

Test report no.: <i>Prüfbericht-Nr.:</i>	CN20JDG8 002	Order No.: <i>Auftragsnr.:</i>	244497877	Page 1 of 10 <i>Seite 1 von 10</i>
Client reference no.: <i>Kunden-Referenz-Nr.:</i>	2297060	Order date: <i>Auftragsdatum:</i>	2023-03-02	
Client: <i>Auftraggeber:</i>	Servotronix Motion Technology Development(Shenzhen)Ltd.			
Test item: <i>Prüfgegenstand:</i>	Servo Drive			
Identification / Type no.: <i>Bezeichnung / Typ-Nr.:</i>	BDHDE-0062AAP, BDHDE-0062AEB, BDHDE-0032AAP, BDHDE-0032AEB, BDHDE-0062AEC, BDHDE-0032AEC			
Order content: <i>Auftrags-Inhalt:</i>	TÜV Rheinland CE LVD			
Test specification <i>Prüfgrundlage:</i>	EN 61800-5-1:2007+A1:2017			
Date of sample receipt: <i>Wareneingangsdatum:</i>	2023-03-02			
Test sample no.: <i>Prüfmuster-Nr.:</i>	Engineering sample			
Testing period: <i>Prüfzeitraum:</i>	2023-03-02 - 2023-04-15			
Place of testing: <i>Ort der Prüfung:</i>	See below			
Testing laboratory: <i>Prüflaboratorium:</i>	TÜV Rheinland (Shanghai) Co., Ltd.			
Test result*: <i>Prüfergebnis*:</i>	Pass			
tested by: <i>geprüft von:</i>	authorized by: <i>genehmigt von:</i>			
Date: 2023-04-15 <i>Datum:</i>	Issue date: 2023-04-15 <i>Ausstellungsdatum:</i>			
Position / Stellung:	RaferXu&MikeYu/PE&Trainee	Position / Stellung:	Yin Yue/Authorizer	
Other: <i>Sonstiges:</i>	Client address: Room 605, Building B2, Kexing Science Park, No.15 Nanshan District Shenzhen 518057 Guangdong P.R.China. Place of testing: Servotronix Motion Technology Development(Shenzhen)Ltd-Shanghai Branch			
Condition of the test item at delivery: <i>Zustand des Prüfgegenstandes bei Anlieferung:</i>	Test item complete and undamaged Prüfmuster vollständig und unbeschädigt			
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark. <i>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</i>				

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Remarks
Anmerkungen

1	<p>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</p> <p><i>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfbedingungen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</i></p>
2	<p>As contractually agreed, this document has been signed digitally only. TÜV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TÜV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged.</p> <p><i>Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben.</i></p>
3	<p>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report. Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</p> <p><i>Prüfklausele mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausele des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausele im Bericht aufgeführt.</i></p>
4	<p>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</p> <p><i>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</i></p>



TEST REPORT IEC 61800-5-1 Adjustable speed electrical power drive systems – Part 5-1: Safety requirements – Electrical, thermal and energy	
Report Number.....	: CN20JDG8 002
Date of issue	: See cover page
Total number of pages.....	: See cover page
Name of Testing Laboratory preparing the Report	: TÜV Rheinland (Shanghai) Co., Ltd.
Applicant's name.....	: Servotronix Motion Technology Development(Shenzhen)Ltd.
Address.....	: Room 605,Building B2,Kexing Science Park,No.15 Nanshan District Shenzhen 518057 Guangdong P.R.China.
Test specification:	
Standard.....	: IEC 61800-5-1: 2007; AMD1:2016
Test procedure.....	: CB Scheme
Non-standard test method	: N/A
Test Report Form No.	: IEC61800_5_1C
Test Report Form(s) Originator....	: SGS Fimko Ltd.
Master TRF	: Dated 2018-05-18
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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.	
General disclaimer:	
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Test item description :	Servo Drive	
Trade Mark :		
Manufacturer :	Servotronix Motion Technology Development(Shenzhen)Ltd. Room 605, Building B2, Kexing Science Park, No.15 Nanshan District Shenzhen 518057 Guangdong P.R. China.	
Model/Type reference	See model list for details	
Ratings :	See model list for details	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input type="checkbox"/>	CB Testing Laboratory:	
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature) .. :		
<input type="checkbox"/>	Testing procedure: CTF Stage 1:	
Testing location/ address		
Tested by (name, function, signature)		
Approved by (name, function, signature) .. :		
<input type="checkbox"/>	Testing procedure: CTF Stage 2:	
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
<input type="checkbox"/>	Testing procedure: CTF Stage 3:	
<input type="checkbox"/>	Testing procedure: CTF Stage 4:	
Testing location/ address		
Tested by (name, function, signature)		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature) .. :		
Supervised by (name, function, signature):		

List of Attachments (including a total number of pages in each attachment): Attachment 1: Photo documents(9 pages). Attachment 2: Critical components list(CDF)(11 pages)											
Summary of testing:											
Tests performed (name of test and test clause): N/A	Testing location: N/A										
Summary of compliance with National Differences (List of countries addressed): <input checked="" type="checkbox"/> The product fulfils the requirements of EN 61800-5-1:2007+A1:2017, IEC 61800-5-1:2007+A1:2016											
History of amendments and modifications:											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Test Report No.</th> <th style="text-align: left;">Date dd.mm.yyyy</th> <th style="text-align: left;">Remark(s)</th> </tr> </thead> <tbody> <tr> <td>CN20JDG8 001</td> <td>04.02.2021</td> <td>Original report of EN 61800-5-1:2007+A1:2017</td> </tr> <tr> <td>CN20JDG8 002</td> <td>15.04.2023</td> <td>Add 2 new models: BDHDE-0062AEC, BDHDE-0032AEC</td> </tr> </tbody> </table>	Test Report No.	Date dd.mm.yyyy	Remark(s)	CN20JDG8 001	04.02.2021	Original report of EN 61800-5-1:2007+A1:2017	CN20JDG8 002	15.04.2023	Add 2 new models: BDHDE-0062AEC, BDHDE-0032AEC		
Test Report No.	Date dd.mm.yyyy	Remark(s)									
CN20JDG8 001	04.02.2021	Original report of EN 61800-5-1:2007+A1:2017									
CN20JDG8 002	15.04.2023	Add 2 new models: BDHDE-0062AEC, BDHDE-0032AEC									

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.


 Model: BDHDE-0062AAP

 S/N: 220J-2391005


 Rev: 
 B

Rating	Input	Output	
Voltage VAC	240 1PH	0-240 3PH	FW: 2.0
Frequency Hz	50/60	0-500Hz	
F.L.Current 1PH		6.0 Arms	Enclosure: IP20
Power 240V		1.44kVA	Ambient : 45°C



Dangerous Voltage / **Tension Dangereuse**
 Residual voltage. Risk of electric shock. Wait 5 minutes after removing power before servicing.
 Voltage résiduel. Attendez 5 minutes après mise hors tension avant de manipuler.

CAUTION / **Attention**
 Read manual & follow the safety instructions Use correct PE earthing technique.
 Lisez le manuel et suivez les consignes de sécurité

Hot Surface / **Surface Chaude**
 Do not touch heatsink. May cause burns.
 Ne touchez pas le dissipateur thermique. Risque de brûlure.

www.servotronix.com


 Model: BDHDE-0062AEB

 S/N: 220J-2394293


 Rev: 
 B

Rating	Input	Output	
Voltage VAC	240 1PH	0-240 3PH	FW: 2.0
Frequency Hz	50/60	0-500Hz	
F.L.Current 1PH		6.0 Arms	Enclosure: IP20
Power 240V		1.44kVA	Ambient : 45°C



Dangerous Voltage / **Tension Dangereuse**
 Residual voltage. Risk of electric shock. Wait 5 minutes after removing power before servicing.
 Voltage résiduel. Attendez 5 minutes après mise hors tension avant de manipuler.

CAUTION / **Attention**
 Read manual & follow the safety instructions Use correct PE earthing technique.
 Lisez le manuel et suivez les consignes de sécurité

Hot Surface / **Surface Chaude**
 Do not touch heatsink. May cause burns.
 Ne touchez pas le dissipateur thermique. Risque de brûlure.

www.servotronix.com


 Model: BDHDE-0032AAP

 S/N: 221A-0000010


 Rev: XX


Rating	Input	Output	
Voltage VAC	240 1PH	0-240 3PH	FW: 2.0
Frequency Hz	50/60	0-500Hz	
F.L.Current 1PH		2.8 Arms	Enclosure: IP20
Power 240V		0.72kVA	Ambient: 45°C



Dangerous Voltage / **Tension Dangereuse**
 Residual voltage. Risk of electric shock. Wait 5 minutes after removing power before servicing.
 Voltage résiduel. Attendez 5 minutes après mise hors tension avant de manipuler.

CAUTION / **Attention**
 Read manual & follow the safety instructions Use correct PE earthing technique.
 Lisez le manuel et suivez les consignes de sécurité

Hot Surface / **Surface Chaude**
 Do not touch heatsink. May cause burns.
 Ne touchez pas le dissipateur thermique. Risque de brûlure.

www.servotronix.com


 Model: BDHDE-0032AEB

 S/N: 221A-0000010


 Rev: XX


Rating	Input	Output	
Voltage VAC	240 1PH	0-240 3PH	FW: 2.0
Frequency Hz	50/60	0-500Hz	
F.L.Current 1PH		2.8 Arms	Enclosure: IP20
Power 240V		0.72kVA	Ambient: 45°C




Dangerous Voltage / **Tension Dangereuse**
 Residual voltage. Risk of electric shock. Wait 5 minutes after removing power before servicing.
 Voltage résiduel. Attendez 5 minutes après mise hors tension avant de manipuler.

CAUTION / **Attention**
 Read manual & follow the safety instructions Use correct PE earthing technique.
 Lisez le manuel et suivez les consignes de sécurité


Hot Surface / **Surface Chaude**
 Do not touch heatsink. May cause burns.
 Ne touchez pas le dissipateur thermique. Risque de brûlure.

www.servotronix.com




BDHDE

Model: BDHDE-0062AEC Rev: **B**


S/N: 222J-0288732 

Rating	Input	Output	
Voltage VAC	240 1PH	0-240 3PH	FW: 2.2.X
Frequency Hz	50/60	0-500Hz	
F.L.Current 1PH		6.0 Arms	Enclosure: IP20
Power 240V		1.44kVA	Ambient: 45°C

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	Dangerous Voltage Tension Dangereuse	Residual voltage. Risk of electric shock. Wait 5 minutes after removing power before servicing. Voltage résiduel. Attendez 5 minutes après mise hors tension avant de manipuler.
	CAUTION Attention	Read manual & follow the safety instructions. Use correct PE earthing technique. Lisez le manuel et suivez les consignes de sécurité.
	Hot Surface Surface Chaude	Do not touch heatsink. May cause burns. Ne touchez pas le dissipateur thermique. Risque de brûlure.

www.servotronix.com




BDHDE

Model: BDHDE-0032AEC Rev: **B**

S/N: 222J-0302952 

Rating	Input	Output	
Voltage VAC	240 1PH	0-240 3PH	FW: 2.2.X
Frequency Hz	50/60	0-500Hz	
F.L.Current 1PH		2.8 Arms	Enclosure: IP20
Power 240V		0.72kVA	Ambient: 45°C

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	Dangerous Voltage Tension Dangereuse	Residual voltage. Risk of electric shock. Wait 5 minutes after removing power before servicing. Voltage résiduel. Attendez 5 minutes après mise hors tension avant de manipuler.
	CAUTION Attention	Read manual & follow the safety instructions. Use correct PE earthing technique. Lisez le manuel et suivez les consignes de sécurité.
	Hot Surface Surface Chaude	Do not touch heatsink. May cause burns. Ne touchez pas le dissipateur thermique. Risque de brûlure.

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Test item particulars.....:	
Equipment under test	<input type="checkbox"/> PDS <input type="checkbox"/> CDM <input checked="" type="checkbox"/> BDM <input type="checkbox"/> Other:
Equipment location	<input type="checkbox"/> stand alone <input checked="" type="checkbox"/> for building-in (open type)
Mains supply overvoltage category (OVC)	<input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input checked="" type="checkbox"/> OVC III <input type="checkbox"/> OVC IV
Reduction of OVC for basic insulation used	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes, by:
Supply earthing systems and system voltage (V) :	Supply earthing system System voltage
	<input checked="" type="checkbox"/> TN-S, TN-C, TN-CS, TT 300 (not corner earthed)
	<input type="checkbox"/> TN-S, TT (corner earthed)
	<input type="checkbox"/> TN-C (middle point earthed)
	<input type="checkbox"/> IT (not corner referenced)
	<input type="checkbox"/> IT (corner referenced)
	<input type="checkbox"/> other:
DVC D circuits/terminals (other than mains)	N/A
DVC C circuits/terminals (other than mains)	Input and output circuits
DVC B circuits/terminals	N/A
DVC A circuits/terminals	Communication circuits
Potential free circuits/terminals (voltage, OVC) ..:	OVC II
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class 0 <input type="checkbox"/> Class III
Pollution degree	<input type="checkbox"/> PD 1: <input checked="" type="checkbox"/> PD 2: <input type="checkbox"/> PD 3: <input type="checkbox"/> PD 4:
IP protection classes	IP20
Ambient temperature during operation (°C) with/without derating	0 to 45
Liquid cooling temperature during operation (°C) with/without derating	N/A
Maximum operation altitude (m)	2000
Altitude of test laboratory (m)	<500
Other particulars.....:	N/A
Motor overload and overtemperature protection ..:	<input checked="" type="checkbox"/> Thermal or electronic overload relay <input type="checkbox"/> Electronic motor overload protection with thermal memory retention <input type="checkbox"/> Electronic motor overload protection with speed sensitivity <input type="checkbox"/> Monitoring and automatic reduction of motor current based on thermal sensor in or on motor <input type="checkbox"/> Embedded motor thermal protection disconnecting the motor <input type="checkbox"/> None

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 : See cover page Date (s) of performance of tests : See cover page	
General remarks: "(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 <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60335-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies): Guangdong Midea Intelligent Technology Co., Limited Area A, floor 2, building 4, Midea global innovation center, Penglai road, Beijiao Town, Shunde district, Foshan City, Guangdong Province. P.R.China	
General product information and other remarks: Description of change(s): 1. Added new models to the serials : Added new models BDHDE-0032AEC, BDHDE-0062AEC comparing to original models BDHDE-0032AAP, BDHDE-0062AAP, BDHDE-0032AEB, BDHDE-0062AEB : 1) Enclosure and contractual are same. 2) Internal power board are same. 3) Pulse signal input and encoder frequency signal output functions are added to I/O port. 4) The internal control board has changed the main control chip, 5V power supply and interface circuit. For the above described change(s) the following was considered to be necessary: Construction Check: Marking and documentation are checked.	

Model list:

Type	Main Board	Control Board	Fan	Rated Input voltage and frequency	Input current(A)	Output voltage and frequency	Output current(A)	Power (kVA)
BDHDE-0032AEB	1711500000566	17115000000563	NO	AC 220-240 V, 1 Phase, 50/60 Hz	5.2	AC 0-240 V, 3 Phase, 0-500 Hz	2.8	0.72
BDHDE-0032AAP	1711500000566	17115000000902	NO	AC 220-240 V, 1 Phase, 50/60 Hz	5.2	AC 0-240 V, 3 Phase, 0-500 Hz	2.8	0.72
BDHDE-0062AEB	1711500000962	17115000000563	Yes	AC 220-240 V, 1 Phase, 50/60 Hz	9.0	AC 0-240 V, 3 Phase, 0-500 Hz	6.0	1.44
BDHDE-0062AAP	1711500000962	17115000000902	Yes	AC 220-240 V, 1 Phase, 50/60 Hz	9.0	AC 0-240 V, 3 Phase, 0-500 Hz	6.0	1.44
BDHDE-0032AEC	1711500003662	17115000003141	Yes	AC 220-240 V, 1 Phase, 50/60 Hz	5.2	AC 0-240 V, 3 Phase, 0-500 Hz	2.8	0.72
BDHDE-0062AEC	1711500003683	17115000003141	Yes	AC 220-240 V, 1 Phase, 50/60 Hz	9.0	AC 0-240 V, 3 Phase, 0-500 Hz	6.0	1.44

System diagram:

See report CN20JDG8 001

- End of test report -