

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Circuit Breaker**

with type designation(s)
DZ931 series

Issued to

Changshu Ruite Electric Co., Ltd.
Changshu, JIANGSU, China

is found to comply with

DNV GL 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 GL.

Rated voltage (V) 400, 480, 690

Rated current (A) up to 1250

Issued at **Hamburg** on **2020-04-24**

This Certificate is valid until **2025-04-23**.

DNV GL local station: **Shanghai**

for **DNV GL**

Approval Engineer: **Harald Amberger**

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Arne Schaarmann
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.



Product description

DZ931... Molded Case Circuit Breaker up to 1250A												
Type DZ931...		-63	-125 / -250		-400 / -630		-1250					
Rated current I _n (40°C)		3-63A	10-125/100-250A		200-400/630A		200-1250A					
Utilisation category		A	A		A / B*		B					
Rated impulse withstands voltage U _{imp}		6kV	8kV				12kV					
Rated insulation voltage U _i		500V	800V				1000V					
Rated operational voltage U _e		400V	400V, 480V, 690V									
Number of poles		2, 3	For 125A frame size including 2P and 3P; up 125A only 3P									
Kind of current		AC										
Rated frequency		50/60Hz										
Short-circuit characteristics												
Breaking capacity		J	G	B	G	X	B	G	X	B	G	X
I _{cu} = I _{cs} 400 V AC	kA	6	30	50	120	150	50	120	150	55	120	150
I _{cu} = I _{cs} 480 V AC	kA	--	--	--	80	--	--	80	--	--	80	--
I _{cu} = I _{cs} 690 V AC	kA	--	--	--	20	--	--	30	--	--	55	--
I _{cw} 0,5s	kA	--	--	--	--	--	--	6/8*	--	--	55	--
*Type DZ931... with electronic release Further ratings according manufacturer documentation.												

Application/Limitation

Location Classes:

Humidity: A, Vibration: A, EMC:A, Enclosure: IP30,

Not suitable for use in IT system.

Operating instruction of the manufacturer to be observed

Type Approval documentation

Tests carried out

IEC 60947-2:2016, vibration test, dry heat test, damp heat test, salt mist test, EMC test.

Marking of product

Acc. IEC 60947-2 subclause 5.2

Job Id: **262.1-028413-1**
Certificate No: **TAE00002XW**

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are 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 Routine Tests (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 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