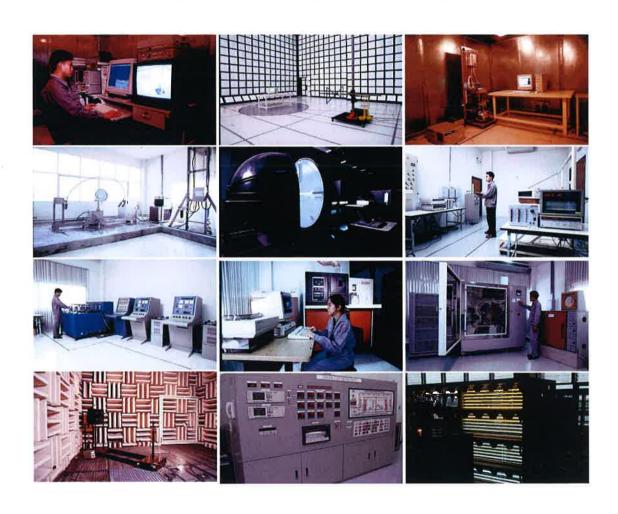


# TEST REPORT



# OPERATION AND STANDARDS DEPARTMENT







975 Moo 4, Bangpoo Industrial Estate Soi 8, Sukhumvit Road km.37, Phraek Sa, Mueang Samut Prakan, Samut Prakan 10280 Tel. +66 2709 4860-8 Fax. +66 2324 0917-8

### **TEST REPORT**

Page 1 / 10

Report No.	L0599(E)/63	
Operation No.	TC2020090030	
Name and address of customer	LEEWATTANA PRODUCTS CO.,LTD.  110,112 PHANITCHAYAKARN THONBURI Rd., WATTHAPRA,  BANGKOKYAI, BANGKOK 10600	
Sample description	Sample was submitted and identified by/on behalf of the customer as following:  Wall-Mounting Enclosure  Model: CA 710  1 set	
Sample No.	TC2020090030	
Sample characteristic and condition	Normal	
Sample received date	September 14, 2020	
Test date	September 21, 2020 – September 22, 2020	
Issue date	September 23, 2020	
Test standard	TIS. 513-2553 (IP54)	
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	ACTUAL AND STRUMEN INSTRUME







Report No.: L0599(E)/63

Operation No.: TC2020090030

### **TEST REPORT**

Page 2 / 10

### 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

### Product description

Model ....: : CA 710







Report No.: L0599(E)/63

Operation No.: TC2020090030

### **TEST REPORT**

Page 3 / 10

Clause	Requirement - Test	Remark	Result
1	SCOPE AND OBJECT		-
2	NORMATIVE REFERENCES		
3	DEFINITIONS		Y - §
4	DESIGNATIONS	A	*
5	DEGREES OF PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS AND		_
	AGAINST SOLID FOREIGN OBJECTS INDICATED BY THE FIRST		
	CHARACTERISTIC NUMERAL		
6	DEGREES OF PROTECTION AGAINST INGRESS OF WATER INDICATED BY		5
	THE SECOND CHARACTERISTIC NUMERAL		
7	DEGREES OF PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS		-
	INDICATED BY THE ADDITIONAL LETTER		
8	SUPPLEMENTARY LETTERS		
9	EXAMPLES OF DESIGNATIONS WITH THE IP CODE		
10	MARKING		*:
11	GENERAL REQUIREMENTS FOR TESTS		2
12	TESTS FOR PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS		Р
	INDICATED BY THE FIRST CHARACTERISTIC NUMERAL		
12.1	Access probes		Р
12.2	Test conditions		Р
	Access probe pushed against or inserted through any openings of the enclosure		-
	with a test force as specified in Table 6		
	Access probe	1.0 mm (Ø) x 100 mm wire	-
	Test force	1 N	(1786
12.3	Acceptance conditions		Р
	Adequate clearance was kept between the access probe and hazardous parts		1 92







Report No.: L0599(E)/63

Operation No.: TC2020090030

### **TEST REPORT**

Page 4 / 10

Clause	Requirement – Test	Remark	Result
12.3.1	For low voltage equipment (rated voltages not exceeding 1000 Va.c. and		
	1500 Vd.c)		
	The access probe did not touch hazardous live parts		
12.3.2	For high voltage equipment (rated voltages	exceeding 1000 Va.c. and 1500 Vd.c.)	N
12.3.3	For equipment with hazardous mechanical parts		Р
	Access probe did not touch hazardous mechanical parts		(166
13.	TESTS FOR PROTECTION AGAINST SOLID FOREIGN OBJECTS INDICATED		Р
	BY THE FIRST CHARACTERISTIC NUMERAL		
13.1	Test means		Р
13.2	Test conditions for first characteristic numerals 1, 2, 3, 4		N
	Object probe pushed against any openings of the enclosure with a test force as		37 *
	specified in Table 7		<b>.</b>
	Object probe	1.0 mm (Ø) wire	*
	Test force	1 N	-
13.3	Acceptance conditions for first characteristic numerals 1, 2, 3, 4		
	Full diameter of the object probe did not pass through any opening		
13.4	Dust test for first characteristic numerals 5 and 6		Р
	Category	2	-
	Duration	8 h	<b>3</b>
	The test is made using a dust chamber incorporating the basic principles show in figure 2 of IEC		-
	60529:2001 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 50 µm and the nominal width of a gap between wires 75 µm. The amount of talcum powder		
	to be used is 2 kg per cubic metre of the test chamber volume.		
13.5	Special conditions for first characteristic numeral 5		Р
13.5.1	Test conditions for first characteristic numeral 5		Р







Report No.: L0599(E)/63

Operation No.: TC2020090030

### TEST REPORT

Page 5 / 10

Clause	Requirement – Test	Remark	Result
13.5.2	Acceptance conditions for first characteristic numeral 5		Р
	No deposit of dust was observable inside th	-	
13.6	Special conditions for first characteristic nur	meral 6	N
14	TESTS FOR PROTECTION AGAINST WATER INDICATED BY THE SECOND		Р
	CHARACTERISTIC NUMERAL		
14.1	Test means		Р
14.2	Test conditions		Р
	Test item temperature during test	Within ± 5°C of water temperature	-
14.2.1	Test for second characteristic numeral 1 wi	N	
14.2.2	Test for second characteristic numeral 2 with the drip box		
14.2.3	Test for second characteristic numeral 3 with the oscillating tube or spray nozzle		N
14.2.4	Test for second characteristic numeral 4 with the oscillating tube or spray nozzle		Р
	Test means	Oscillating tube	H
	Water flow rate	1.8 Vmin	₩2
	Test duration	10 min	<b>3</b> €
14.2.5	Test for second characteristic numeral 5 with the 6.3 mm spray nozzle		N
14.2.6	Test for second characteristic numeral 6 with the 12.5 mm spray nozzle		N
14.2.7	Test for second characteristic numeral 7: temporary immersion between 0.15 m		N
	and 1 m		
14.2.8	Test for second characteristic numeral 8: continuous immersion subject to		N
	agreement		
14.3	Acceptance condition		Р
	No water was found inside any of the enclosures		7 <u>2</u> 2
15.	TESTS FOR PROTECTION AGAINST ACCESS TO HAZARDOUS PARTS		N
	INDICATED BY THE ADDITIONAL LETTER		







Report No.: L0599(E)/63

Operation No.: TC2020090030

### **TEST REPORT**

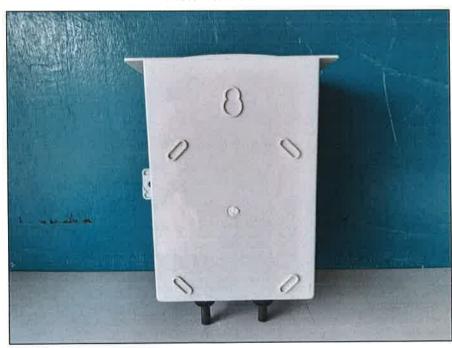
Page 6 / 10

### Attached photo

Photo No.1: Front View



Photo No.2: Back View









Report No.: L0599(E)/63

Operation No.: TC2020090030

### **TEST REPORT**

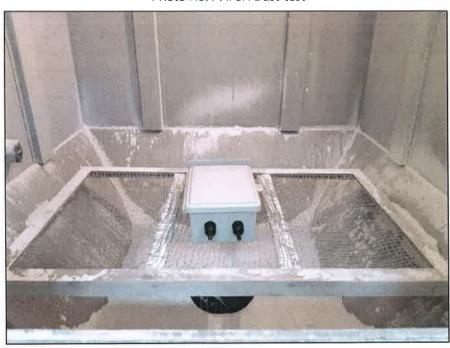
Page 7 / 10

### Attached photo

Photo No.3: Side View



Photo No.4: IP5X Dust test









Report No.: L0599(E)/63

Operation No.: TC2020090030

### **TEST REPORT**

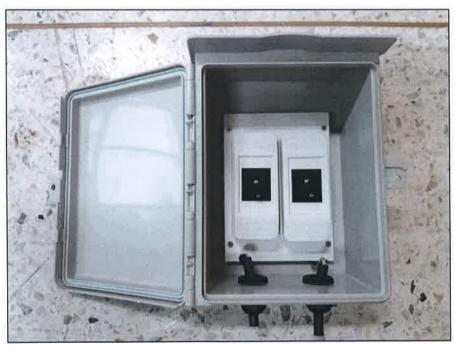
Page 8 / 10

### Attached photo

Photo No.5: IPX4 Water test



Photo No.6: After test









Report No.: L0599(E)/63

Operation No.: TC2020090030

### TEST REPORT

Page 9 / 10

### Attached photo

Photo No.7: After test



Photo No.8: After test









Report No.: L0599(E)/63

Operation No.: TC2020090030

### TEST REPORT

Page 10 / 10

### Attached photo

Photo No.9: After test



Photo No.10: After test



- End of report -