



EUROPEAN UNION RECOGNISED ORGANISATION (EU RO) MUTUAL RECOGNITION TYPE APPROVAL CERTIFICATE

Certificate No:
MRE0000017

In accordance with Article 10.1 of EU Regulation 391/2009

This Certificate is issued to

Schneider Electric Industries S.A.S.
Grenoble, France

for

Circuit Breakers

with type designation(s)

MasterPact MTZ1, MTZ2 & MTZ3

The product is found to comply with

EU RO Mutual Recognition Technical Requirements for Circuit Breakers

Intended service

Circuit breaker for use onboard ship and offshore platforms.

Rated Voltage (V) Up to 1150

Rated Current (A) Up to 6300

Frequency (Hz) 50-60

This is to certify:

that the Product referred to herein has been inspected for the Manufacturer, pursuant to the relevant requirements of the European Union Recognised Organisation Mutual Recognition procedure, required by Article 10.1 of EU Regulation 391/2009, and has been found in accordance with those requirements.

This Certificate is valid until **2027-08-07**.

Issued at **Høvik** on **2022-08-02**

DNV local station: **France CMC**

Approval Engineer: **Nicolay Horn**

for **DNV**

Marta Alonso Pontes
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.



Form code: MRTA 201

Revision: 2021-03

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Product description

Circuit breaker MTZ1

	H1	H2	H3	L1
Number of poles	3-4	3-4	3-4	3-4
Rated insulation voltage AC (V)	1000	1000	1000	1000
Rated operational voltage AC(V)	690	690	440	525
Rated Current (A)	630-1600	630-1600	630-1600	630-1000
Rated Frequency (Hz)	50-60	50-60	50-60	50-60
Rated ultimate short-circuit breaking cap. I_{cu} (kA)				
220/415	42	50	66	150
440V	42	50	66	130
525V	42	42	-	100
690V	42	42	-	-
Rated service short-circuit breaking cap. I_{cs} (kA)				
220/415	42	50	50	150
440V	42	50	50	130
525V	42	42	-	100
690V	42	42	-	-
Rated short time withstand current cap. I_{cw} 1s (kA)				
220/415/440V	42	42	50	-
525V	42	42	-	-
690V	42	42	-	-
Utilization category	B	B	B	A

Circuit breaker MTZ2

	N1	N2	H1	H1b
Number of poles	3-4	3-4	3-4	3-4
Rated insulation voltage AC (V)	1000	1000	1000	1000
Rated operational voltage AC(V)	690	690	690	690
Rated Current (A)	800-2000	800-2500	800-4000	800-4000
Rated Frequency (Hz)	50-60	50-60	50-60	50-60
Rated ultimate short-circuit breaking cap. I_{cu} (kA)				
220/415/440V	42	50	66	85
525V	42	50	66	85
690V	42	50	66	85
Rated service short-circuit breaking cap. I_{cs} (kA)				
220/415/440V	42	50	66	85
525V	42	50	66	85
690V	42	50	66	85
Rated short time withstand current cap. I_{cw} 1s (kA)				
220/415/440V	42	50	66	85
525V	42	50	66	85
690V	42	50	66	85
Utilization category	B	B	B	B

	H2	H3	L1	H2V	H10
Number of poles	3-4	3-4	3-4	3-4	3-4
Rated insulation voltage AC (V)	1000	1000	1000	1000	1250
Rated operational voltage AC(V)	690	690	690	440	1150
Rated Current (A)	800-4000	2000-4000	800-2000	800-4000	800-4000
Rated Frequency (Hz)	50-60	50-60	50-60	50-60	50-60
Rated ultimate short-circuit breaking cap. I_{cu} (kA)					
220/415/440V	100	150	150	100	-
525V	85	130	130	-	-
690V	85	100	100	-	-
1150V	-	-	-	-	50
Rated service short-circuit breaking cap. I_{cs} (kA)					
220/415/440V	100	150	150	100	-
525V	85	130	130	-	-
690V	85	100	100	-	-
1150V	-	-	-	-	50
Rated short time withstand current cap. I_{cw} 1s (kA)					
220/415/440V	85	65	30	100	-
525V	85	65	30	-	-
690V	85	65	30	-	-
1150V	-	-	-	-	50
Utilization category	B	B	B	-	B

Circuit breaker MTZ3

	H1	H2
Number of poles	3-4	3-4
Rated insulation voltage AC (V)	1000	1000
Rated operational voltage AC(V)	690	690
Rated Current (A)	4000-6300	4000-6300
Rated Frequency (Hz)	50-60	50-60
Rated ultimate short-circuit breaking cap. I_{cu} (kA)		
220/415/440V	100	150
525V	100	130
690V	100	100
Rated service short-circuit breaking cap. I_{cs} (kA)		
220/415/440V	100	150
525V	100	130
690V	100	100
Rated short time withstand current cap. I_{cw} 1s (kA)		
220/415/440V	100	100
525V	100	100
690V	100	100
Utilization category	B	B

Circuit-breakers MTZ equipped with Micrologic X control units: 2.0 X – 5.0 X – 6.0 X

Switch disconnecter MTZ1-MTZ2-MTZ3

	MTZ1-HA	MTZ2-NA	MTZ2-HA	MTZ2-HF
Number of poles	3-4	3-4	3-4	3-4
Rated insulation voltage AC (V)	1000	1000	1000	1000
Rated operational voltage AC(V)	690	690	690	690
Rated Current (A)	630-1600	800-1600	800-4000	800-4000
Rated Frequency (Hz)	50-60	50-60	50-60	50-60
Rated short time withstand current I _{cw} 1s (kA)	36	42	66	85
Rated short time making capacity I _{cm} (kA)	75	88	145	187

	MTZ2-HH	MTZ2-HA10	MTZ3-HA
Number of poles	3-4	3-4	3-4
Rated insulation voltage AC (V)	1000	1250	1000
Rated operational voltage AC(V)	440	1150	690
Rated Current (A)	2000-4000	800-4000	4000-6300
Rated Frequency (Hz)	50-60	50-60	50-60
Rated short time withstand current I _{cw} 1s (kA)	100	50	85
Rated short time making capacity I _{cm} (kA)	220	105	187

Unprotected circuit-breaker* MTZ2-MTZ3

	MTZ2-HA	MTZ2-HF	MTZ2-HH	MTZ3-HA
Number of poles	3-4	3-4	3-4	3-4
Rated insulation voltage AC (V)	1000	1000	1000	1000
Rated operational voltage AC(V)	690	690	440	690
Rated Current (A)	800-4000	800-4000	2000-4000	4000-6300
Rated Frequency (Hz)	50-60	50-60	50-60	50-60
Rated ultimate short-circuit breaking cap. I _{cu}	66	85	100	85
Rated service short-circuit breaking cap. I _{cs}	66	85	100	85
Rated short time withstand current I _{cw} 1s (kA)	66	85	100	85
Utilization category	B	B	B	B

*with external protection relay and shunt trip; maximum delay of short-circuit protection: 400ms
 For more detailed technical information see the manufacturer datasheet or catalogue.

Manufactured by**

Schneider Electric Alpes
 Voie Isaac Newton, ZI Alpespace,
 73800, FRANCIN, France

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 70 Rue de la Grange Batie, Z.I. Centr'Alp, 38430 Moirans,
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 ELEC. APP. CO LTD
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Schneider Electric India Pvt Ltd
 SURVEY NO 215,
 GAGILLAPUR VILLAGE,
 MEDAK ROAD, RANGAREDDY DISTRICT,
 HYDERABAD – 500 043, (A.P.), INDIA

** See Application/limitation

Application/Limitation

Note : Others Schneider-Electric Local Adaptation Centres are allowed to assembly this line of products (refer to the below declaration "MasterPact MTZ_industrial organization and factory audit_2022-03-15).

Circuit breaker MTZ Suitable for use in an IT system with a capacity of 1.2 times the maximum trip current at up to 690 V AC (I_{IT} ≤50kA),.except MTZ2H10.

Unprotected circuit breaker MTZ2-MTZ3 are suitable for use in an IT system up to 690 V AC, with a capacity of :

Unprotected CB	In (A)	I _{IT} (kA) at 690V
MTZ2-08 HA to MTZ2-20 HA	800A to 2000A	24
MTZ2-25 HA to MTZ2-40 HA	2500A to 4000A	50
MTZ3-40 HA to MTZ3-63 HA	4000A to 6300A	50
MTZ2-08 HF to MTZ2-40 HF	800A to 4000A	50
MTZ2-20 HH to MTZ2-40 HH	2000A to 4000A	50

Environmental classes in accordance with IACS E10 rev.8:

Test	Standard	Description
Dry heat	IEC 60068-2-2:2007	Temperature: 70°C ± 2°C Duration: 16 hours
Damp heat	IEC 60068-2-30:2005 test Db	Temperature: 55°C Humidity: 95% Duration: 2 cycles 2 x (12 +12 hours
Cold	IEC 60068-2-1:2007	Temperature: -25°C ± 3°C Duration: 2 hours
Vibration	IEC 60068-2-6:2007 Test Fc	2 +3 Hz to 13.2 Hz – amplitude ±1mm –0 13.2 Hz to 100 Hz – acceleration ± 0.7 g.

Type Approval documentation

Name	Number	Date
Switch-disconnector equipped w making current release Masterpact MTZ description file	GDE5514200 rev. 00	2019-11-22
Switch-disconnector Masterpact MTZ description file	QGH4904800 rev. 02	2019-12-16
Air Circuit-breaker Masterpact MTZ description file	QGH4603200 rev. 06	2019-11-28
Unprotected Circuit-breaker Masterpact MTZ description file	QGH7277800 rev. 02	2019-11-26
ZHEJIANG FANGYUAN Test Report	22119E90001	2022-04-02
ZHEJIANG FANGYUAN Test Report	1911990018	2019-01-09
ZHEJIANG FANGYUAN Test Report	1911990019	2020-01-17
ZHEJIANG FANGYUAN Test Report	1911990024	2020-01-17
F-Lab Test Report	SPEC22AA0627	2022-05-13
F-Lab Test Report	SPEC22AA0628	2022-05-18
F-Lab Test Report	SPEC22AA0629	2022-05-18
F-Lab Test Report	SPEC22AA1123	2022-05-15
F-Lab Test Report	SPEC22AA1127v2	2022-05-12
F-Lab Test Report	SPEC22AA1437	2022-05-10
F-Lab Test Report	SPEC22AA1439	2022-05-10
F-Lab Test Report	SPEC22AA1440	2022-05-10
LCIE CB Test Report	13413278-775430-B	2022-02-17
LCIE CB Test Report	157394-733105-A	2019-06-25
LCIE CB Test Report	TR_2111990001	2021-03-15
LCIE CB Test Report	TR_2111990029	2021-02-16
LCIE CB Test Report	TR_2111990030	2022-01-06
LCIE CB Test Report	TR_2111990031	2022-01-06
LCIE CB Test Report	TR_2111990032	2022-02-16
LCIE CB Test Report	TR_2111990033	2022-01-08
LCIE CB Test Report	TR_2111990034	2022-02-17
LCIE CB Test Report	TR_2111990035	2021-03-04
LCIE CB Test Report	TR_2111990036	2022-03-23
LCIE CB Test Report	TR_2111990037	2022-03-25
LCIE CB Test Report	TR_2111990038	2021-03-28
LCIE CB Test Report	TR_157394-733100-A	2019-06-04
LCIE CB Test Report	TR_157394-733101-A	2019-07-30

LCIE CB Test Report	TR_157394-733103-A	2019-07-30
LCIE CB Test Report	TR_157394-733104-A	2019-07-30
LCIE CB Test Report	TR_157394-733105-A	2019-06-25
LCIE CB Test Report	TR_161635-737436-A	2019-12-13
LCIE CB Test Report	TR_165451-747202-A	2020-03-30
LCIE CB Test Report	TR_164183-744402-A	2020-03-25
LCIE CB Test Report	TR_164183-744404-A	2020-03-23
LCIE CB Test Report	TR_164183-744410-A	2020-03-26
LCIE CB Test Report	TR_172902-766306-A	2022-03-11
LCIE CB Test Report	TR_172902-766312-A	2022-03-11
LCIE CB Test Report	TR_172902-766321-A	2022-03-11
LCIE CB Test Report	TR_172902-766324	2022-03-11
LCIE CB Test Report	TR_172902-766330	2022-03-11
LCIE CB Test Report	TR_172902-766337-A	2022-03-11
LCIE CB Test Report	TR_1911990015	2019-12-16
LCIE CB Test Report	TR_1911990010	2019-09-25
LCIE CB Test Report	TR_1911990016	2019-12-27
LCIE CB Test Report	TR_1911990017	2019-12-16
LCIE CB Test Report	TR_161635-73436-A	2019-12-13
LCIE CB Test Report	TR_1911990009	2020-02-08
LCIE CB Test Certificate	FR_713151	2022-03-03
LCIE CB Test Certificate	FR_713152	2022-03-03
LCIE CB Test Certificate	FR_713153	2022-03-04
LCIE CB Test Certificate	FR_713325	2022-03-03
LCIE CB Test Certificate	FR_713326	2022-03-03
LCIE CB Test Certificate	FR_713327	2022-03-03
LCIE CB Test Certificate	FR_713512	2022-03-05
LCIE CB Test Certificate	FR_713522	2022-04-05
LCIE CB Test Certificate	FR_713523	2022-03-05
LCIE CB Test Certificate	FR_713524	2022-03-30
LCIE CB Test Certificate	FR_713530	2022-04-05
LCIE CB Test Certificate	FR_713531	2022-03-30
LCIE CB Test Certificate	FR_713549/A1	2022-04-06
LCIE CB Test Certificate	FR_713551/A1	2022-04-06
LCIE CB Test Certificate	FR_713552/A1	2022-04-06
LCIE CB Test Certificate	FR_713556/A1	2022-04-06
MasterPact MTZ_industrial organization and factory audit		2022-03-15

Marking of product

Schneider Electric – MasterPact MTZ – Type designation.

Other conditions

Type tests according to: IEC 60947-2 including Annex H, vibration test, dry heat test, damp heat test, cold test and EMC test (IACS rev.8). Switch disconnector type tested in accordance with IEC 60947-3.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routines (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment to be performed annually.

Generic Statement for EU RO MR Type Approval Certificate

When a product is presented with this EU RO MR Type Approval Certificate for given application, its acceptability with regards to the limitations stated in the certificate conditions defined in 1b, 1c and 1d of the applied Technical Requirement will be evaluated by the EU RO in charge of classing the ship or being in charge of the unit/system certification.

In accordance with Article 10 of Regulation (EC) No 391/2009 of the European Parliament and of the Council of 23 April 2009 "on common rules and standards for ship inspection and survey organizations", the following organizations, recognized by the EU on this date, have agreed on the technical and procedural conditions under which they will mutually recognize this certificate:

- American Bureau of Shipping (ABS);
- Bureau Veritas (BV);
- China Classification Society (CCS);
- Croatian Register of Shipping (CRS);
- DNV;
- Indian Register of Shipping (IRS);
- Korean Register (KR);
- Lloyd's Register Group Ltd. (LR);
- Nippon Kaiji Kyokai General Incorporated Foundation (ClassNK);
- Polish Register of Shipping (PRS);
- RINA Services S.p.A. (RINA);
- Russian Maritime Register of Shipping (RS).

The scheme for the mutual recognition of class certificates for materials, equipment and components laid down by Article 10(1) of Regulation (EC) No 391/2009 is only enforceable within the Union in respect of ships flying the flag of a Member State. As far as foreign vessels are concerned, the acceptance of relevant certificates remains at the discretion of relevant non-EU flag States in the exercise of their exclusive jurisdiction, notably under the United Nations Convention on the Law of the Sea (UNCLOS). (In accordance with COMMISSION IMPLEMENTING REGULATION (EU) No 1355/2014 amending Regulation (EC) No 391/2009 - recital (25)).

END OF CERTIFICATE