

Wuxi Betteri Electronic Technology CO.,LTD.

Prepared For:	Wuxi Betteri Electronic Technology CO.,LTD. 5-1, #11, JinShan Rd.Branch#4, Wuxi Optoelectronic Materials Science&Technology Park, Liangxi District, Wuxi City, Jiangsu, China
Product Name:	3pin main line connector
Trade Name:	Betteri
Additional Model:	BC05A-ML3-40A,BC05A-BR3-12A,BC05A-BR3M-01,BC05A-BR3M-02
Prepared By:	BST Testing (Shenzhen)Co., Ltd.
	Add: No.7,New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Test Date:	Aug. 23, 2023 -Aug. 30, 2023
Date of Report:	Aug. 30, 2023
Report No.:	BSTXD230855022101SR



TEST REPORT

EN 61984:2009

Connectors — Safety requirements and tests

To the state of the sector sec	
Testing Laboratory	
Name:	BST Testing (Shenzhen)Co., Ltd.
Address:	Add: No.7,New Era Industrial Zone, Guantian, Bao'an District, Shenzhen, Guangdong, China
Testing location:	BST Testing (Shenzhen)Co., Ltd.
Applicant:	Wuxi Betteri Electronic Technology CO.,LTD.
Address:	5-1, #11, JinShan Rd.Branch#4, Wuxi Optoelectronic Materials Science&Technology Park, Liangxi District, Wuxi City, Jiangsu, China
Test specification:	
	EN 61984:2009
Standard:	EN 61984:2009
Test procedure:	CE-LVD
Non-standard test method:	N/A
Test item	
Description	See Page 1
Model and/or type reference:	See Page 1
Manufacturer:	Wuxi Betteri Electronic Technology CO.,LTD.
Address	5-1, #11, JinShan Rd.Branch#4, Wuxi Optoelectronic Materials Science&Technology Park, Liangxi District, Wuxi City, Jiangsu, China.
Rating(s):	300V,40A



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Particulars: test item vs. test requirements	
Nature of supply	
Class of protection againstelectrical shock	
Degree of protection against moisture	IP44
Type of cord attachment	Туре Ү
Type of mounting	
- building-in	No
- independent	Yes
- to be fixed to a support	No
- hand-held	No
Switch	Yes
Thermostat	No
Power supply cord provided	Yes
Motor with capacitor inauxiliary winding	No
Series motors incorporated	No
Appliance inlet provided	No
Accessories provided	No
Portable appliance	No
Water outlet	No
Test case verdicts	
Test case does not apply to the test object	N(.A.)
Test item does meet the requirement	P(ass)
Test item does not meet the requirement	F(ail)
General remarks	
This test report shall not be reproduced except in fu	l without the written approval of the testing laboratory.
The test results presented in this report relate only	to the item tested.
"(See remark #)" refers to a remark appended to th	ne report.

"(See appended table)" refers to a table appended to the report.

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

General product information:

The series products have the same circuit diagram, PCB layout and functionality. The differences are the model name, so, we select BC05A-ML3-40A to test.



Artwork of Marking Label: 3pin main line connector Model:BC05A-ML3-40A Rating: 300V,40A $\overleftarrow{c} \in \overleftarrow{a} \overleftarrow{c}$ Wuxi Betteri Electronic Technology CO.,LTD

Jade Zhan Prepared by : Engineer Zhang Reviewer: Approved & Authorized Signer :



Report No.: BSTXD230855022101SR

EN 61984:2009			
Clause	Requirement + Test	Result - Remark	Verdict
4	Technical information (electrical ratings)		Р
	In this standard, no particular values have been specified for electrical ratings such as voltage, current and breaking capacity of connectors. Values for these characteristics shall be specified in conjunction with mechanical and environmental conditions given in the detail specification or in the manufacturer's specification, where no detail specification exists.	300V,40A	P
5	Classification		Р
5.1	General Connectors shall be classified by the manufacturer's specification or the detail specification (DS), if any, according to their characteristics and intended use in accordance with 5.2, 5.3 and 5.4 as appropriate.		P
5.2	Classification according to protection against electric shock		Р
	 The classification according to protection against electric shock is as follows: a) unenclosed connector (as per definition in 3.7), b) enclosed connector (as per definition in 3.6), c) connector for class II equipment (as per definition in 3.10). 	enclosed connector	Ρ
5.3	Classification according to the style of connector		Р
	The classification according to the style of connector is a s follows: a) fixed connector (as per definition in 3.3), b) free connector (as per definition in 3.2).	free connector	P
5.4	Classification according to additional characteristics of connectors		P
	The classification according to additional characteristics of connectors is as follows: a) connector with protective earthing contact, b) connector without protective earthing contact, c) connector without breaking capacity (COC) (as defined in 3.9), NOTE 1 See also Annex B.		P



2103	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022	101SR
	 unprotected (IP0X), with protection against electric shock by back of hand safety (IP1X or IPXXA), when mated, 	IP44	Ρ
	 3) with protection against electric shock by finger safety (IP2X or IPXXB), when mated, d) connector with breaking capacity (CBC) (as defined in 3.8) for protection against electric shock by finger safety only (IP2X or IPXXB), both in mated and in unmated condition, NOTE 2 See also Annex B. e) degree of protection of a connector (IP code), f) connector with interlock, g) connector without interlock, h) non-rewirable connector, i) rewirable connector, j) terminations and connection methods. 	IP44	Ρ
6	Constructional requirements and performance		Р
6.1	General		Р
	Connectors shall be so designed and dimensioned that they can withstand the electrical, mechanical, thermal and corrosive stresses which occur in their intended use and present no danger to the user or the environment. Compliance with this requirement is verified by the specified tests of this standard.		
6.2	Marking and identification		Р
6.2.1	Identification		Р



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	Connectors shall be identified and characterised by the following markings: a) manufacturer's name, trademark or mark of origin;		Р
	 b) type identification; NOTE The type identification may be a part number, catalogue number or IEC type designation. 		
	c) rated current in ampere (A);		
	d) rated voltages or rated insulation voltages between line to earth and line to line in volt (V);		
	e) rated impulse voltage in kilovolt (kV), if specified;		
	f) pollution degree;		
	g) degree of protection by enclosure according to IEC 60529, if applicable;		
	h) temperature range (°C), (LLT – ULT);		
	i) type of terminals;		
	j) connectable conductors;		
	k) reference to this standard or to the DS, if applicable.		
6.2.2	Marking		Р
	Wipe the sample label with a wet cloth dipped in water for 15s, and then wipe it with a cloth soaked in gasoline for 15s.	The label were still indelible and easily legible	Р
	The minimum marking on the connector shall be that of item a) of 6.2.1.	300V,40A	Р
	Markings a) and b) of 6.2.1 shall be found on the smallest unit of packaging.		
	All markings of 6.2.1 shall be given in the technical documentation or catalogue of the manufacturer; for the rated values		
6.2.3	Marking of position for contacts		Р



BST Testing (Shenzhen)Co., Ltd. Report No.: BSTXD230855022101SR NA The positions for the contacts and protective earthing contacts shall be clearly indicated. Marking of the first contact and first row by a letter, number or another clear symbol is sufficient. This requirement does not apply to a connector in which contact identification is ensured in the end-use product. Relevant information shall be given in the technical documentation of the manufacturer. Marking of protective earthing contacts shall apply the symbol or PE. This requirement is not necessary for non rewirable connectors. Marking shall not be applied to screws or other removable parts. Ρ 6.3 Provision against incorrect mating (nonintermateable) Ρ Protection against electric shock 6.4 Ρ 6.4.1 Non accessibility of live parts Р A connector shall be so designed that, after 20 N force mounting, its live parts are not accessible by the IEC test finger in accordance with Clause 5 of IEC 60529:1989 using a test force of 20 N. All parts which are necessary to ensure protection against electric shock shall only be removable by the aid of a tool. This requirement does not apply to a connector in which protection against electric shock is ensured by its mounting provisions or by the use of safety extra-low voltage (SELV, according to IEC 60364-4-41) in the end-use product. Ρ 6.4.2 Non applicability of protection requirement to unenclosed connectors Ρ 6.4.2.1 General Ρ A connector intended for use inside an enclosure which ensures protection against electric shock is not required to have its own protection against electric shock. If protection is claimed by the manufacturer, the requirements of 6.4.2.2 or 6.4.2.3 apply. Ρ 6.4.2.2 Back of hand safety



NIG LL	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022	101SR
	For a COC with protection against electric shock according to characteristic c2) of 5.4,protective provisions shall be tested by using the access probe – "50 mm sphere" – according to Clause 5 of IEC 60529:1989 with a test force of 20 N, without consideration of clearances and creepage distances.		Ρ
6.4.2.3	Finger safety		Р
	For a COC and a CBC with protection against electric shock respectively according to characteristic c3) and d) of 5.4, protective provision shall be tested according to Clause 5 of IEC 60529:1989 by using the test finger with a test force of 20 N without consideration of clearances and creepage distances.		Ρ
6.4.3	Protection against electric shock during insertion and withdrawal		Р
	For a CBC, protection against electric shock shall be ensured also during insertion and withdrawal. Compliance is checked in accordance with Clause 5 of IEC 60529:1989 by the IEC test finger with a test force of 20 N with consideration of clearances and creepage distances according to the manufacturer specification.		Ρ
6.5	Provisions for earthing		Р
6.5.1	First make, last break PE contact		Р
	For a CBC with a protective earthing contact according to characteristic a) of 5.4, the earthing contact shall be a "first make, last break" contact.		Ρ
6.5.2	PE contacts on connector for class II equipment		Р
	A connector for class II equipment according to characteristic c) of 5.2 may be equipped with protective earthing contacts, provided that these contacts are considered as live parts and are equally protected against electric shock by double or reinforced insulation.		Ρ
6.5.3	Reliability of connection to PE contacts		Р
	Accessible metal parts of a connector with an earthing contact which may become live in the event of an insulation fault shall be reliably connected to the earthing contact. In no case shall the resistance of this connection exceed $0,1 \Omega$.		Ρ
6.5.4	Connection of the protective conductor		Р
6.5.4.1	PE conductor terminal capacity	1.5 mm ²	Р



6.5.4.2 Design of PE termination P The design and type of construction of the protective conductor terminations shall be at least equivalent in performance to the types of termination given in 6.6. P 6.6 Terminations and connection methods P The design and type of construction of the protective conductor terminations P 6.6.1 Terminations and connection methods P 6.6.2 Type and range of construction of the protective conductor terminations P 6.6.3 Design of electrical connections P 6.6.3 Design of electrical connections P Electrical connections shall be so designed that the contact pressure is not transmitted through insulating material other than ceramic, pure mica or other material with characteristics not less suitable, unless there is sufficient resiliency in the metallic parts to compensate for any shrinkage or yielding of the insulating material (see 25.3 of IEC 60399-1 or Clause 7 of IEC 60399-2). On the basis of the tests according to IEC 60352-6 or IEC 60998-2-3 of Table 3, insulation piercing connections are excluded from the above requirement. P 6.7 Interlock P A connector with an interlock shall be so designed that it cannot be engaged or disengaged as long as the contacts are live. P 6.8 Resistance to ageing P 6.8 Resistance to ageing might impair safety shall	since LL ²	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022101SR	
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A connector with an interfock shall be so designed that it cannot be engaged or disengaged as long as the contacts are live. Image: Contact are live. 6.8 Resistance to ageing P Parts which, due to ageing, might impair safety shall be so resistant that the specified characteristics such as dielectric strength, contact resistance or degree of protection are maintained. P	6.7	Interlock	P	
Parts which, due to ageing might impair safety shall be so resistant that the specified characteristics such as dielectric strength, contact resistance or degree of protection are maintained.		that it cannot be engaged or disengaged as long as	P	
be so resistant that the specified characteristics such as dielectric strength, contact resistance or degree of protection are maintained.	6.8	Resistance to ageing	P	
6.9 General design		be so resistant that the specified characteristics such as dielectric strength, contact resistance or degree of	P	
	6.9	General design	P	
6.9.1 Polarisation P Multipole connectors shall be so polarised that improper connection of mating parts is prevented. This requirement does not apply to connectors (for example two-part connectors for printed boards and rack-and-panel connectors) where mismating is prevented by their mounting provisions or by additional accessories, if necessary and available.	6.9.1	Multipole connectors shall be so polarised that improper connection of mating parts is prevented. This requirement does not apply to connectors (for example two-part connectors for printed boards and rack-and-panel connectors) where mismating is prevented by their mounting provisions or by	P	
6.9.2 Fixing of live parts P	6.9.2	Fixing of live parts	P	



Mechanisms which are used for mounting the connector and/or termination of conductors shall not be used to Ki lve parts in the connector housing, if it may impair the proper function of the mechanism or reduce the clearance and creepage distances below the requirements according to 6.19. P 6.9.3 Connection of conductors P Connectors shall be so designed that connection of conductors of the type and cross-sectional areas as specified by the DS or the manufacturer shall be possible. Besides the termination of the conductor, care shall be taken that no damage of the insulation is possible, e.g. by avoiding of sharp edges. P 6.9.4 Design of non rewirable connectors P Non-rewirable connectors shall be so designed that • the flexible cable cannot be separated from the connector without making it permanently useless; P the connector cannot be opened by hand or by using a general purpose tool, for example a screwdriver, as intended; P • means are provided to prevent live parts, e.g. free strands of a conductor, from reducing the minimum insulation distance between such live parts and all accessible external surfaces of the connector, with the exception of the engagement face of the male connector. P 6.10 Design of a CBC P A CBC shall have an adequate breaking capacity. P 6.11 Design of a tree connector P In a free connector, he wires shall be protected against shear and tensile stress at the termination and be	Since MG	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022101SR
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A CBC shall have all adequate bleaking capacity. 6.11 Design of a free connector P In a free connector, the wires shall be protected against shear and tensile stress at the termination and be secured to prevent twisting. P This requirement does not apply to a) free connectors for termination to cables in fixed mountings (plug connection in the sense of a detachable connection); b) free connectors in which the terminations are protected against pull and twisting by mounting provisions in the end-use product. D	6.10	Design of a CBC	P
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6.12 Degree of protection (IP Code)		 against shear and tensile stress at the termination and be secured to prevent twisting. This requirement does not apply to a) free connectors for termination to cables in fixed mountings (plug connection in the sense of a detachable connection); b) free connectors in which the terminations are protected against pull and twisting by mounting 	P
	6.12	Degree of protection (IP Code)	P



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	A connector shall have a degree of protection according to IEC 60529, if specified by the DS or the manufacturer's specification according to classification of 5.4 e).	IP 44	P
6.13	Dielectric strength		Р
	A connector shall withstand the specified test voltage, preferably the impulse withstand voltage $(1,2/50 \ \mu s)$ or the r.m.s. withstand voltage $(50/60 \ Hz)$ alternatively. The connector shall withstand the test voltage specified in Table 8, in accordance with 7.3.12.	3750 Vac	P
6.14	Mechanical and electrical durability		Р
6.14.1	Mechanical endurance (COC and CBC)		Р
	A connector, either COC or CBC, shall meet the mechanical operations without load as specified in the DS or in the manufacturer's specification (preferred numbers of operating cycles are given in Table 4a).		P
6.14.2	Electrical endurance (CBC)		Р
	A CBC shall meet the specified breaking capacity taking into account the severity as specified in the DS or in the manufacturer's specification (preferred numbers of operating cycles are given in Table 4a).		Р
6.14.3	Bendings (non-rewirable connectors)		Р
	A non-rewirable connector shall meet the numbers of bendings (flexings) specified in the relevant DS or in the manufacturer's specification (preferred numbers are given in Table 4b).	-20℃-70℃	Р
6.15	Temperature limits		Р
6.16	Temperature rise	Max 42℃ with Ta 40℃	Р
6.17	Cable clamp		Р
	The cable clamp, if any, shall be suitable for the cable to be connected. The range of acceptable cable diameters shall be specified in the DS or by the manufacturer's specification.		Р
6.18	Mechanical strength		Р
6.18.1	Robustness of connectors		Р
	A connector shall show no damage likely to impair safety after exposure to mechanical stress according to the test programme.		Р
6.18.2	Retention of contacts		Р



since 244	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022101SR
	In a connector assembled for final use, the contacts shall be securely retained in the contact insert.	Р
6.18.3 I	Integrity of internal insulation	P
	After exposure to the stresses according to the test schedule, the internal insulation shall show no damage which could impair normal use.	P
6.19	Clearances and creepage distances	P
	Clearances and creepage distances shall be dimensioned according to the following specifications, unless otherwise specified by the application or the manufacturer.	P
6.19.1	Clearances	Р
6.19.1.1	General	P
	Clearances shall be in accordance with IEC 60664-1 and/or IEC 60664-5.	Р
6.19.1.2	Rated impulse voltage	P
	The rated impulse voltage shall be selected according to the nominal voltage of the supply	Р
	system and the overvoltage category, as specified in table B.2 of IEC 60664-1:2007.	
6.19.1.3	Overvoltage category	P
	The assignment of connectors shall be carried out according to the rules as given in IEC 60664-1.	P
6.19.2	Creepage distances	Р
6.19.2.1	General	Р
	Creepage distances shall be dimensioned according to the rated voltage according to IEC 60664-1	P
6.19.2.2	Pollution degree	Р
6.19.2.3	Dimensioning of creepage distances for connectors with IP54 or higher	NA
6.19.2.4	Shape of insulating surfaces	Р
L	1	1



3 since Le	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022	101SR
	Insulating surfaces may include transverse ridges and grooves to break the continuity of conductive layers.		Р
	a) Ribs shall be dimensioned so that they withstand the mechanical stresses according to the test sequence without damage. If the height of the ribs is at least 2 mm the creepage distances may be dimensioned in accordance with one insulating material group level lower.		
	b) In the case where there are grooves across the creepage distance, the groove walls shall be included in the creepage distance if the width X of the groove complies with 4.2 of IEC 60664-1:2007.		
	If the associated clearance, measured on the component, is less than 3 mm, the minimum		
	groove width may be reduced to one-third of this clearance.		
6.20	Insulation		Р
6.20.1	Functional and basic insulation		Р
	Functional and basic insulation shall be so designed that it withstands the impulse withstand voltage or the r.m.s. withstand voltage as specified in the DS or by the manufacturer's specification, as derived from the rated insulation voltage of the connector.		Ρ
6.20.2	Supplementary insulation		Р
	For the supplementary insulation, the same requirements are valid as for the basic insulation.		Р
6.20.3	Double insulation		Р
	Double insulation shall be so designed that the breakdown of one part (basic or supplementary insulation) does not impair the protective function of the other part. It shall not be possible to remove the supplementary insulation without using a tool.		Ρ
	For double insulation, where basic and supplementary insulation cannot be tested separately, the insulation system shall be considered as reinforced insulation.		
6.20.4	Reinforced insulation		Р



Since LLL	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022101SR
	For the assessment of clearances for reinforced insulation, the rated impulse voltage shall be selected from the next higher overvoltage category in comparison to basic insulation. The creepage distances shall be doubled in comparison with the basic insulation. Insulation material of group IIIb ($100 \le CTI < 175$) shall not be used at pollution degrees 3 and 4.	P
6.21	Protection against corrosion	Р
	Metal parts shall be so designed that corrosion shall not impair safety with regard to electrical and mechanical characteristics.	P
7	Tests	P
7.1	General	P
7.1.1	Test sequence and number of specimens	P
7.1.2	Specimens condition	P
	Unless otherwise specified, the condition used in the test schedule is unmated.	P
7.1.3	Atmospheric conditions	P
	The tests shall be made under the standard atmospheric conditions of IEC 60068-1, unless otherwise specified in the test schedule.	P
7.1.4	Number of specimens for tests on terminations	P
	The tests on the terminations according to the relevant standard shall be made on three terminations per specimen, if available.	P
7.1.5	Failure criteria	Р
	The product is deemed not to comply with this standard if the product fails in more than one of	P
	the tests of any test group. If the product fails in only one of the tests, this test and the preceding tests which have affected the result shall be repeated on a new set of specimens. The new set of specimens shall pass the repeated tests, otherwise the product is deemed not to comply.	
7.1.6	Visual examination tests	P
	All visual examination tests should be performed with the naked eye, unless otherwise specified.	Р
7.2	Preparation of specimens	P



Since LL 2000	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022	101SR
7.2.1	Pre-conditioning	Specimens shall be pre- conditioned under standard conditions for testing, for a period of 24 h	Ρ
7.2.2	Conductors		Р
	The tests shall be carried out with copper conductors unless otherwise specified by the manufacturer and with the type of conductor specified for the connector. If terminations are provided for all types of conductors, solid, stranded and flexible, the tests shall be carried out only with flexible conductors according to Class 5 of IEC 60228.		P
7.2.3	Torque for screw-type clamping units		NA
	Screw-type clamping units shall be tightened with the value of the torque stipulated according to IEC 60999-1 and IEC 60999-2, unless otherwise specified by the manufacturer.		NA
7.2.4	Assembly conditions		Р
	Unless otherwise specified in the test schedule, all tests shall be made on the specimen completely assembled according to the manufacturer's instructions.		Р
7.3	Performance of tests		Р
7.3.1	General		Р
	In accordance with the test schedule given in 7.5, the general test methods specified in Tables 10 to 14, columns 3 and 7, shall be applied according to IEC 60512. Other tests are indicated in column 4.		Р
7.3.2	Durability of marking		Р
	 The test of the durability of marking shall be done as a wet test according to test Xb (abrasion of marking) of IEC 60068-2-70. For the test piston, size 1 shall be used and the test liquid shall be water. A force of 5 N shall be applied for a duration of 10 cycles. After the test, the marking shall be still readable. Markings made by impression, moulding, pressing or 		Ρ
	engraving or the like are not subjected to this test.		P
7.3.3	"First make, last break" protective earthing contact		I



2003	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD2308550221	01SR
	The specimens shall be engaged and disengaged by hand in every possible position. To indicate contact, an electrical device (for example a lamp) shall be used. It shall be checked that the protective earthing contact will first make and last break relative to any other contact. For this test, all other contacts shall be wired in parallel.		Ρ
7.3.4	Interlock		Р
	The specimens are engaged by hand over their full engagement distance. The requirement that interlock contacts will make last and break first before any other contact shall be checked. An electric device, i.e. a lamp, shall be used to indicate contact. For this test, all other contacts shall be wired in series.		Ρ
7.3.5	Breaking capacity of a CBC		Р
	The specimens of a CBC shall be electrically operated at the indicated breaking capacity and at the rated voltage for a.c. with $\cos \phi = (0,9 \pm 0,05)$ or for d.c. with a time constant of 1 ms \pm 15 %, depending on manufacturer's specifications. Any existing protective earthing contact shall not be loaded. The specimens shall be engaged and disengaged by means of a device simulating normal insertion and withdrawal. The number of operating cycles shall be specified by the DS or by the manufacturer, preferred values being given in Table 4a.	During the test, no sustained arcing shall occur.	Ρ
	The specimen is inserted into and withdrawn from its counterpart at a rate of three to four cycles per minute. The speed of insertion and withdrawal of the specimen shall be $(0,8 \pm 0,1)$ m/s. Electrical contact shall be maintained for no more than 4 s and no less than 2 s.	During the test, no sustained arcing shall occur.	Ρ
7.3.6	Protection against electric shock		Р
7.3.6.1	Unenclosed connectors		Р
	For unenclosed connectors, with the exception of classification IP00, protection against electric shock shall be tested with the relevant test probe in accordance with the IP code claimed by the manufacturer.		Ρ
7.3.6.2	Enclosed connectors		Р



2103	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022	101SR
	Enclosed connectors shall be tested with the IEC jointed test finger taking into consideration clearances and creepage distances between live parts and the test finger. This does not apply to the contact openings (lead-in)		Р
	in the mating face:For a CBC, clearance and creepage distances		
	according to IEC 60664-1 shall be measured through the openings between the live parts and the plane of the mating face.		
	• For a connector without breaking capacity (COC), clearance and creepage distances		
7.3.6.3	through the openings are disregarded. Tests for connectors with IP Code higher than IP2X or IPXXB	IP44	Р
	If the manufacturer claims a protection against access to hazardous parts higher than IP2X or	IP44	Р
	IPXXB, the relevant tests shall be carried out according to IEC 60529.		
7.3.7	Protection against solid foreign objects and against ingress of water		Р
7.3.7.1	General		Р
7.3.7.2	Protection against foreign solid objects		Р
	If the manufacturer claims a degree of protection against ingress of foreign solid objects, the relevant tests shall be carried out according to IEC 60529.		Р
7.3.7.3	Protection against harmful ingress of water		Р
	If the manufacturer claims a degree of protection against harmful ingress of water, the relevant tests shall be carried out according to IEC 60529.		Р
7.3.8	The object of this test is to assess the ability of a connector to continuously carry its rated current without exceeding the upper limiting temperature. The test shall be carried out according to test 5a of IEC 60512-5-1, unless otherwise specified, under the following test conditions.		Р
7.3.9	Mechanical operation		Р
	The object of this test is to assess the mechanical operational endurance of a connector either CBC or COC in the normal operational mode without electrical load. The test shall be carried out according to test 9a of IEC 60512, under the following conditions, unless otherwise specified.		Р



since LLC	BST Testing (Shenzhen)Co., Ltd.	Report No.: BSTXD230855022	2101SR
7.3.10	Bending (flexing) test	20 N	Р
7.3.11	Measurement of clearances and creepage distances		Р
	Clearances and creepage distances shall be measured according to IEC 60664-1 with the following additional requirements. For connectors without breaking capacity (COC), clearances and creepage distances to the accessible surface shall be measured only in the mated position.		Ρ
7.3.12	Dielectric strength		Р
7.3.13	Resistance between accessible metal parts and the protective earthing contact		Р
7.3.14	Corrosion test		Р
	Test 1: Flowing mixed gas corrosion according to test 11g of IEC 60512, with a choice of method 1 or method 4 (see Table 1 of IEC 60512-11-7). The test duration shall be four days. Test 2: Sulfur dioxide test with general condensation of moisture according to ISO 6988.		P
	The test duration shall be 24 h (1 test cycle).		
7.4	In-process test schedule (routine test) for non- rewirable free connectors		Р
7.4.1	General		Р
	For non-rewirable free connectors, it shall be verified that live parts, e.g. free strands, cannot become accessible. If this cannot be ensured by construction or by the production process, the following tests shall be made on 100 % of the production.		NA
7.4.2	Impulse withstand voltage test	No breakdown, No flashover shall occur.	Р
	The accessible external surface of the connector, with the exception of the engagement face of the male connector, shall be scanned by plane electrodes according to IEC 61032 and each time the specified impulse withstand voltage of the connector shall be applied between all live parts and these electrodes.		P
	Alternatively, the specified r.m.s. withstand voltage according to Table 8 shall be applied for a minimum of three full cycles (i.e. 60 ms at a frequency of 50 Hz).		
7.4.3	Continuity of PE path test		Р
7.4.4	AC power-frequency voltage withstand test		Р



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ANNEX A:

Photo-documentation



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Photo 1 General Appearance of the EUT



Photo 2 General Appearance of the EUT

******END******