



中国认可
国际互认
检测
TESTING
CNAS L2643

 **DEKRA**
Report No.: 3334714.50

Test Report

Name of products: Moulded-Case Circuit-Breaker

Type: TSM4E-400M

Applicant: Wenzhou Tosun Electric Co., Ltd.

Kind of test: Commission test

DEKRA Testing Services (Zhejiang) Co., Ltd



Test Report

Project No.	3334714	Trade mark	/		
Name of Product	Moulded-Case Circuit-Breaker	Type	TSM4E-400M		
Rated parameters	Ue = 400 Vac, In = 400 A, Icw = 5 kA/s		Pole number	3P	
Applicant	Name	Wenzhou Tosun Electric Co., Ltd.			
	Address	No.1 Huashan Road, Wenzhou Bridge Industrial Zone Baixiang Yueqing, Zhejiang - China.			
Manufacturer	Name	/			
	Address	/			
Quantity of samples	2 PCS	Contact Person	Changfa Zeng	Date of sample available	2025-05-27
Test requirements	Clause 9.3.4.5 and cause 9.3.7.3 of IEC 60947-2:2024				
Test duration	2025-06-03 to 2025-06-10				
Test result	Pass (Only Clause 9.3.4.5 and 9.3.7.3)		Issue date	2025-06-13	
Subcontract	Subcontractor Laboratory	Qualification No.	Within the scope: ☐		
	/	/	Beyond the scope: ☐		
Remarks	/				
Tested by		Reviewed by		Approved by	



Product Description

1. Name and type of product:

Moulded-Case Circuit-Breaker: TSM4E-400M

2. Primary technical parameters:

$U_e = 400 \text{ Vac}$, $I_n = 400 \text{ A}$, $I_{cw} = 5 \text{ kA/s}$

3. Test remarks

/

4. General remark:

The meaning for all the symbols used in this report:

'P': Test object does meet the standards and/or applicant's requirement;

'F': Test object does not meet standards and/or applicant's requirement;

'/': For description: not applicable or the information is not required or not provided by the applicant;

For test verdict: test case does not apply to the test object or just part of items conducted in the specified test program;

'-': Test case is not conducted as some tests in the sequence have failed already.

5. Photograph of the product:
5.1 Copy of the marking plate:



Summary of Test

Sequence	Test Item	Clause	Result	Remark
1	Overload performance	9.3.4.5	Pass	/
2	Test of rated short-time withstand current.	9.3.7.3	Pass	/
/	Below is blank			

Clause	Requirement - test	Results-Remarks	Verdict
9.3.4.5	Overload performance		
	this test applies to circuit-breaker of rated current up to and including 630 A		
	Type designation or serial number catalogue reference	TSM4E-400M	
	Sample no:	1#	
	Rated current I_n (A)	400 A	
	Rated operational voltage: U_e (V)	400 Vac	
	Ambient temperature 10-40 °C :	24,6 °C	P
	Maximum rated operational voltage: U_e (V)	400 Vac	P
	Number of operating cycles per hour	60 cycles per hour	P
	Number of cycles with current (total) (closing releases energized at the rated U_c)	15 cycles	P
	Applied voltage: closing releases (V)		N/A
	For circuit-breaker fitted with adjustable releases, test shall be made with the overload/short-circuit settings at maximum.		N/A
	Conditions, overload operations:		P
	- test voltage $U/U_e = 1,05$ (V) L1-L2: L2-L3: L1-L3:	424,0 Vac 424,3 Vac 423,8 Vac	P
	- test current AC/DC: $I/I_e = 6,0/2.5$ (A) L1: L2: L3:	2,43 kA 2,45 kA 2,46 kA	P
	- power factor/time constant:	0,50	P
	- 12 manual operations - three additional operations with automatic opening, made at any convenient voltage	12 manual operations at 1,05 U_e 3 (automatic operations at convenient voltage)	P
	- frequency: (Hz)	50 Hz	P

Clause	Requirement - test	Results-Remarks	Verdict
	- on-time max 2s:	Manual operations: Min: 17,0 s Max: 17,5 s	P
	Operating rate if different from Table 8		N/A

Clause	Requirement - test	Results-Remarks	Verdict
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9.3.7	TEST SEQUENCE IV (Icw): Rated short-time withstand current		
	Type designation or serial number	TSM4E-400M	
	Sample no:	2#	
	Rated current: In (A)	400 A	
	Rated operational voltage: Ue (V)	400 Vac	
	Rated short-time withstand current: (kA/s)	5 kA / 1 s	
	Rated frequency: (Hz)	50 Hz	
9.3.7.3	Test of rated short-time withstand current.		
	For this test, any over-current release, including the instantaneous override, if any, likely to operate during the test, shall be rendered inoperative.		
	- test voltage: (V)L1-L2:	402 Vac	P
	L2-L3:	401,9 Vac	
	L3-L1:	401,2 Vac	
	- r.m.s. test current: (kA).....L1:	5,07 kA	P
	L2:	5,09 kA	
	L3:	5,08 kA	
	- power factor / time constant (ms):	0,68	P
	- duration of the test: (s)	1,04 s	P
	Melting of the fusible element	No melting	P
	Damage to insulation on conductors	No damage	P
	Cracks observed	No crack	P

Declaration

1. The test report must be signed by test engineer, reviewer, approver and sealed by test stamp of DEKRA Testing Service (Zhejiang) Co., Ltd. otherwise it is invalid.
2. This test result applies only to the inspected and tested sample stipulated in the report.
3. When the information provided by the customer has an influence on the judgment of the test result, the company shall not bear the corresponding responsibility.
4. Deviation testing of customer requirements should be stated clearly in the report and the company is not responsible for the impact of the deviation.
5. The report shall not be reproduced except in full without approval of the Company.
6. The usage of test report, if without CMA stamp, is limited to scientific research, internal quality control, and product development.

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