



TEST REPORT EN 61800-5-1 Adjustable speed electrical power drive systems – Part 5-1: Safety requirements – Electrical, thermal and energy	
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Testing Laboratory	Shenzhen CCT Testing Technology Co., Ltd.
Address	3F, Huafeng Business Building, Xin'an Industrial Zone, Bao'an District, Shenzhen, China
Applicant's name	SHENZHEN SINOVO ELECTRIC TECHNOLOGIES CO.,LTD.
Address	5th Floor, No. D Building, Huafeng International Robot Industry Park, Xixiang Street, Hangcheng Road, Baoan District, Shenzhen City, China
Test specification:	
Standard	EN 61800-5-1:2007 +A1:2017/ +A11:2021
Test procedure	CE-LVD
Non-standard test method	N/A
Test Report Form No.	IEC61800_5_1C
Test Report Form(s) Originator	SGS FIMKO Ltd.
Master TRF	2021-03
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Test item description	Inverter
Trade Mark	
Manufacturer	SHENZHEN SINOVO ELECTRIC TECHNOLOGIES

TRF No. IEC61800_5_1C

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3F, Huafeng Business Building, Xin'an Industrial Zone, Bao'an District, Shenzhen, China
Tel: 86-0755-27888557 E-mail: Lisa@cctlab.com Fax: 86-0755-27888557



Model/Type reference	CO.,LTD. 5th Floor, No. D Building, Huafeng International Robot Industry Park, Xixiang Street, Hangcheng Road, Baoan District, Shenzhen City, China SD600-4T-1.5G/2.2P,SD600-4T-0.7G/1.5P, SD600-4T-2.2G/4.0P,SD600-4T-4.0G/5.5P, SD600-4T-5.5G/7.5P,SD600-4T-7.5G/11P, SD600-4T-11G/15P,SD600-4T-15G/18.5P, SD600-4T-18.5G/22P,SD600-4T-22G/30P, SD600-4T-30G/37P,SD600-4T-37G/45P, SD600-4T-45G/55P,SD600-4T-55G/75P, SD600-4T-75G/90P,SD600-4T-90G/110P, SD600-4T-110G/132P,SD600-4T-132G/160P, SD600-4T-160G/185P,SD600-4T-185G/200P, SD600-4T-200G/220P,SD600-4T-220G/250P, SD600-4T-250G/280P,SD600-4T-280G/315P, SD600-4T-315G/350P,SD600-4T-350G/400P, SD600-4T-400G/450P,SD600-4T-450G/500P, SD600-4T-500G/550P,SD600-2S-0.7G, SD600-2S-1.5G,SD600-2S-2.2G,SD600-2S-4.0G, SD600-2S-5.5G,SD600-2S-7.5G,SD600-2S-11G, SD600-2S-15G,SD600-2S-18.5G,SD600-2S-22G, SD600-2S-30G,SD600-2S-37G,SD600-2T-0.7G, SD600-2T-1.5G,SD600-2T-2.2G,SD600-2T-4.0G, SD600-2T-5.5G,SD600-2T-7.5G,SD600-2T-11G, SD600-2T-15G,SD600-2T-18.5G,SD600-2T-22G, SD600-2T-30G,SD600-2T-37G,
Ratings	Input: 3PH 380V~, 50/60Hz, 5.0A/5.8A Output: 3PH 380V~, 0-500Hz, 3.7A/5.1A

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Testing Laboratory:	Shenzhen CCT Testing Technology Co., Ltd.	
Testing location/ address	3F, Huafeng Business Building, Xin'an Industrial Zone, Bao'an District, Shenzhen, China	
Tested by (name + signature).....	Ada Lin (Tester)	
Reviewed by (name + signature)	Liberal Li (Director)	
Approved by (name + signature)	Kizard Zhang (Manager)	
List of Attachments (including a total number of pages in each attachment): Attachment No.1: Photo documentation (6 pages)		
Summary of testing:		
Tests performed (name of test and test clause): The submitted samples were found to comply with the requirements of: Electrical safety EN 61800-5-1:2007 +A1:2017/ +A11:2021	Testing location: Shenzhen CCT Testing Technology Co., Ltd. 3F, Huafeng Business Building, Xin'an Industrial Zone, Bao'an District, Shenzhen, China	
Summary of compliance with National Differences: N/A		

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Copy of marking plate

The artwork below may be only a draft.



The label of SD600-4T-1.5G/2.2P

Remark:

1. Representative markings of model: SD600-4T-1.5G/2.2P, markings of all models are identical except for their appearance and ratings.
2. The height dimension of WEEE symbol should not less than 7mm, the height dimension of CE symbol should not less than 5mm



Test item particulars:	
Equipment under test	☒ PDS ☐ CDM ☐ BDM
Intended equipment location	☐ stand alone ☒ for building-in (open-type)
Mains supply overvoltage category (OVC)	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV
Reduction of OVC for basic insulation used	
Supply earthing systems and system voltage (V)	☒ No ☐ Yes, by: Supply earthing system System voltage ☐ TN-S, TN-C, TN-CS, TT (not corner earthed) ☐ TN-C (middle point earthed) ☒ TN-S, TT (corner earthed) ☐ IT (not corner earthed) ☐ IT (corner earthed) ☐ other:
OVC for potential free terminals	
Other non-DVC A connections	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV
Class of equipment	
Pollution degree (PD)	☐ Class 0 ☒ Class I ☐ Class II ☐ Class III ☐ PD 1: ☒ PD 2: ☐ PD 3: ☐ PD 4:
IP protection class(es)	Not applicable
Ambient temperature during operation (°C) with/without derating	40°C
Max. operation altitude (m)	≤ 2000
Altitude of test laboratory (m)	< 500
Other particulars	N/A
Possible test case verdicts:	
- test case does not apply to the test object	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement	F (Fail)
Testing:	
Date of receipt of test item	2021-04-26
Date(s) of performance of tests	From 2021-04-26 to 2021-05-10

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General remarks:

The test results presented in this report relate only to the object tested.

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“(see Enclosure #)” refers to additional information appended to the report.

“(see appended table)” refers to a table appended to the report.

Throughout this report a comma / point is used as the decimal separator.

General product information:

1. All models have the same circuit diagram and construction except their appearance and ratings.
2. All tests were conducted on model SD600-4T-1.5G/2.2P

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
4	PROTECTION AGAINST ELECTRIC SHOCK, THERMAL, AND ENERGY HAZARDS		P
4.1	General		P
4.2	Fault conditions		P
4.3	Protection against electric shock		P
4.3.1	Decisive voltage classification	DVC C	P
4.3.1.1	Use of decisive voltage class (DVC)	DVC C	P
4.3.1.2	Limits of DVC		P
4.3.1.3	Requirements for protection		P
4.3.1.4	Circuit evaluation		P
4.3.1.4.1	General		P
4.3.1.4.2	A.C. working voltage		P
4.3.1.4.3	D.C. working voltage		N/A
4.3.1.4.4	Pulsating working voltage		P
4.3.2	Protective separation		P
4.3.3	Protection against direct contact		P
4.3.3.1	General		P
4.3.3.2	Protection by means of insulation of live parts		P
4.3.3.3	Protection by means of enclosures and barriers		P
4.3.4	Protection in case of direct contact		P
4.3.4.1	General		P

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.4.2	Protection using DVC A		N/A
4.3.4.3	Protection by means of protective impedance		N/A
4.3.4.4	Protection by means of using limited voltage		N/A

4.3.5	Protection against indirect contact		P
4.3.5.1	General		P
4.3.5.2	Insulation between live parts and accessible conductive parts		P
4.3.5.3	Protective bonding circuit		P
4.3.5.3.1	General		P
4.3.5.3.2	Rating of protective bonding		P
4.3.5.3.3	Protective bonding impedance		P
4.3.5.4	Protective earthing conductor		P
4.3.5.5	Means of connection for the protective earthing conductor		P
4.2.5.5.1	General		P
4.2.5.5.2	Touch current in case of failure of protective earthing conductor		P
4.2.5.6	Special features in equipment for protection class II		N/A

4.3.6	Insulation		P
4.3.6.1	General		P
4.3.6.1.1	Influencing factors		P
4.3.6.1.2	Pollution degree		P
4.3.6.1.3	Overvoltage Category		P
4.3.6.1.4	Supply earthing systems		P
4.3.6.1.5	Insulation voltages		P

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6.2	Insulation to the surroundings		P
4.3.6.2.1	General		P
4.3.6.2.2	Circuits connected directly to the supply mains :	AC	P
4.3.6.2.3	Circuits not connected directly to the supply mains :		N/A
4.3.6.2.4	Insulation between circuits :		P
4.3.6.3	Functional insulation		P
4.3.6.4	Clearance distances	See appended table 3.4.6.4	P
4.3.6.4.1	Determination		P
4.3.6.4.2	Electric field homogeneity		P
4.3.6.4.3	Clearance to conductive enclosures :		P
4.3.6.5	Creepage distance	See appended table 4.3.6.5	P
4.3.6.5.1	General		P
4.3.6.5.2	Materials :		P
4.3.6.6	Coating		N/A
4.3.6.7	PWB spacings for functional insulation :		P
4.3.6.8	Solid insulation	See appended table 4.3.6.8	P
4.3.6.8.1	General		P
4.3.6.8.2	Requirements for electrical withstand capability		P
4.3.6.8.2.1	Basic or supplementary insulation		P
4.3.6.8.2.2	Double and reinforced insulation		P
4.3.6.8.2.3	Functional insulation		P
4.3.6.8.3	Thin sheet or tape material		P
4.3.6.8.3.1	General		P
4.3.6.8.3.2	Material thickness not less than 0.2 mm		P

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.6.8.3.3	Material thickness less than 0.2 mm		N/A
4.3.6.8.3.4	Compliance		P
4.3.6.8.4	Printed wiring boards		P
4.3.6.8.4.1	General		P
4.3.6.8.4.2	Use of coating materials		N/A
4.3.6.8.5	Wound components		N/A
4.3.6.8.6	Potting materials		N/A
4.3.6.9	Insulation requirements above 30 kHz		N/A

4.3.7	Enclosures		P
4.3.7.1	General	See cl. 4.4.3, 5.2.2.5.3, 5.2.2.4.	P
4.3.7.2	Cast metal		N/A
4.3.7.3	Sheet metal		N/A

4.3.8	Wiring and connections		P
4.3.8.1	General		P
4.3.8.2	Routing		P
4.3.8.3	Colour coding		N/A
4.3.8.4	Splices and connections		P
4.3.8.5	Accessible connections		P
4.3.8.6	Interconnections between parts of the PDS		P
4.3.8.7	Supply connections		P
4.3.8.8	Terminals		P
4.3.8.8.1	Construction requirements		P
4.3.8.8.2	Connecting capacity		P

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.3.8.8.3	Connection		P
4.3.8.8.4	Wire bending space for wires 10 mm ² and greater		P

4.3.9	Output short circuit requirements		P
4.3.10	Residual current-operated protective (RCD) or monitoring (RCM) device compatibility		N/A
4.3.11	Capacitor Discharge		P
4.3.12	Access conditions for high-voltage PDS		P

4.4	Protection against thermal hazards		P
4.4.1	Minimizing the risk of ignition	See appended table 1.	P
4.4.2	Insulation Materials		P
4.4.2.1	General	See appended table 5.2.3.8.	P
4.4.2.2	Material requirements	See cl. 5.2.5.1, 5.2.5.2 and appended table 1.	P
4.4.3	Flammability of enclosure materials	See appended table 1.	P
4.4.4	Temperature limits		P
4.4.4.1	Internal parts		P
4.4.4.2	External parts of CDM		P
4.4.5	Specific requirements for liquid cooled PDS		P
4.4.5.1	Coolant		P
4.4.5.2	Design requirements		N/A
4.4.5.2.1	Corrosion resistance		N/A
4.4.5.2.2	Tubing, joints and seals		N/A
4.4.5.2.3	Provision for condensation		N/A
4.4.5.2.4	Leakage of coolant		N/A
4.4.5.2.5	Loss of coolant		N/A

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
4.4.5.2.6	Conductivity of coolant		N/A
4.4.5.2.7	Insulation requirements for coolant loss		N/A

4.5	Protection against energy hazards		P
4.5.1	Electrical energy hazards		P
4.5.2	Mechanical energy hazards		P
4.5.2.1	General		P
4.5.2.2	Critical torsional speed		N/A
4.5.2.3	Transient torque analysis		N/A
4.5.3	Acoustic noise emission		N/A

4.6	Protection against environmental stresses		P
5	TEST REQUIREMENTS		P
5.1	General		P
5.1.1	Test objectives and classification		P
5.1.2	Selection of test samples		P
5.1.3	Sequence of tests		P
5.1.4	Earthing Conditions	Neutral to earth; isolated (not earthed)	P
5.1.5	Compliance		P
5.1.6	Test Overview		P
5.2	Test specifications		P
	5.2.1 Visual inspections (type test, sample test and routine test)		P
5.2.2	Mechanical tests		P
5.2.2.1	Clearance and creepage distances (type test)	See appended table 5.2.2.1.	P
5.2.2.2	PWB short-circuit test (type test)	See appended table 5.2.2.2.	P

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.3	Non-accessibility test (type test)		P
5.2.2.4	Enclosure integrity test (type test)		P
5.2.2.5	Deformation tests		N/A
5.2.2.5.1	General		N/A
5.2.2.5.2	Deflection test (type test)		N/A
5.2.2.5.3	Impact test (type test), temperature (°C)		N/A

5.2.3	Electrical tests		P
5.2.3.1	Impulse voltage test (type test and sample test)	See appended table 5.2.3.1.	N/A
5.2.3.2	A.C. or d.c. voltage test (type and routine test)	See appended table 5.2.3.2.	P
5.2.3.2.1	Purpose of test		P
5.2.3.2.2	Value and type of test voltage		P
5.2.3.2.3	Performing the voltage test		P
5.2.3.2.4	Duration of the a.c. or d.c. voltage test		P
5.2.3.2.5	Verification of the a.c. or d.c. voltage test		P
5.2.3.3	Partial discharge test (type test, sample test)		N/A
5.2.3.4	Protective impedance (type test and routine test) :		N/A
5.2.3.5	Touch current measurement (type test)	See appended table 5.2.3.5.	P
5.2.3.6	Short-circuit test and Breakdown of components test (type tests)	See appended table 5.2.3.6.	P
5.2.3.6.1	General		P
5.2.3.6.2	Test configuration		P
5.2.3.6.2.1	Supply voltage and current		P
5.2.3.6.3	Short-circuit test		P
5.2.3.6.3.1	Load conditions		P
5.2.3.6.3.2	Location of short-circuit		P

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
5.2.3.6.4	Breakdown of component test		P
5.2.3.6.4.1	Load condition		P
5.2.3.6.4.2	Application of short-circuit or open-circuit		P
5.2.3.6.5	Test sequence		P
5.2.3.6.6	Pass criteria		P
5.2.3.7	Capacitor discharge (type test)		P
5.2.3.8	Temperature rise test (type test)	See appended table 5.2.3.8.	P
5.2.3.9	Protective bonding (type test and routine test)	See appended table 5.2.3.9.	P

5.2.4	Abnormal operation tests	See appended table 5.2.4.	P
5.2.4.1	General		P
5.2.4.2	Test duration		P
5.2.4.3	Pass criteria		P
5.2.4.4	Loss of phase (type test)		P
5.2.4.5	Cooling failure tests (type tests)		N/A
5.2.4.5.1	General		P
5.2.4.5.2	Inoperative blower motor (type test)		P
5.2.4.5.3	Clogged filter (type test)		N/A
5.2.4.5.4	Loss of coolant		N/A

5.2.4	Abnormal operation tests	See appended table 5.2.4.	P
5.2.4.1	General		P
5.2.4.2	Test duration		P
5.2.4.3	Pass criteria		P
5.2.4.4	Loss of phase (type test)		P
5.2.4.5	Cooling failure tests (type tests)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.2.4.5.1	General		P
5.2.4.5.2	Inoperative blower motor (type test)		P
5.2.4.5.3	Clogged filter (type test)		N/A
5.2.4.5.4	Loss of coolant		N/A
5.2.5	Material tests		P
5.2.5.1	High current arcing ignition test (type test)		P
5.2.5.2	Glow-wire test (type test)		P
5.2.5.3	Hot wire ignition test (type test - alternative to Glow-wire test)		P
5.2.5.4	Flammability test (type test)		P
5.2.6	Environmental tests (type tests)		P
5.2.6.1	General		P
5.2.6.2	Acceptance criteria		P
5.2.6.3	Climatic tests		P
5.2.6.3.1	Dry heat test (steady state)		P
5.2.6.3.2	Damp heat test (steady state)		P
5.2.6.4	Vibration test (type test)		P
5.2.7	Hydrostatic pressure test (type test and routine test) :		N/A
6	INFORMATION AND MARKING REQUIREMENTS		
6.1	General		P
6.2	Information for selection	See appended table 6, part6.2.	P

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Tel: 86-0755-27888557 E-mail: Lisa@cctlab.com Fax: 86-0755-27888557



IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.3	Information for installing and commissioning	See appended table 6, part 6.3.	P
6.3.1	General		P
6.3.2	Mechanical considerations		P
6.3.3	Environment		P
6.3.4	Handling and mounting		P
6.3.5	Motor and driven equipment		P
6.3.5.1	Motor selection		N/A
6.3.5.2	Motor integrated sensors		N/A
6.3.5.3	Critical torsional speeds		N/A
6.3.5.4	Transient torque analysis		N/A
6.3.6	Connections		P
6.3.6.1	General		P
6.3.6.2	Interconnection and wiring diagrams		P
6.3.6.3	Conductor (cable) selection		N/A
6.3.6.4	Terminal capacity and identification		P
6.3.6.5	Protection requirements		P
6.3.6.6	Earthing		P
6.3.6.7	Protective earthing conductor current		P
6.3.6.8	Special requirements		P
6.3.7	Overcurrent and short-circuit protection		P
6.3.8	Motor overload protection		P
6.3.9	Commissioning		N/A
6.4	Information for use	See appended table 6, part 6.4.	P

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IEC 61800-5-1			
Clause	Requirement + Test	Result - Remark	Verdict
6.4.1	General		P
6.4.2	Adjustment		P
6.4.3	Labels, signs and signals		P
6.4.3.1	General		P
6.4.3.2	Isolators		N/A
6.4.3.3	Visual and audible signals		N/A
6.4.3.4	Hot surfaces		N/A
6.4.3.5	Equipment marking		P

6.5	Information for maintenance	See appended table 6, part 6.5.	P
6.5.1	General		P
6.5.2	Capacitor discharge		P
6.5.3	Auto restart/bypass connection		P
6.5.4	PT/CT connection		N/A
6.5.5	Other hazards		N/A
Annex A	Examples of protection in case of direct contact	Considered	N/A
Annex B	Examples of overvoltage category reduction	Considered	N/A
Annex C	Measurement of clearance and creepage distances	Considered	N/A
Annex D	Altitude correction for clearances	Considered	N/A
Annex E	Clearance and creepage distance determination for frequencies greater than 30 kHz	Considered	N/A
Annex F	Cross sections of round conductors	Considered	N/A
Annex G	Guidelines for RCD compability	Considered	N/A
Annex H	Symbols referred to in this part of IEC 61800	Considered	N/A

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Tel: 86-0755-27888557 E-mail: Lisa@cctlab.com Fax: 86-0755-27888557



IEC 61800-5-1

Clause	Requirement + Test	Result - Remark	Verdict
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5.2.2.1	General selection and information of supply earthing systems for clearance distances								-	
Power systems	TN-S, TN-C, TN-CS, TT (not corner earthed)		TN-S, TT (corner earthed)		TN-C (middle point earthed)		IT (not corner earthed)		IT (corner earthed)	
Rated voltage (V)	N/A		3P-380 Vac		N/A		N/A		N/A	
Max. altitude (m)	N/A		2000 m		N/A		N/A		N/A	
System voltage	N/A		3P-380 Vac		N/A		N/A		N/A	
	B/S	D/R	B/S	D/R	B/S	D/R	B/S	D/R	B/S	D/R
Rated Impulse voltage (kV)	N/A	N/A	2500	4000	N/A	N/A	N/A	N/A	N/A	N/A
Temporary overvoltage (V)	N/A	N/A	0	0	N/A	N/A	N/A	N/A	N/A	N/A
Clearance (mm)	N/A	N/A	1.5	3.0	N/A	N/A	N/A	N/A	N/A	N/A
Test impulse voltage for clearance (kV)	N/A	N/A	2500	4000	N/A	N/A	N/A	N/A	N/A	N/A
IT corner earthed, simulated impedance (M)...... :					N/A					
Supplementary information:										

5.2.2.1		TABLE: Working voltage measurements for clearance and creepage distances									
Condition#	Between	TN-S, TN-C, TN-CS, TT (not corner earthed)		TN-S, TT (corner earthed)		TN-C (middle point earthed)		IT (not corner earthed)		IT (corner earthed)	
		peak	rms	peak	rms	peak	rms	peak	rms	peak	rms
	L to N	N/A	N/A	315	220	N/A	N/A	N/A	N/A	N/A	N/A
Supplementary information:											
Condition #: N/A											

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IEC 61800-5-1

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

5.2.2.1	TABLE: Clearance and creepage distance measurements					P
Clearance (cl) and creepage distance (cr) at/of/between:	U_{peak} (V)	U_{rms} (V)	Req. cl. (mm)	Meas. cl. (mm)	Req. cr. (mm)	Meas. cr. (mm)
Functional:						
L to N	315	220	1.5	> 2.0	2.5	> 2.0
Primary hazardous live parts to earthing terminal	315	220	1.5	> 3.5	2.5	> 3.5
Reinforced:						
Primary hazardous live parts to enclosure outside	315	220	3.0	> 6.0	2.5	> 6.0
Supplementary information:						

4.3.6.8 5.2.3.1 5.2.3.2 5.2.3.3	TABLE: Solid insulation, Impulse voltage test, A.C. or d.c. voltage test, Partial discharge test					P
Test voltage applied between/at:		DTI (mm)	Impulse test (kV, circuit)	Electric strength test (V a.c., V d.c.)	Partial discharge test (V)	Result
Functional:						
L to N		1.5	2500Vd c	1200Vdc	N/A	P
Basic/supplementary:						
Primary hazardous live parts to enclosure outside		1.5	2500Vd c	1200Vdc	N/A	P
Supplementary information:		3.0	3000Vd c	1200Vdc	N/A	P

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4.3.6.8	TABLE: Solid insulation,							
5.2.3.1	Impulse voltage test,							
5.2.3.2	A.C. or d.c. voltage test,							
5.2.3.3	Partial discharge test							
Single phase equipment								
L – N TN-S, TN- C, TN-CS, TT (not corner earthed) Figure 6	L – L TN-C, TT (middle point earthed) Figure 7	L – L TN, TT (not corner earthed) Figure 8	L – N IT (not corner earthed) Figure 9	L – N IT (corner earthed) Figure 9	L – L IT (not corner earthed) Figure 10	L – L IT (corner earthed) Figure 10	Measu- rement limit for 50 Hz (mA)	Measu- ment limit for 60 Hz (mA)
--	--	--	--	--	--	--	3.5	3.5
Three-phase equipment								
TN-S, TN-C, TN-CS, TT (not corner earthed) Figure 11	IT (star point earthed) Figure 12	TN, TT (centre earthed) Figure 12	TN, TT (centre earthed) Figure 13	TN, TT (centre earthed) Figure 14	Measu- ment limit for 50 Hz (mA)		Measu- ment limit for 60 Hz (mA)	
--	--	--	1.59	1.43	3.5		3.5	
Supplementary information:								
Measurements have been carried out according to figures of IEC 60990.								
5.2.3.8	TABLE: Temperature rise test							
	Supply voltage (V)	3P-380 Vac	--	--	--	--	—	
	Derating (%)	--	--	--	--	--	—	
	Rated maximum ambient temperature (°C)	40	--	--	--	--	—	
	Ambient T _{min} (°C)	39.7	--	--	--	--	—	
	Ambient T _{max} (°C)	40.0	--	--	--	--	—	
Maximum measured temperature T of part/at::			T (°C)				Allowed T _{max} (°C)	
Terminal block			78.6	--	--	--	--	85
Controll panel			47.8	--	--	--	--	Ref.
DC fan			100.6	--	--	--	--	155
PCB			93.4	--	--	--	--	130

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Enclosure outside	54.7	--	--	--	--	70	
Supplementary information:							
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
--	--	--	--	--	--	--	--
Supplementary information							

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IEC 61800-5-1

Clause	Requirement + Test	Result - Remark	Verdict
--------	--------------------	-----------------	---------

5.2.2.2 5.2.3.6 5.2.4	TABLE: PWB short-circuit test, Short-circuit test and breakdown of component test, Abnormal operation tests			P
	Ambient temperature (°C)	25°C		—
	Mains fuse during test (A)			—
Component No.	Fault	Supply voltage (V)	Test time	Observation
T1 pin 3-6	SC	3P-380 Vac	10min	Unit shutdown immediately, ecoverable, No damage. no hazard.
T1 pin 2-7	SC	3P-380 Vac	10min	Unit shutdown immediately, ecoverable, No damage. no hazard.
C1	SC	3P-380 Vac	10min	Unit shutdown immediately, ecoverable, No damage. no hazard.
Supplementary information:				

5.2.3.9	TABLE: Protective bonding				P
	Test current (A)		10		—
Points of application		Resistance (mΩ)	Voltage (V)	Test time (s)	Result
PE terminal to protective bonding circuit		0.45	24	60	Pass
Supplementary information:					

5.2.5	TABLE: Material tests				P
Part	Manufacturer of material/part	Type of material/part	Thickness (mm)	Test	Result
PCB	/	/	1.75	type test	Pass
Supplementary information:					

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IEC 61800-5-1					
Clause	Requirement + Test			Result - Remark	
6	TABLE: Information and marking requirements				P
		Product	Package	Installation	User Maintenance
6.2	Information for selection				
- Name or trademark of the manufacturer, supplier or importer	P	P	P	P	P
- Catalogue number or equivalent	P	P	P	P	P
- Voltage rating	P	-	P	-	P
- Current rating	P	-	P	-	P
- Power rating	P	-	P	-	P
- Frequency	P	-	P	-	P
- Number of phases	P	-	P	-	P
- Reference to standards	-	-	P	-	-
- Date code or serial number	P	-	-	-	-
- Reference to instructions	-	-	P	P	P
6.3	Information for installation and comissioning				
6.3.2: Mechanical considerations	-	P	P	-	P
- Dimensions (SI units)	-	-	P	-	P
- Mass (SI units)	-	P	P	-	P
- Mounting details (SI units)	-	-	P	-	P
6.3.3: Environment (operation, transport, storage)	-	-	P	-	P
- Temperature	-	-	P	-	P
- Humidity	-	-	P	-	P
- Altitude	-	-	P	-	P
- Pollution	-	-	P	-	P
- Ultra violet light	-	-	N/A	-	N/A
- Type of electrical supply system	-	-	P	-	-
- Field supply requirements (if any)	-	-	N/A	-	-
- IP rating	N/A	-	N/A	-	N/A
6.3.4: Handling and mounting	-	N/A	N/A	-	N/A
- Packing and unpacking	-	N/A	N/A	-	N/A
- Moving	-	N/A	N/A	-	N/A
- Lifting	-	N/A	N/A	-	N/A
- Strength and rigidity of mounting surface	-	N/A	N/A	-	N/A
- Fastening	-	N/A	N/A	-	-

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- Coolant type and design pressure for liquid cooled product	-	-	N/A	-	N/A
- Provision of adequate access for operation, adjustment and maintenance	-	N/A	N/A	-	N/A
- Warning if mounting surface exceeds 90 °C :	-	-	N/A	-	-
6.3.5.1: Motor selection	-	-	P	P	P
6.3.5.2: Motor integrated sensors	-	-	N/A	N/A	N/A
6.3.5.3: Critical torsional speeds	-	-	N/A	N/A	N/A
6.3.5.4: Transient torque analysis	-	-	N/A	N/A	N/A
6.3.6.2: Interconnection and wiring diagrams ..	-	-	N/A	-	N/A
6.3.6.3: Conductor (cable) selection	-	-	N/A	-	N/A
6.3.6.4: Terminal capacity and identification ..	P	-	P	-	P
6.3.6.5: Protection requirements	-	-	P	P	P

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Attachment 1: photo documentation

Photo 1 General Appearance of the EUT



Photo 2 General Appearance of the EUT



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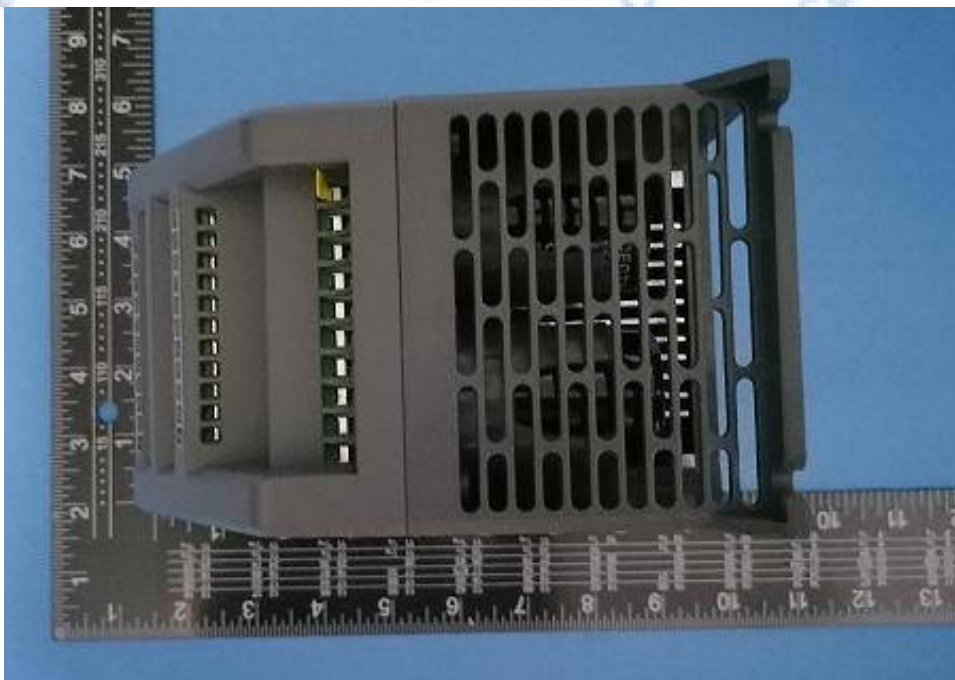
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Tel: 86-0755-27888557 E-mail: Lisa@cctlab.com Fax: 86-0755-27888557



Photo 3 General Appearance of the EUT



Photo 4 General Appearance of the EUT



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Photo 5 General Appearance of the EUT

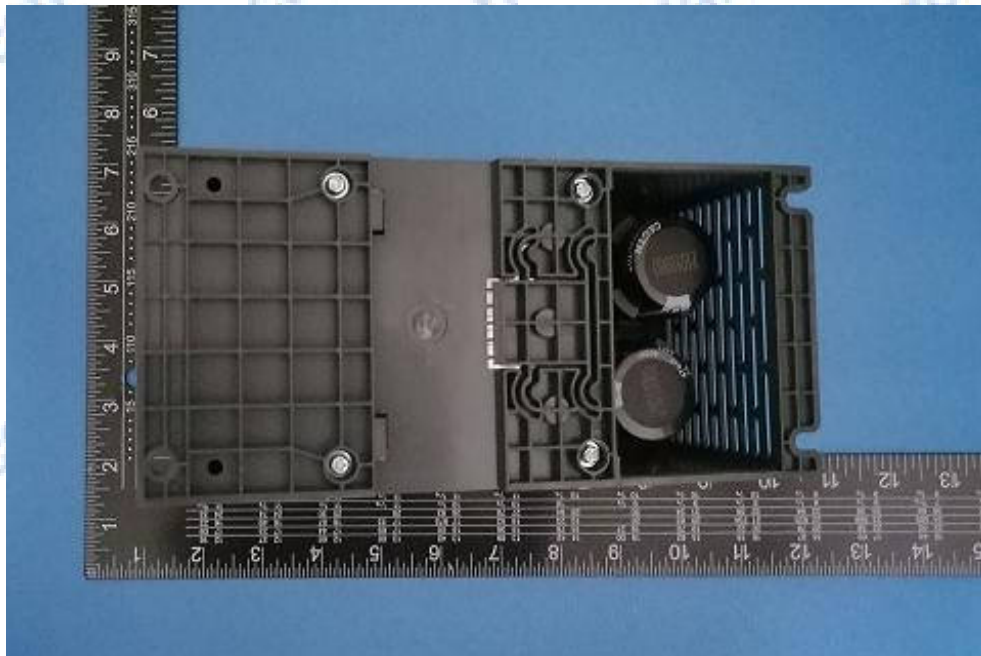


Photo 6 General Appearance of the EUT (Inside)



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Photo 7 General Appearance of the EUT (Inside)

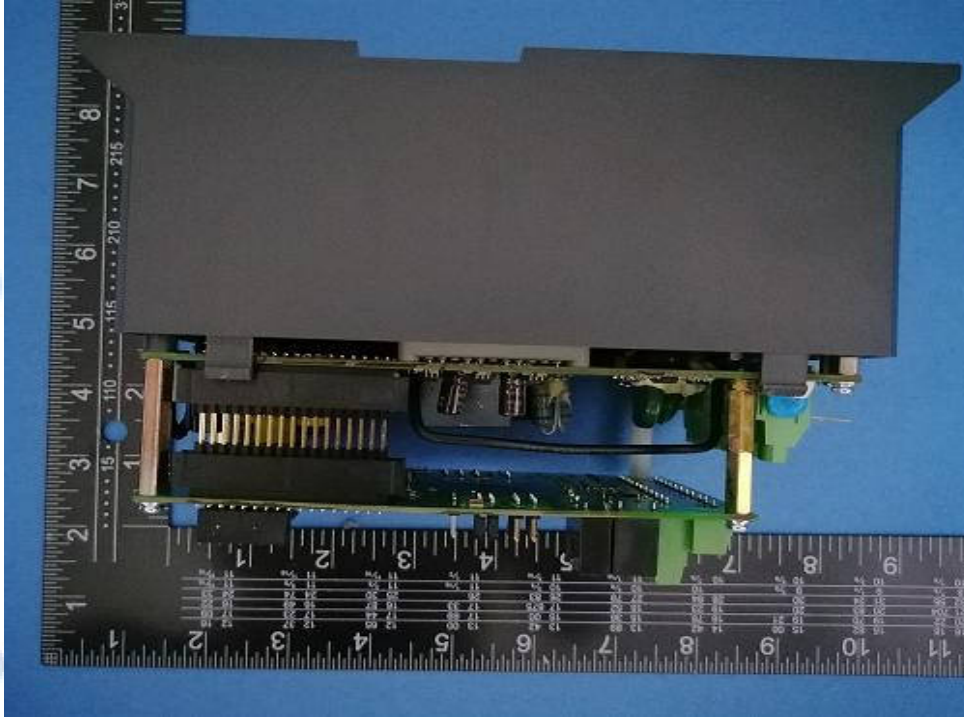
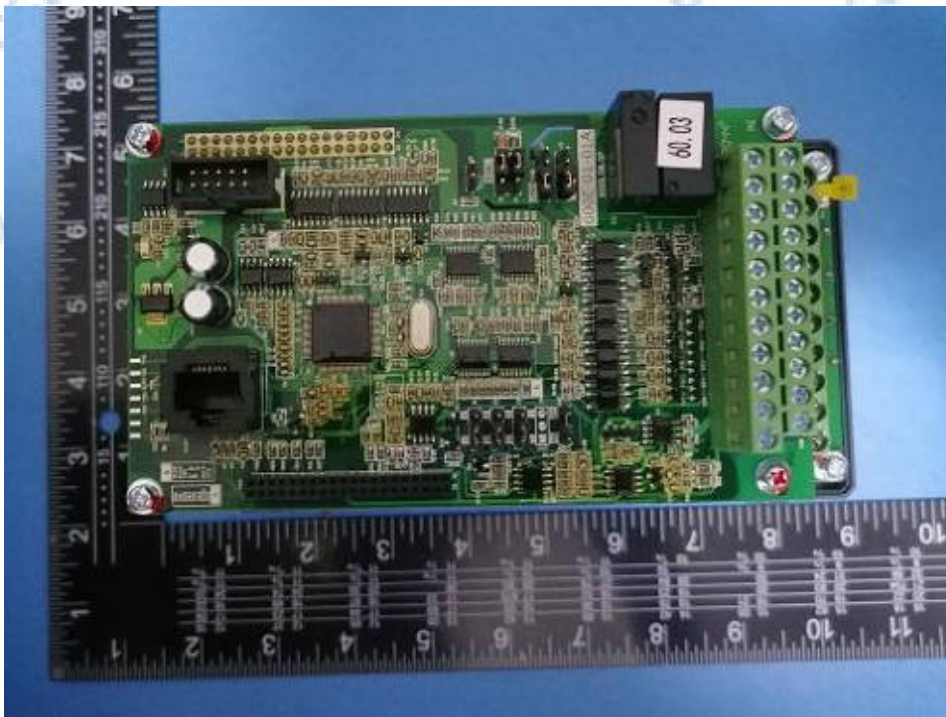


Photo 8 General Appearance of the EUT (Inside)



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Photo 9 General Appearance of the EUT (Inside)

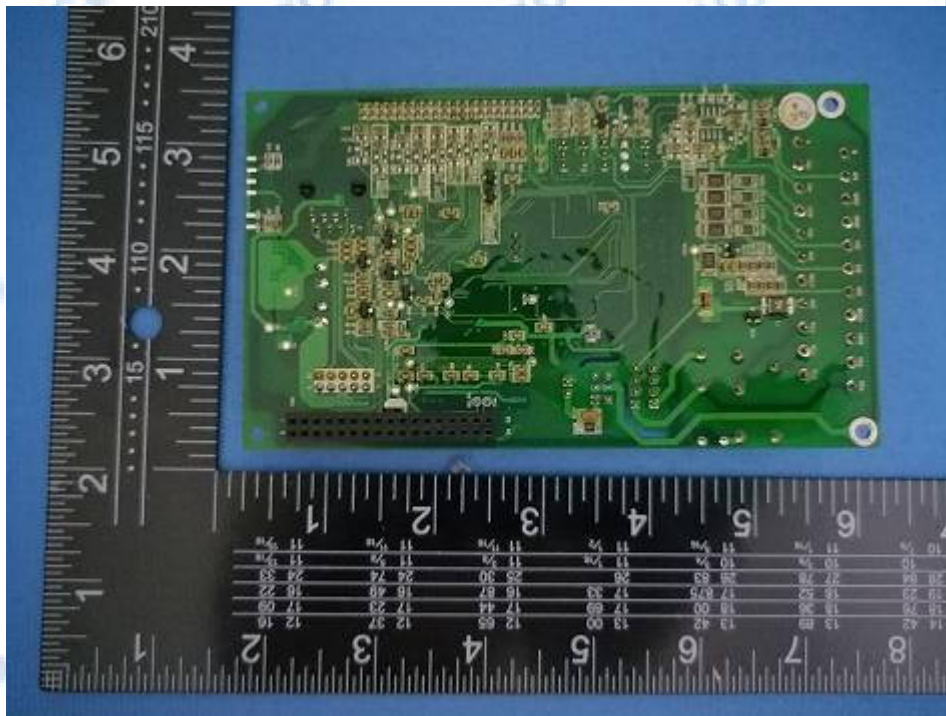


Photo 10 General Appearance of the EUT (Inside)



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Photo 11 General Appearance of the EUT (Inside)

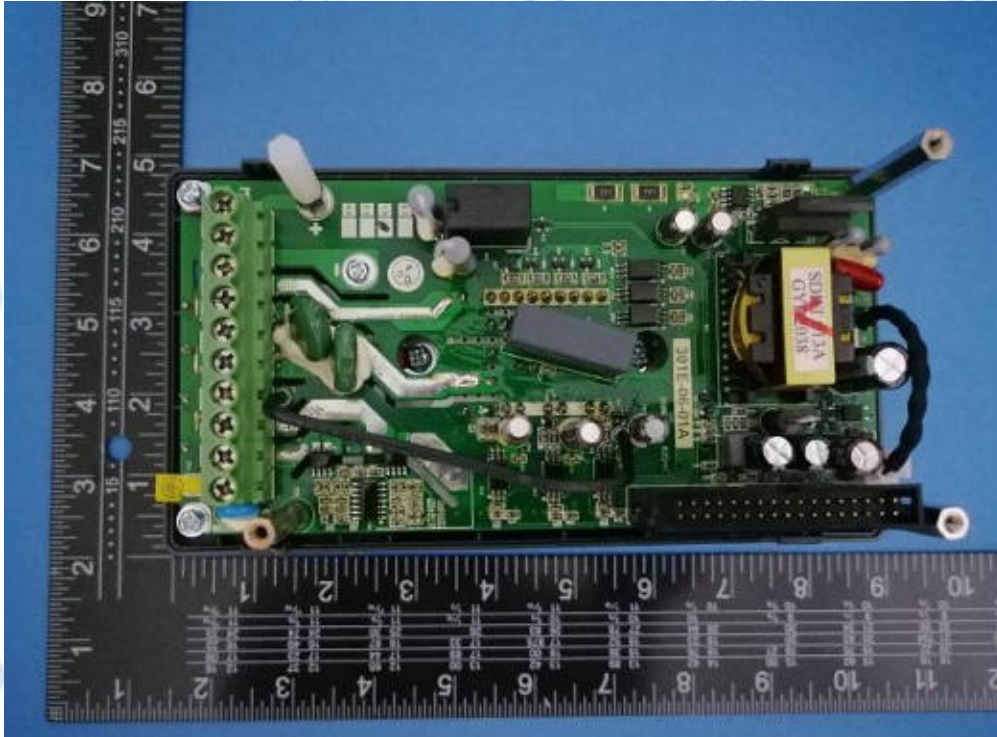
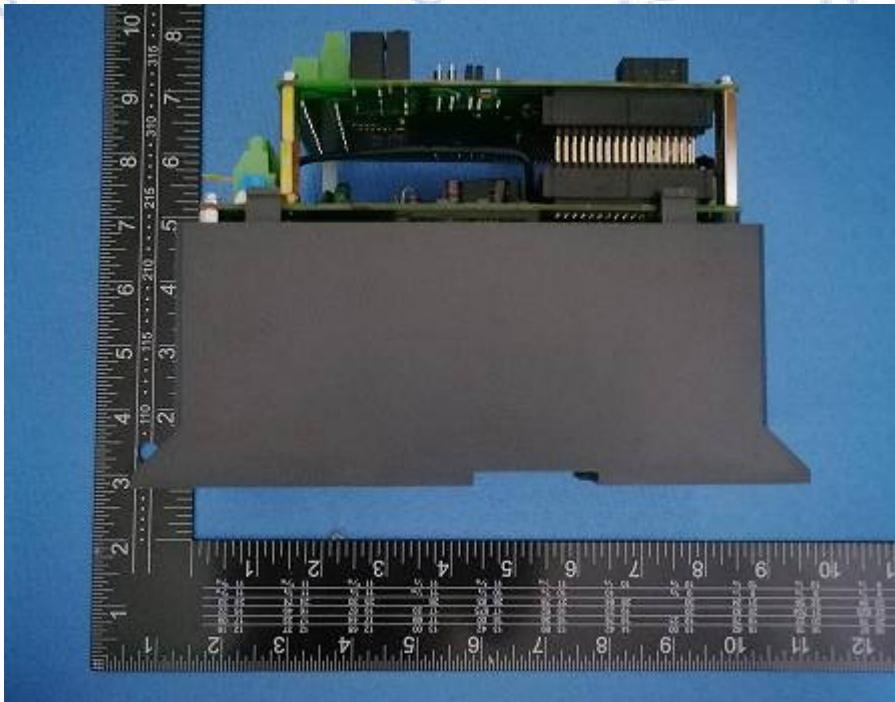


Photo 12 General Appearance of the EUT (Inside)



----- THE END OF TEST REPORT -----

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