



สถาบันไฟฟ้าและอิเล็กทรอนิกส์  
ELECTRICAL AND ELECTRONICS INSTITUTE

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FOUNDATION FOR INDUSTRIAL DEVELOPMENT

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TEST REPORT

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Report No.	L0560(E)/62	
Operation No.	6207BL0590	
Name and address of customer	SEANG NGARM GROUP (2535) CO., LTD. 123-125-127 Chakawat rd. Samphantawong, Samphantawong Bangkok 10100	
Sample description	Sample was submitted and identified by/on behalf of the customer as following: ELECTRICAL PLASTIC ENCLOSURES Trademark: PRI PRODUCTS Model: PR4 Size: 350X510X180mm 1 set (1 unit)	
Sample No.	BL0590	
Sample characteristic and condition	Normal	
Sample received date	July 23, 2019	
Test date	August 8, 2019 – August 8, 2019	
Issue date	August 15, 2019	
Test standard	IEC 60529:2001 (IP44)	
Test report	Details of the test report as shown on the following pages.	
Summary of testing	The test results comply with standard	
Tested by (name + signature)	Mr. Nopparat Charoen	
Approved by (name + signature)	Mr. Rachen Muongon	
Certified by (name, function + signature)	Mr. Arthit Wussanamongkol Division manager, Operation division 1	 

This report is certified only on the tested sample. Prohibit to reproduce some part of them without permission from the Electrical and Electronics Institute.

Sample photo



Possible test case verdicts :

- P : test object does meet the requirement
- F : test object does not meet the requirement
- N : test case does not apply to the test object

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TEST REPORT

**Test method**

The sample was tested and complies with the IP44 requirement, Protection against access to hazardous parts, Protection against solid foreign objects and Protection against water test.

**Protected against access to hazardous parts with a wire test (IP4X)**

The test wire of 1.0 mm  $\varnothing$  shall not penetrate and adequate clearance shall be kept.

**Protected against solid foreign objects of 1.0 mm.  $\varnothing$  and greater (IP4X)**

The object probe of 1.0 mm  $\varnothing$  is pushed against or inserted through any opening of the enclosure with 1 N $\pm$ 10%

**Protected against splashing water test (IPX4)**

The test is made using of test devices described in figure 4 The oscillating tube has spray holes over the whole 180° of the semicircle and total flow rate is adjusted as specified in table 9 of IEC 60529:2001

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 being about 12 s. The test duration of the test is 10 min.

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.

The tube radius is 400 mm.

The flow rate is 1.80 lite/min.

Distance from spray holes to enclosure surface 200 mm.





TEST REPORT

Test Result

Degree of protection			Result / Remark	Verdict	
Degree	Test	Definition			
IP44	IP4X	Protected against access to hazardous parts with a wire	The access probe of 1.0 mm $\emptyset$ shall not penetrate	The access probe of 1.0 mm $\emptyset$ , not penetrate to the enclosure.	P
		Protected against solid foreign objects of 1.0 mm $\emptyset$ and greater	The object probe of 1.0mm $\emptyset$ , shall not penetrate at all	The object probe of 1.0 mm $\emptyset$ , not penetrate to the enclosure.	P
	IPX4	Protected against splashing water	Water splashed against the enclosure from any direction shall have no harmful effects.	No water was found inside the enclosure.	P

Attached photo

Photo No.1 : Front view



Photo No.2 : Back view







Attached photo

Photo No.3 : Side view

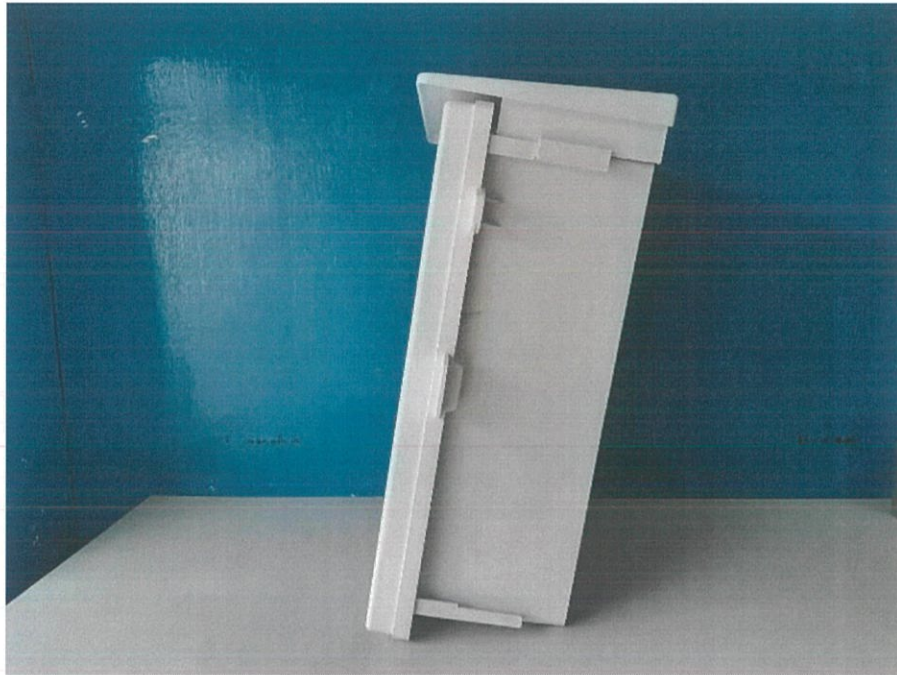
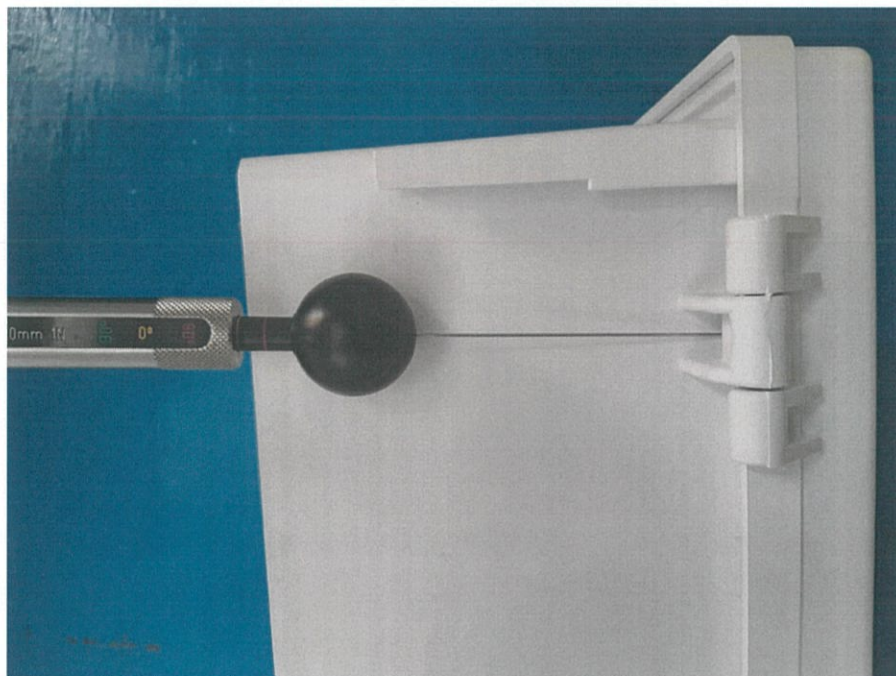


Photo No.4 : IP4X test wire of  $\varnothing$  1.0 mm



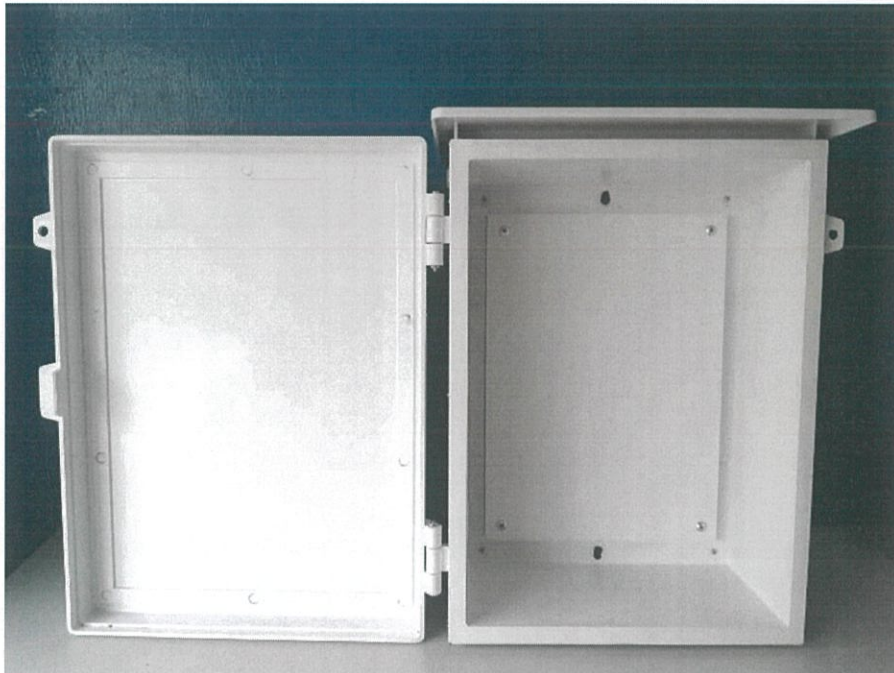


Attached photo

Photo No.5 : IPX4 Water test



Photo No.6 : After test





Attached photo

Photo No.7 : After test

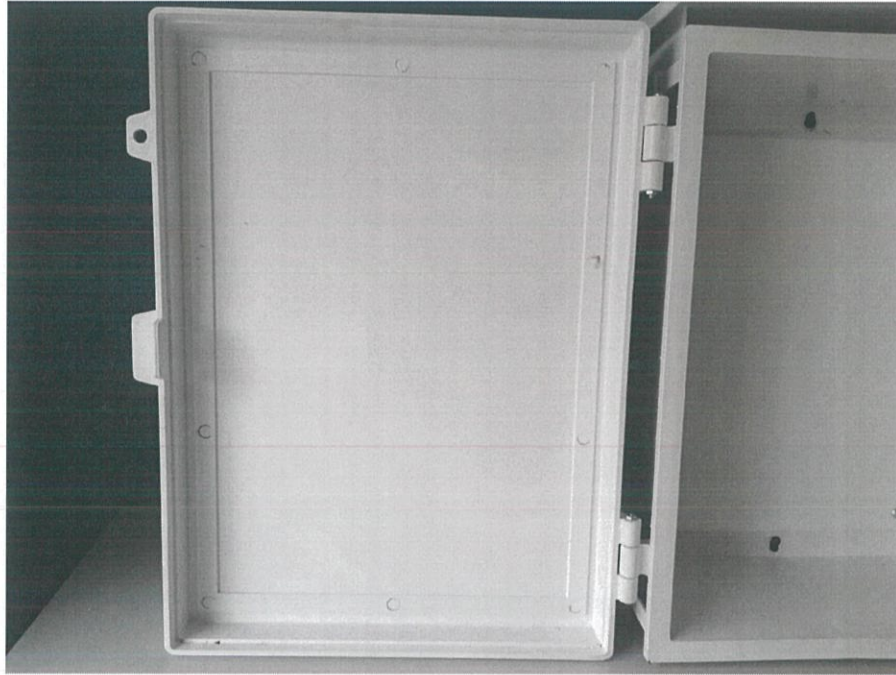
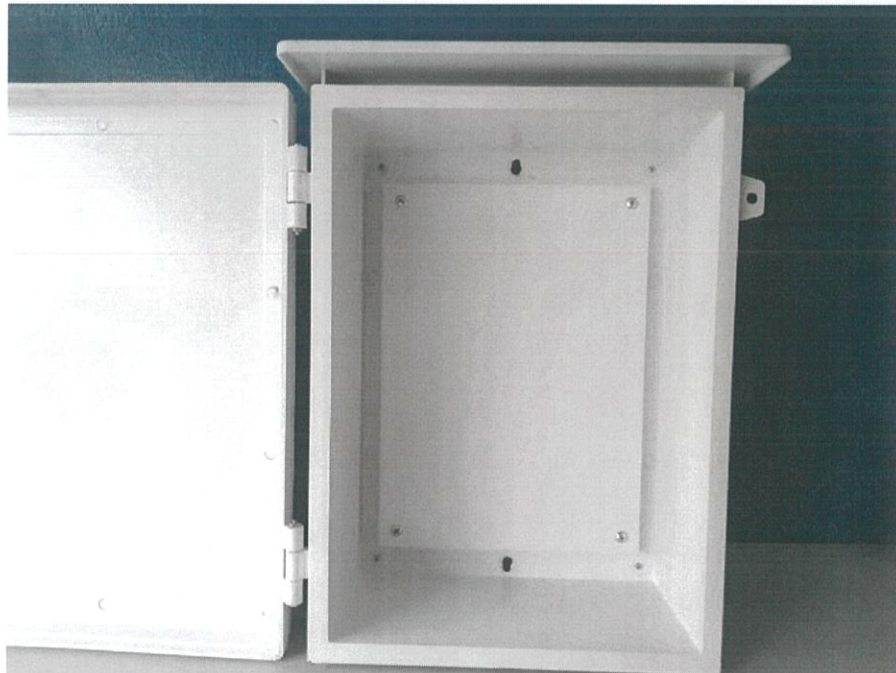


Photo No.8 : After test





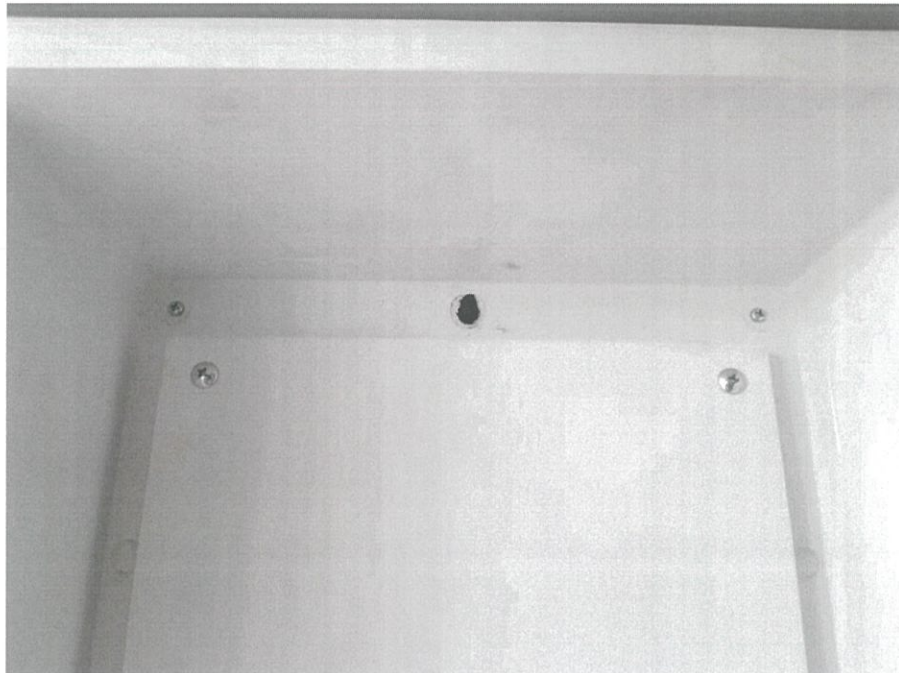


Attached photo

Photo No.9 : After test



Photo No.10 : After test



- End of report -