TEST REPORT
IEC 62262
Degress of protection provided by enclosure for electrical external mechanical impacts (IK code)

Report Number.....:	ET-24111731S
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Applicant's name.....:	Shenzhen Techtion Smart Electronics Co., Ltd
Address.....:	Room 902, 9th Floor, Shenzhou Tianyun Building, Bell Road, Bantian Street, Longgang District, Shenzhen. China
Test specification:	
Standard.....:	IEC 62262: 2002
Test procedure.....:	Type test
Non-standard test method.....:	N/A
Test item description .....:	55 inch outdoor display
Trade mark .....:	N/A
Manufacturer .....:	Shenzhen Techtion Smart Electronics Co., Ltd
Address .....:	Room 902, 9th Floor, Shenzhou Tianyun Building, Bell Road, Bantian Street, Longgang District, Shenzhen. China
Model and/or type reference .....:	TS-550THD
Rating(s).....:	100-240Vac, 50/60Hz, 1A

Test item particulars:	
Equipment mobility.....:	For building-in
Connection to the mains.....:	Appliance coupler
Operating condition.....:	Continuous
Pollution degree (PD) .....:	☐ PD 1 ☒ PD 2 ☐ PD 3
Degree of protection.....:	IK10
Accessories and detachable parts included in the evaluation.....:	N/A
Options.....:	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.....:	2024-11-01
Date (s) of performance of tests.....:	2024-11-01 to 2024-11-04

General remarks:

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

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"(see remark #)" refers to a remark appended to the report.

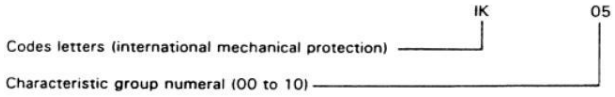
"(see Annex #)" refers to an annex appended to the report.

"(see Form A.#)" refers to a table appended to the report. Throughout this report a comma (point) is used as the decimal separator.

Summary of the test report

The complete report including following parts:

1. All clauses of IEC 62262: 2002
2. Appendix 1: Eqiupment List.
3. Appendix 2: Photo documentation.

4	DESIGNATIONS		P
	The degree of protection provided by an enclosure against impact is indicated by the IK code in the following way.		P
4.1	Arrangement of the IK code  	IK10	P
	Codes letters (intemational mechanical protection)		P
	Characteristic group numeral (00 to 10)		P
4.2	Characteristic group numerals of the IK code and their meanings	See table1 of IEC 62262, IK10 Impact energy: 20J	P
	Each characteristic group numeral, represents an impact energy value as shown in table 1.		P
4.3	Application of the IK code		P
	In general the degree of protection applies to the complete enclosure. If part of the enclosure have differing degrees of protecton, the latter shall be separately indicated.		P
4.4	Marking		P
	In case where the relevant product committee decides that marking of the IK-code shall be required, the marking requirement shall be detailed in the relevant product standard.		P
	Where appropriate, such a standard should also specify the method of marking which is to be used when;		N/A
	--one part of an enclosure has different degree of protection to that of another part of the same enclosure;		P
	--the mounting position has an influence on the degree of protection.		P
5	General requirements for tests		P
5.1	Atmospheric conditions for tests		P
	Unless otherwise specified in the relevant product standard, the test shall be carried out under the standard atmospheric conditions for tests described in IEC 60068-1 as:		P
	Temperature range 15℃ to 35℃	25.0	P
	Air pressure 86 kPa to 106 kPa(860 mbar to 1060 mbar)		P
	When the altitude at which the test is performed is		N/A

	higher than 2000m the height of fall shall be adjusted where necessary to result in the specified impact energy.		
5.2	Enclosure under test		P
	Each eclsoure under test shall be in a clean and new condition, complete with all their parts in place unless otherwise specified in the relevant product standard.		P
5.3	Specification to be given in the relevant product standard.		P
	The relevant product standard shall specify;		P
	--the difinition of “enclosure“ as it applies to the particular type of equipment;		P
	--the test equipment(e.g.pendulum hammer, spring hammer or vertical hammer, see Clause7);		P
	--the number of samples to be tested;	1	P
	--the conditions for mounting, assembling and positioning the samples, e.g. by the use of an artificial surface (ceiling, floor or wall), in order to stimulate intended service conditions as far as possible;		N/A
	--the pre-conditioning, if any, which is to be used;		N/A
	--whether to be tested energized;		N/A
	--whether to be tested with any moving parts in motion;		N/A
	--the number of impacts and their points of applications (see 6.4).		P
	In the absence of such specifications in the relevant product standard, conditions of this standard shall apply.		P
6	Test to verify the protection against mechanical impacts		P
6.1	The tests specified in this standard are type tests.		P
6.2	In order to verify the protection against mechanical impacts blows shall be applied to the enclosure to be tested. The device to be used for this test are described in Clause 7.		P
6.3	During the test the enclosure shall be mounted, according to the manufacturer in structions for use, on a rigid support. A support is considered to be sufficiently rigid if its displacement is less than or equal to 0,1 mm under the effect of an impact directly applied and whose energy corresponds to the degree of protection. Alternative mounting and	Displacement is less than orequal to 0,1mm	P

	support, suitable for the product, may be specified in the relevant product standard.		
6.4	The number of impacts shall be five on each exposed face unless other wise specified in the relevant product standard. The impacts shall be evenly distributed on the faces of the enclosure(s) under test. In no case shall more than three impacts be applied in the surroundings of the same point of the enclosure. The relevant product standard shall specify the points of application of impacts.	5 point in surface, 5 times	P
6.5	Test evaluation		P
	The relevant product standard shall specify the criteria upon which the acceptance or rejection of the enclosure is to based on particularly;		P
	--admissible damages;	No damage	P
	--verification certeria relative to the continuity of the safety and reliability of the equipment.	No broken	P
7	Test apparatus		P
	The test shall be done by using one of the test apparatus as described in IEC 60068-2-75		N/A

Table 1 of IEC 62262-2002:

Table 1- Relation between IK code and impact energy

IKcode	IK00	IK01	IK02	IK03	IK04	IK05	IK06	IK07	IK08	IK09	IK10
Impact energy J	a	0,14	0,2	0,35	0,5	0,7	1	2	5	10	20
Not protected according to this standard											

NOTE 1 When higher impact energy is required the value of 50 J is recommended.

NOTE 2 A characteristic group numeral of two figures has been chosen to avoid confusion with some former national standards which used a single numeral for a specific impact energy.

Table 2 of IEC 60068-2-75:

Table 2- Height of tall

Energy (J)	0,14	0,2		(0,3)	0,35	(0,4)	0,5		0,7	1	2	5	10	20	50
Equivalent mass (kg)	0,25	(0,2)	0,25	(0,2)	0,25	(0,2)	(0,2)	0,25	0,25	0,25	0,5	1,7	5	5	10
Height of tall mm± 1%	56	(100)	80	(150)	140	(200)	(250)	200	280	400	400	300	200	400	500
NOTES 1 See note in 3.2.2. 2 In this part of IEC 60068, the energy, J, is calculated taking the standard acceleration clue to the earth's Gravity(g_n), rounded up to the nearest whole number, that is 10m/s².															

Appendix 1

Equipment List

No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration date	Calibration due date
ETR-S113	Pendulum impact tester	Shanghai Haiyue Technology Co., Ltd.	HY-BCT-1	--	2024-05-23	2025-05-22

Appendix 2 photo documentation

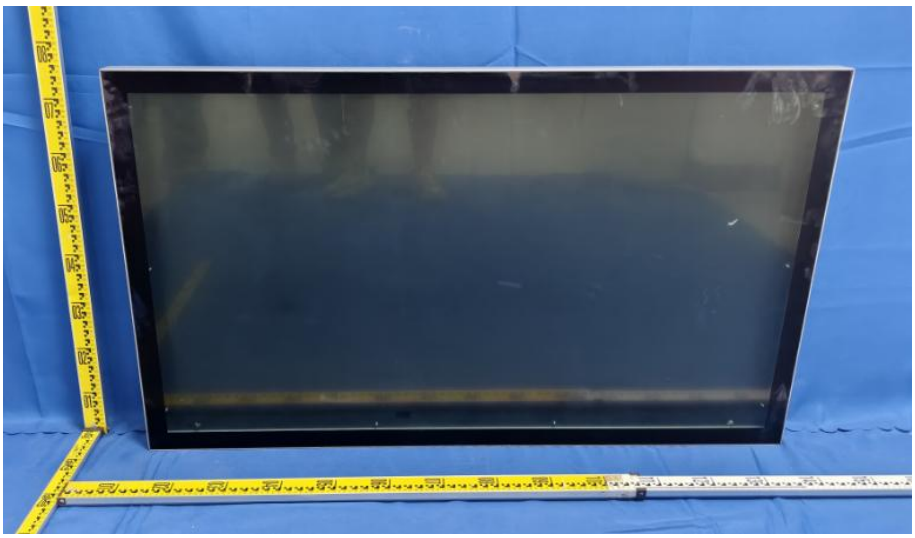


Photo 1

Photo 2

==== the end ====