EMC01\_1v0 (2016-11-30); PB-455e

#### Documents:

Installation MSP30/32/40/42 and MSM20/22/24/40/42/46/50; Difference MSP Backplanes Original (0.7g) and Rugged version (4g) (11.07.14); MSP Part list 000181550DNR rev.0, MSM Part list no. 000181552DNR rev.0; SVD HiOS 06.1.02 Version 1v1 (06.02.2017); C-Sample Test Report HiOS 06.1.02 (06.02.2017); Description of changes from release HiOS 06.0 to 07.0 (17.05.2018); SQP\_HiOS\_Software\_08.0.00\_1v0\_Final.docx  
HiOSRelease\_Info\_07\_to\_08.docm; Release\_HiOS\_09.0.00

### Place of Production

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