



Marine &amp; Offshore

Certificate number: 49263/A1 BV

File number: AP1

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 Cedex 09 - FRANCE

*for the type of product*

**CIRCUIT BREAKERS (LOW VOLTAGE)**

Air Circuit breaker Masterpact MTZ series.

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships & Offshore Units.

EC Code: 41.

IEC 60947-1:2007 (ed.5) + A1:2010 + A2:2014

IEC 60947-2:2006 (ed.4) + A1:2009 + A2:2013

*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: 29 Jun 2022**

**For Bureau Veritas Marine & Offshore,**

At BV LYON, on 01 Feb 2018,

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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

The **MASTERPACT MTZ1-MTZ2-MTZ3 series**, equipped with Micrologic X control units: 2.0X, 5.0X, 6.0 X, 7.0X, are air circuit breakers for Marine and Offshore applications.

#### 1.1 - Specifications:

Number of poles	3-4
Rated insulation voltage, $U_i$ (V)	1000
Impulse withstand voltage, $U_{imp}$ (kV)	12
Rated frequency (Hz)	50-60

#### 1.2 - Approval range:

	Type	In	selectivity categories	Ue	Icu	Ics	Icw	
							1s	3s
<b>MTZ1</b>	<b>H1</b>	630A - 1600A	cat. B	220/415/440V 525V 690V	42 kA	42 kA	42 kA	-
	<b>H2</b>	630A - 1600A	cat. B	220/415/440V 525V 690V	50 kA 42 kA 42 kA	50 kA 42 kA 42 kA	42 kA	-
	<b>H3</b>	630A - 1600A	cat. B	220/415/440V	66 kA	50 kA	50 kA	30 kA
	<b>L1</b>	630A - 1000A	cat. A	220/415V 440V 525V	150 kA 130 kA 100 kA	150 kA 130 kA 100 kA	-	-
<b>MTZ2</b>	<b>N1</b>	800A - 2000A	cat. B	220/415/440V 525V 690V	42 kA	42 kA	42kA	22kA
	<b>N2</b>	800A - 2500A	cat. B	220/415/440V 525V 690V	50 kA	50 kA	50kA	-
	<b>H1</b>	800A - 2000A	cat. B	220/415/440V 525V 690V	66 kA	66 kA	66kA	36kA
		2500 - 4000A		220/415/440V 525V 690V	66 kA	66 kA	66kA	66kA
	<b>H1b</b>	800A - 4000A	cat. B	220/415/440V 525V 690V	85 kA	85 kA	85kA	-
	<b>H2</b>	800A - 1600A	cat. B	220/415/440V 525V 690V	100 kA 85 kA 85 kA	100 kA 85 kA 85 kA	85kA	50kA
		2000 - 4000A		220/415/440V 525V 690V	100 kA 85 kA 85 kA	100 kA 85 kA 85 kA	85kA	75kA
	<b>H3</b>	2000 - 4000A	cat. B	220/415/440V 525V 690V	150 kA 130 kA 100 kA	150 kA 130 kA 100 kA	65kA	65kA
	<b>L1</b>	800A - 2000A	cat. B	220/415/440V 525V 690V	150 kA 130 kA 100 kA	150 kA 130 kA 100 kA	30kA	30kA
	<b>MTZ3</b>	<b>H1</b>	4000A - 6300A	cat. B	220/415/440V 525V 690V	100 kA	100 kA	100kA
<b>H2</b>		4000A - 6300A	cat. B	220/415/440V 525V 690V	150 kA 130 kA 100 kA	150 kA 130 kA 100 kA	100kA	100kA

**2. DOCUMENTS AND DRAWINGS :**

Specification ref. QGH4603200, dated 24 Feb 2017.

**3. TEST REPORTS :****LCIE:**

- CB Scheme certificate ref. FR\_700480, dated 30 Mar 2017.
- CB Scheme certificate ref. FR\_700383, dated 16 Mar 2017.
- CB Scheme certificate ref. FR\_700345, dated 10 Mar 2017.
- CB Scheme certificate ref. FR\_700483, dated 30 Mar 2017.
- Tests report ref. 143620-690532-A, dated 03 Feb 2017.
- Tests report ref. 141610-685260-C, dated 17 Feb 2017.
- Tests report ref. 145188-694373-C dated 02 Jan 2017.

**Volta:**

- Tests report ref. 201504917\_082, dated 25 Jan 2017.
- Tests report ref. 20154917\_105\_v1, dated 12 Jan 2017.
- Tests report ref. 20154917\_108\_v1, dated 12 Jan 2017.
- Tests report ref. 20154917\_099\_v2, dated 12 Jan 2017.
- Tests report ref. 20154917\_110\_v1, dated 12 Jan 2017.
- Tests report ref. 20154917\_084, dated 25 Jan 2017.

**ENVIRONNE'TECH:**

- Test report ref. RENV-ENN-16-400870-3/A, dated 08 Dec 2016.
- Test report ref. RENV-ENN-16-400870-4/A, dated 08 Dec 2016.

**For A1 version:****LCIE:**

- CB Scheme certificate ref. FR\_700907, dated 15 June 2017.
- CB Scheme certificate ref. FR\_700915, dated 15 June 2017.
- CB Scheme certificate ref. FR\_701040, dated 10 July 2017.
- Tests reports ref. 141610-685260-C dated 17 Feb 2017.
- Tests reports ref. 143619-690528-A dated 03 Feb 2017.

**Volta:**

- Tests report ref. 201605195\_011, dated 25 Apr 2017.
- Tests report ref. 201605195\_013, dated 21 Feb 2017.
- Tests report ref. 201605195\_017, dated 03 Mar 2017.
- Tests report ref. 201605195\_051, dated 07 Feb 2017.

**4. APPLICATION / LIMITATION :**

4.1 - BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships and Offshore Units.

4.2 - BUREAU VERITAS Environmental Category, **EC Code: 41.**

4.3 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zones.

**5. PRODUCTION SURVEY REQUIREMENTS :**

5.1 - The above products 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 - **SCHNEIDER ELECTRIC INDUSTRIES SAS** has declared to Bureau Veritas the following production site(s):

**SCHNEIDER ELECTRIC FRANCE (MASTERTech)**

70 Rue de la Grange Batie

ZI Centr'Alp

38430 MOIRANS

France

**SCHNEIDER ELECTRIC ALPES**

Voie Isaac Newton  
ZI Alpespace  
73800 FRANCIN  
France

**SCHNEIDER SHANGHAI Power Distribution ELEC.APP.Co Ltd**

833 Kang Qiao Road Pudong Area  
201315 Shanghai  
China

**6. MARKING OF PRODUCT :**

- 6.1 - Trade name.
- 6.2 - Date of manufacture and serial number.
- 6.3 - Equipment type or model identification under which it was type-tested.

**7. OTHERS :**

- 7.1 - It is **SCHNEIDER ELECTRIC INDUSTRIES SAS'** 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 No. 49263/A0 BV issued on 29 Jun 2017 by the Society.

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