



Marine &amp; Offshore

Certificate number: 17479/C0 BV

File number: ACE 02/003/43

Product code: 2633H

*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*

**SCHNEIDER ELECTRIC INDUSTRIES SAS**

Grenoble - FRANCE

*for the type of product*

**CIRCUIT BREAKERS (LOW VOLTAGE)**

Types: Compact NS630b - 1600

**Requirements:**

BV Rules for the Classification of Steel Ships.

IEC 60947-2 (2013)

*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: 02 Jan 2024**

**For Bureau Veritas Marine & Offshore,**

At BV LYON, on 02 Jan 2019,

Florian Aulen



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](http://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.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=mesv66htqa>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION:

Product Type	Number of poles	Rated Voltage AC(V)	Insulation voltage AC(V)	Maximum operating current (A)	Breaking capacity (kA) in Manual	Remarks
<b>Circuit breakers Type N/H/L/LB rating from 630A to 1600A Low voltage IEC 60947-2 Ed.4 +A1+A2</b>		Ue	Ui	In (up to 65°C)	Icu/Ics U	Rated Frq =50/60Hz ----- overcurrent release Micrologic control unit 2.0 / 5.0 / 6.0 2.0 / 5.0 / 6.0 / 7.0A 2.0 / 5.0 / 6.0E 5.0 / 6.0 / 7.0P
NS 630b NS 800 NS 1000 NS 1250  NSxxx-/N   NSxxx-/H	3-4 3-4 3.4 3.4     3-4 3-4 3-4	690 690 690 690	800 800 800 800	630 800 1000 1250	          85/50 220/240V 50/50 380/415V 50/50 440V 40/40 500/525V 30/30 660/690V  85/52 220/240V 70/52 380/415V 65/48 440V 50/37 500/525V 42/31 660/690V	Icw 19.2/1s          Icw 19.2/1s
NS 630b NS 800 NS 1000  NSxxx/L	3-4 3-4 3-4	690 690 690	800 800 800	630 800 1000	          150/150 220/240V 150/150 380/415V 130/130 440V 130/130 500/525V 25/25 660/690V	Icw 7/1s
NS 630b NS 800  NSxxx/LB	3-4 3-4	690 690	800 800	630 800	          200/200 220/240V 200/200 380/415V 200/200 440V 100/100 500/525V 75/75 660/690V	Icw 5/1s
NS 1600 (Manual Control)  NS1600-/N   NS1600-/H	3.5	690	800	1600 <sup>1)</sup> 1510 <sup>2)</sup>	          85/37 220/240V 50/37 380/415V 50/25 440V 40/20 500/525V 30/15 660/690V  85/37 220/240V 70/37 380/415V 65/32 440V 50/25 500/525V 42/21 660/690V	50°C <sup>1)</sup> 65°C <sup>2)</sup>  Icw 19.2/1s          Icw 19.2/1s

The compact NS630b-1600 is equipped with Micrologic control units for protection against overload, low short-circuit and insulation faults:

**X: Type of protection**

- 2: For basic Protection
- 5: For Selective Protection
- 6: For Selective Protection + Earth-Fault Protection
- 7: For Selective Protection + Earth-Leakage

**Y: Control-Unit Generation**

- Identification of Control-unit generation, 0 means the first generation

**Z: Type of Measurement**

- Micrologic A : " Ammeter"
- Micrologic E : " Energy"
- Micrologic P : " Power"
- Micrologic H : " Harmonics"

**2. DOCUMENTS AND DRAWINGS:**

- 2.1 - Catalogue "2006" ref.: ABTED201147EN/ART06435 dated 11/2005.
- 2.2 - Marine Certification file N° NS630b-1600A\_LB-08-2007 revised 08/2007.

**3. TEST REPORTS:**

- 3.1 - Schneider Test reports N°:
  - F03.2005-0216-01 dated 08/06/2005
  - F03.2005-0216-02 dated 08/06/2005
  - F03.2005.0223-00 dated 30/11/2005
  - F03-2005-0224-00 dated 30/11/2005
- 3.2 - ASEFA Certificate of conformity N°:
  - 05b-05BT, 05-06BT, 06-06BT.
- 3.3 - SOPEMEA test reports N°:
  - EHL 06058 dated 09/06/2005
  - EHL08636 dated 05/10/2006.
- 3.4 - LCIE - CB Scheme certificates N°:
  - FR 652973A dated 06/11/2014
  - FR 652973B dated 06/11/2014
  - FR 652973C dated 06/11/2014
  - FR 652973D dated 08/01/2015.

**4. APPLICATION / LIMITATION:**

- 4.1 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.2 - According to BV Rules for the Classification of Steel Ships.

**5. PRODUCTION SURVEY REQUIREMENTS:**

- 5.1 - The circuit-breakers are to be supplied by **Schneider Electric Industries SAS** 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 - **Schneider Electric Industries SAS** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - For information, **Schneider Electric Industries SAS** has declared to Bureau Veritas the following production site(s):

**SCHNEIDER ELECTRIC INDUSTRIALE ITALIA UNITA CASAVATORE  
CORSO ITALIA 113  
80020 CASAVATORE -NA  
ITALY**

**SCHNEIDER SHANGHAI POWER DISTRIBUTION ELEC. APP. CO, LTD  
833 Kang Qiao Lu Pu Dong  
201315 SHANGHAI  
CHINA**

**6. MARKING OF PRODUCT:**

According to IEC 60947 specifications.

**7. OTHERS:**

- 7.1 - It is **Schneider Electric Industries SAS**'s responsibility 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.
- 7.2 - This certificate supersedes the Type Approval Certificate N° 17479/B0 BV issued on 29/03/2012 by the Society.

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