



# TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAA00001H2**  
Revision No:  
**2**

## This is to certify:

that the **Network and Communication Components**

with type designation(s)  
**Industrial Ethernet Rail Switch, TCSESPU & TCSESSU devices Line**

issued to  
**Schneider Electric France S.A.S.**  
**Carros, France**

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:**  
**Temperature D\***  
**Humidity B**  
**Vibration A**  
**EMC B**  
**Enclosure A**

\* see Application/Limitation

Issued at **Hamburg** on **2023-11-08**

for **DNV**

This Certificate is valid until **2027-04-18**.

DNV local unit: **Augsburg**

Approval Engineer: **Heinz Scheffler**

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.



Form code: TA 251

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**Product description**  
**ConneXium P-Unmanaged Switch**

Product Code	Description	Ports
TCSESPU083FN0	8TX	Twisted pair ports: 8 x Twisted-Pair, RJ45
TCSESPU053F1CU0	4TX/1FX-MM	Twisted pair ports: 4 x Twisted-Pair, RJ45 Optical fiber port 1: DSC multimode socket for 100 Mbit/s F/O connections
TCSESPU093F2CU0	7TX/2FX-MM	Twisted pair ports: 7 x Twisted-Pair, RJ45 Optical fiber ports 1&2: DSC multimode socket for 100 Mbit/s F/O connections
TCSESPU053F1CS0	4TX/1FX-SM	Twisted pair ports: 4 x Twisted-Pair, RJ45 Optical fiber port 1: DSC singlemode socket for 100 Mbit/s F/O connections
TCSESPU093F2CS0	7TX/2FX-SM	Twisted pair ports: 7 x Twisted-Pair, RJ45 Optical fiber ports 1&2: DSC singlemode socket for 100 Mbit/s F/O connections

**Application/Limitation**

**Location classes Temperature D:** -40°C / 16h tested

**Location classes EMC B:** Equipment for installation outside a distance of 5m from a standard or a steering magnetic compass.

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.

**Type Approval documentation**

See ANNEX

**Tests carried out**

Applicable tests according to Class Guideline DNVGL-CG-0339, Edition August 2021.

**Place of manufacture**

See ANNEX

### 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



Job ID: **262.1-027309-2**  
Certificate no.: **TAA00001H2**  
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## ANNEX

### Type Approval documentation

Hidden

Present certificate is a multiple Listing Certificate based on certificate TAA00000XC  
MRS\_OEM\_SE\_SPIDER III Premium\_Standard Line\_7v0\_signed\_FL\_SE\_MK\_HAC

### Place of manufacture

Hidden

Hirschmann Automation and Control GmbH  
Stuttgarter Straße 45-51  
72654 Neckartenzlingen, Germany

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