Test Report

Client	:	Shenzhen MDL Technology Co., Ltd
Address	:	210/A Building, Ri Su Industry Park, Sheng Bao Rd, Bu Lan Street, Longgang Shenzhen China Zip code: 518112

Description of the submitted sample(s):

Sample Name	:	Shenzhen MDL Technology Co.,Ltd
Model/Type	:	MDL-UDGLA, MDL-UDGL1, MDL-UDGL1A, MDL-UDGL2, MDL-UDGL3, MDL-UDGL4,MDL-UDGL8, MDL-UDGL8A, MDL-UDGL10, MDL-UDGL11, MDL-UDGL12, MDL-UDGL13
Ratings	:	85-265 V~, 50/60 Hz, 9 W, IP 65
Test Item	:	RESISTANCE TO DUST, SOLID OBJECTS AND MOISTURE
State of Sample(s)	:	-
Sample Quantity	:	1 PC
Manufacturer	:	Shenzhen MDL Technology Co., Ltd 210/A Building, Ri Su Industry Park, Sheng Bao Rd, Bu Lan Street, Longgang Shenzhen China Zip code: 518112
Testing Laboratory	:	Shenzhen AOCE Electronic Technology Service Co., Ltd Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Sample Received Date	:	May 31, 2023
Test Requested	:	Degrees of protection provided by enclosures IEC 60529
Test Results	:	**PASS**
Remark	:	The tested sample(s) and the sample information are provided by the client.

Compiled by: Reviewed by:

Approved by: Robin.Lin Date: June 5, 2023

Lab Supervisor

Test Report

IEC 60529			
Clause	Requirement + Test	Result - Remark	Verdict
	- classification according to IP.....:	IP 65	—
13.4	Dust test for first characteristic numerals 5 and 6	IP 6X	P
	The test is made using a dust chamber incorporating the basic principles shown in figure 2 whereby the powder circulation pump may be replaced by other means suitable to maintain the talcum powder in suspension in a closed test chamber. The talcum powder used shall be able to pass through a square-meshed sieve the nominal wire diameter of which is 50μm and the nominal width of a gap between wires 75μm. The amount of talcum powder to be used is 2 kg per cubic metre of the test chamber volume. It shall not have been used for more than 20 tests. NOTE Health and safety regulations should be observed in selecting the type of talcum powder and its use.		P
	Category 1: Enclosures where the normal working cycle of the equipment causes reductions in air pressure within the enclosure below that of the surrounding air, for example, due to thermal cycling effects.		P
	Category 2: Enclosures where no pressure difference relative to the surrounding air is present.		N/A
13.5	Special conditions for first characteristic numeral 5		N/A
13.5.1	Test conditions for first characteristic numeral 5		N/A
	The enclosure shall be deemed category 1 unless the relevant product standard for the equipment specifies that the enclosure is category 2.		N/A

Test Report

IEC 60529			
Clause	Requirement + Test	Result - Remark	Verdict
13.5.2	Acceptance conditions for first characteristic numeral 5 The protection is satisfactory if, on inspection, talcum powder has not accumulated in a quantity or location such that, as with any other kind of dust, it could interfere with the correct operation of the equipment or impair safety. Except for special cases to be clearly specified in the relevant product standard, no dust shall deposit where it could lead to tracking along the creepage distances.		N/A
13.6	Special conditions for first characteristic numeral 6		P
13.6.1	Test conditions for first characteristic numeral 6		P
	The enclosure shall be deemed category 1, whether reductions in pressure below the atmospheric pressure are present or not.		P
13.6.2	Acceptance conditions for first characteristic numeral 6		P
	The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.		P
14.2.4	Test for second characteristic numeral 4 with oscillating tube or spray nozzle		N/A
	The test is made using one of the two test devices described in figure 4 and in figure 5 in accordance with the relevant product standard.		N/A

IEC 60529			
Clause	Requirement + Test	Result - Remark	Verdict
	a) Conditions when using the test device as in figure 4 (oscillating tube): The oscillating tube has spray holes over the whole 180” of the semicircle. The total flow rate is adjusted as specified in table 9 and is measured with a flow meter. The tube is caused to oscillate through an angle of almost 360°, 180° on either side of the vertical, the time for one complete oscillation (2 × 360°) being about 12 s. The duration of the test is 10 min. If not specified otherwise in the relevant product standard, the support for the enclosure under test is perforated so as to avoid acting as a baffle and the enclosure is sprayed from every direction by oscillating the tube to the limit of its travel in each direction.		N/A
	b) Conditions when using the test device as in figure 5 (spray nozzle): The counterbalanced shield is removed from the spray nozzle and the enclosure is sprayed from all practicable directions. The rate of water flow and the spraying time per unit area are as specified in 14.2.3.		N/A
	Test for second characteristic numeral 4 with oscillating tube or spray nozzle		N/A
14.2.5	Test for second characteristic numeral 5 with the 6,3 mm nozzle		P
	The test is made by spraying the enclosure from all practicable directions with a stream of water from a standard test nozzle as shown in figure 6. The conditions to be observed are as follows:		P
	– internal diameter of the nozzle: 6,3 mm;		P
	– delivery rate: 12,5 l/min ± 5 %;		P
	– water pressure: to be adjusted to achieve the specified delivery rate;		P
	– core of the substantial stream: circle of approximately 40 mm diameter at 2,5 m distance from nozzle;		P

IEC 60529			
Clause	Requirement + Test	Result - Remark	Verdict
	– test duration per square metre of enclosure surface area likely to be sprayed: 1 min;		P
	– minimum test duration: 3 min;		P
	– distance from nozzle to enclosure surface: between 2,5 m and 3 m.		P
14.3	Acceptance conditions		P
	The enclosure shall be inspected for ingress of water.		P
	In general, if any water has entered, it shall not:		P
	– be sufficient to interfere with the correct operation of the equipment or impair safety;		P
	– deposit on insulation parts where it could lead to tracking along the creepage distances;		P
	– reach live parts or windings not designed to operate when wet;		P
	- accumulate near the cable end or enter the cable if any.		P
	If the enclosure is provided with drain-holes, it should be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment.		P
	For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts.		N/A

Test Report

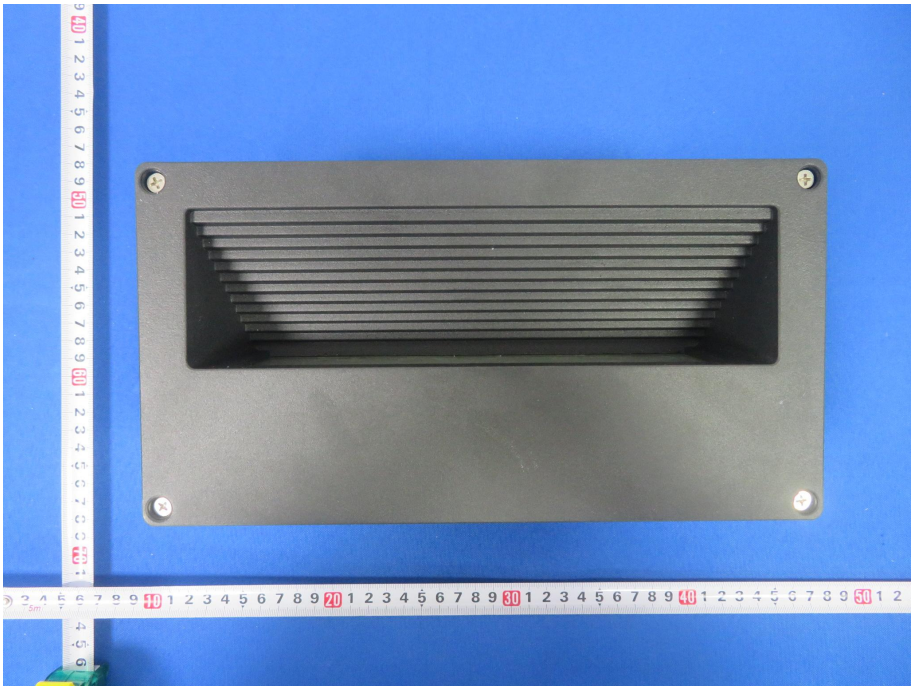

Fig. 1

*** End of Report ***