

ROUTINE TEST REPORT

EvoPacT lateral version



Reference : AVX-FM-08601-81
Rev. 01



GENERAL DATA

Reference No.:	ETL24C1BTLX1D	Order No.:	2011493696-10
Serial No.:	25483P0032	Test date:	2025-11-27

Rated voltage:	24kV	Continuous current:	630A
Short-time withstand current:	20kA	Phase distance:	250mm
VI No.:	A: 9425026319	B: 9425100322	C: 9425066319

Temperature °C:	27.4	Humidity %:	26.2	Atmosphere pressure kPa:	101
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MECHANICAL CHARACTERISTIC TEST

Test Item	Technical Spec.	Test Result		
		Phase A	Phase B	Phase C
Average closing speed (m/s)	1.0~2.0	1.45	1.44	1.43
Average opening speed (m/s)	0.9~1.7	1.12	1.26	1.43
Opening rebound (mm)	≤1	0.08	0.10	0.04
Synchronization at closing (ms)	≤2	0.10		
Synchronization at opening (ms)	≤2	0.00		

POWER FREQUENCY WITHSTAND VOLTAGE TEST

Main circuit between phases and phases to earth:	50 kV/50Hz/60s	☒ Pass ☐ Failed
Main circuit across open contact gaps:	50 kV/50Hz/60s	☒ Pass ☐ Failed

RESISTANCE TEST ON MAIN CIRCUIT (DC 100A)

Data
matrix



Test Item	Technical Spec.	Phase A	Phase B	Phase C
Resistance of main circuit ($\mu\Omega$)	≤29	20	19	20

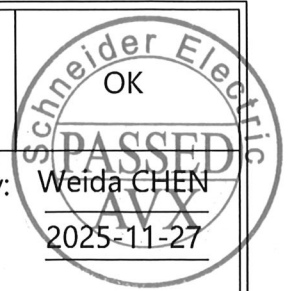
COMPLETENESS INSPECTION

Secondary wiring, auxiliary, label comply to requirements.
According to the inspection of the order specification with requirements.

Tested by: Gaoqiu YE
Date: 2025-11-27

Approved by: Weida CHEN
Date: 2025-11-27

Schneider Electric (Xiamen) Switchgear Equipment Co., Ltd.



Customer / Cliente: SCHNEIDER ELECTRIC S.p.A.
Customer order / Ordine Cliente: 4502429922/000002 of / del: 20/01/2026
Schneider order / Ordine Schneider: 120004638 item / pos: 20
Schneider trasfer order / Trasf. Ordine Schneider: item / pos:
Apparatus / Apparecchio: 20 M.V.. Circuit Breaker / Interruttori M.T. Q.ty / Q.tà: 1 / 1
Serial numbers / Numeri di serie

NM2026W1810039

RATED CHARACTERISTICS
CARATTERISTICHE NOMINALI

Rated voltage Tensione nominale	Ur	24 kV
Rated lightning impulse withstand voltage Tensione nominale di tenuta ad impulso atmosferico	Up	125 kV
Rated Power-frequency withstand voltage Tensione nominale di tenuta a frequenza industriale	Ud	50 kV
Rated normal current Corrente termica nominale	Ir	630 A
Rated short-circuit breaking current Corrente di breve durata nominale ammissibile	Isc	16 kA
Rated duration of short circuit Durata nominale di corto circuito	tk	1 s
Rated frequency Frequenza nominale	fr	50/60 Hz
Rated operating sequence Sequenza di operazioni nominali	O-3mn-CO-3mn-CO	

RATED SUPPLY VOLTAGE and DOCUMENT
TENSIONI AUSILIARIE E DOCUMENTI

1st opening devices Primo dispositivo di apertura	Uop	220 V 50 Hz
2nd/double opening devices Secondo/doppio dispositivo di apertura	Uop	NO
Closing devices Dispositivo di chiusura	Uop	NO
Undervoltage devices Dispositivo di minima tensione	Uop	NO
Spring charging motor devices Dispositivo motore carica molle	Ua	NO
Mitop Mitop	Ua	NO
Schematic dwg. Schema funzionale	PKR56072	
Quality control sheet Scheda di controllo Qualità	M-CS&Q-035.01	

ROUTINE TESTS
PROVE INDIVIDUALI

Design and visual checks
Controlli di progetto e visivi
Dielectric test on the main circuit
Prova d'isolamento sul circuito principale
Dielectric tests on auxiliary and control circuits
Prova d'isolamento dei circuiti ausiliari e di comando
Measurement of the resistance of the main circuit
Misura della resistenza del circuito principale

STANDARD
NORME

IEC 62271-100 par. 7.5
IEC 62271-100 par. 7.1
IEC 62271-100 par. 7.2
IEC 62271-100 par. 7.3

TEST RESULTS
ESITO

Satisfactory
Conforme
Satisfactory
Conforme
Satisfactory
Conforme
Satisfactory
Conforme

MEASUREMENT INSTRUMENTS
STRUMENTI DI MISURA

/
Rif. Verb.
ETL24C1BTLX1D-25483P0032-A20B19C20
PR47
Rif. Verb.
ETL24C1BTLX1D-25483P0032-A20B19C20

Current test / Corrente di prova
Value max. / Valore max.

100 A dc
29 mV

L1	/	mV	L2	/	mV	L3	/	mV
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Mechanical operating tests
Prove di funzionamento meccanico

IEC 62271-100 par. 7.101

Satisfactory
Conforme

PR47

Closing time	Value max.	Measure
Umax.	60 ms	0 ms
Un	60 ms	0 ms
Umin.	60 ms	0 ms

Opening time	Value max.	Measure	Value max.	Measure
Umax.	50 ms	33 ms	50 ms	0 ms
Un	50 ms	35 ms	50 ms	0 ms
Umin.	50 ms	35 ms	50 ms	0 ms

Tightness test
Prova di ermeticità

IEC 62271-100 par. 7.4

Satisfactory
Conforme

Rif. Verb.
TLX1D-25483P0032-/

Quality Assurance
Garanzia della Qualità

Schneider Electric S.p.A.
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Fax 035 415 3200
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Codice Fiscale n° 00509110011
Partita IVA n° 02424870166
Società con un unico socio
Diretta e coordinata da Schneider Electric S.A.

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narayan
powertech pvt. ltd.
Unit-1: Padra-Vadodara Road, Padra, District:Vadodara-391440

LOW POWER CURRENT TRANSFORMER TEST REPORT IEC61869-10

PO No.- 4010078515 Date:- 06/06/2025
W.O. NO: EO/25-26/513 Ratio : 100A/22.5 mV Class : 0.5/5P Burden : >20 kohms
Freq:-50/60hz Drawing number:ICTE01748-0000 STC Rating:25KA/1sec Test Report Number NP/TR/ 1379

Sr.No.	% of Primary Current	Limits		Rated Burden >20 kohms		Verification of terminal marking and polarity	Power Frequency voltage withstand test on Secondary winding @ 0.82kV for 1 Min	Power Frequency voltage withstand test on Primary winding @ 3kV for 1 Min
		Ratio Error in %	Phase Angle Error (Min.)	Ratio Error in %	Phase Angle Error (Min.)			
E2109537	5%	±1.5%	90	-0.65	25.11	OK	OK	OK
	20%	±0.75%	45	-0.05	22.50			
	100%	±0.5%	30	-0.21	4.77			
	1250%	±0.5%	30	-0.22	-1.11			

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powertech pvt. ltd.

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LOW POWER CURRENT TRANSFORMER TEST REPORT IEC61869-10



Date:- 06/06/2025

PO No.- 4010078515

W.O. NO: EO/25-26/513

Freq:-50/60hz

Drawing number:LTE01748-0000

Class : 0.5/5P

STC Rating:25KA/1sec

Burden : >20 kohms

Test Report Number NP/TR/ 1379

Sr.No.	% of Primary Current	Limits		Rated Burden >20 kohms		Verification of terminal marking and polarity	Power Frequency voltage withstand test on Secondary winding @ 0.82kV for 1 Min	Power Frequency voltage withstand test on Primary winding @ 3kV for 1 Min
		Ratio Error in %	Phase Angle Error (Min.)	Ratio Error in %	Phase Angle Error (Min.)			
E2109538	5%	±1.5%	90	0.44	17.83	OK	OK	OK
	20%	±0.75%	45	-0.29	14.45			
	100%	±0.5%	30	-0.20	-0.41			
	1250%	±0.5%	30	-0.12	3.39			

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powertech pvt. ltd.
Unit-1: Padra-Vadodara Road, Padra, District:Vadodara-391440

LOW POWER CURRENT TRANSFORMER TEST REPORT IEC61869-10

PO No.- 4010078515
W.O. NO: EO/25-26/513
Freq:- 50/60hz
Drawing number: LCTE01748-0000

Class : 0.5/5P
Ratio : 100A/22.5 mV
Burden : >20 kohms
STC Rating: 25KA/1sec

Date:- 06/06/2025
Test Report Number NP/TR/ 1379

Sr.No.	% of Primary Current	Limits		Rated Burden >20 kohms		Verification of terminal marking and polarity	Power Frequency voltage withstand test on Secondary winding @ 0.82kV for 1 Min	Power Frequency voltage withstand test on Primary winding @ 3kV for 1 Min
		Ratio Error in %	Phase Angle Error (Min.)	Ratio Error in %	Phase Angle Error (Min.)			
E2109539	5%	±1.5%	90	1.41	22.87	OK	OK	OK
	20%	±0.75%	45	0.28	19.24			
	100%	±0.5%	30	-0.37	-0.45			
	1250%	±0.5%	30	-0.16	-1.79			

[Signature]

Checked By : Narendra Rana

WI/4.10/F65 Rev. A

Tested by :- Parth shah

CALIBRATION AND TEST REPORT

Page 1 (2)

Device: **Protection relay (P3U30)** VID: P3U30-200165608
 S/N: SM2608712600722

Program version: V30.209
 HW version: 1.2
 Order code: 7AAA1CCAA REL52074
 Auxiliary power: 48 - 240 Vac/dc
 Nominal inputs current: 22.5mV / $\sqrt{3}$ In: 1/5A Io1n: 1/5A
 Nominal inputs voltage: 3.25V / $\sqrt{3}$
 Frequency: 50/60 Hz



Auxiliary power:

Voltage	Current	Power (< 15W)
111 Vdc	48.74 mA	5.42 W

Communication:

Local (front) ☒ OK
 Remote ☒ OK 2 x RJ-45-Interface
 Ethernet (MAC 001AD342A21F)

Digital inputs:

☒ OK (Connectors: X3:3-6,X4:1-14)

Output relays:

☒ OK (Connectors: X3:7-20,X5:9-14)

Insulation Test:

☒ OK (IEC 60255-27 2kV, 50Hz)

Meas. Accuracy:

LPCT = Prim: 1000 A
 CTo = 500 A / 5 A (In = 5 A) or 100 A / 1 A (In = 1 A)
 LPVT = Prim: 1000V f=50Hz

Current channels:

	Channel	Supply value	Measured	Error	Tolerance	
0,1 x In	IL1	22.50 mV	100 A	0.00 %	±2,5%	Pass
	IL2	22.50 mV	100 A	0.00 %		Pass
	IL3	22.50 mV	100 A	0.00 %		Pass
1,0 x In	IL1	225.00 mV	1001 A	0.10 %	±0,4%	Pass
	IL2	225.00 mV	1001 A	0.10 %		Pass
	IL3	225.00 mV	1001 A	0.10 %		Pass
4,0 x In	IL1	900.00 mV	4004 A	0.10 %	±2,5%	Pass
	IL2	900.00 mV	4003 A	0.08 %		Pass
	IL3	900.00 mV	4003 A	0.08 %		Pass

Residual current:

	Channel	Supply value	Measured	Error	Tolerance	
0,01 x In	In = 1A	0.0100 A	1.00 A	0.00 %	±20%	Pass
0.10 x In	In = 1A	0.0999 A	9.99 A	0.01 %	±2%	Pass
1.00 x In	In = 1A	1.0001 A	100 A	0.08 %	±0,3%	Pass
0,01 x In	In = 5A	0.0500 A	4.99 A	-0.20 %	±20%	Pass
0.10 x In	In = 5A	0.5000 A	49.96 A	-0.08 %	±2%	Pass
1.00 x In	In = 5A	5.0050 A	500 A	-0.01 %	±0,3%	Pass

Voltage channels:

Mode: 3LN/Lny/z

	Channel	Supply value	Measured	Error	Tolerance	
0,02 x Un	UL1	0.065 V	20.0 V	0.00 %	±25%	Pass
	UL2	0.065 V	20.0 V	0.00 %		Pass
	UL3	0.065 V	20.0 V	0.00 %		Pass
	UL1y	0.065 V	20.0 V	0.00 %		Pass
	UL1z	0.065 V	20.0 V	0.00 %		Pass
0,1 x Un	UL1	0.325 V	100.0 V	0.00 %	±2,5%	Pass
	UL2	0.325 V	100.0 V	0.00 %		Pass
	UL3	0.325 V	100.0 V	0.00 %		Pass
	UL1Y	0.325 V	100.0 V	0.00 %		Pass
	UL1z	0.325 V	100.0 V	0.00 %		Pass
1,00 x Un	UL1	3.250 V	1001.0 V	0.10 %	±0,4%	Pass
	UL2	3.250 V	1001.0 V	0.10 %		Pass
	UL3	3.250 V	1001.0 V	0.10 %		Pass
	UL1Y	3.250 V	1001.0 V	0.10 %		Pass
	UL1z	3.250 V	1001.0 V	0.10 %		Pass

COMPLIANCE REPORT

Manufactory order: 2604344

CURRENT TRANSFORMER type CSH160

Serial Number: **26014603**

Type, Rated insulation level (Kv), rated frequency.....:

!CSH160_____0.72/3/0_kv50Hz!

Rated short time thermal current x t, rated dynamic current

0
0
0
0
0
0
0
0
0
0
0
0
0



TEST PERFORMED ACCORDING TO IEC 61869 SERIES STANDARDS

- 1) Power-frequency voltage withstand tests on primary terminals (if applicable)
- 2) Partial discharge measurement (if applicable)
- 3) Power-frequency voltage withstand tests between sections (if applicable)
- 4) Power-frequency voltage withstand tests on secondary terminals
- 5) Inter-turn overvoltage test (if applicable)
- 6) Test for accuracy
- 7) Verification of markings

TEST RESULTS: SATISFACTORY

DATE: 17/04/2026

SEMAR ELECTRIC QUALITY CONTROL

CALIBRATION AND TEST REPORT

Page 2 (2)

Device: Protection relay (P3U30)
S/N SM2608712600722 VID: P3U30-200165608

Functional Test

Stage	Delay type	I>	Tp	Input	Measured	Error	Tolerance	
I >	NI	0.5 pu	0.10	0.620 pu	3.332 s	0.085 s	±5%	Pass

Stage	Delay type	I>	I>	Input		Error	Tolerance	
IDir >	DT	1.0 pu	0.30 s	1.1 pu	0.299 s	-0.001 s	±25ms	Pass
I >>	DT	2.0 pu	0.05 s	2.1 pu	0.047 s	-0.003 s		Pass
Io >	DT	0.05 pu	1.00 s	0.06 pu	1.013 s	0.013 s		Pass

Accepted

Date: 2026-02-24

Name:

OPE