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## TESTLA

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AB-0386-T

1902.14.01/00

11.04.2019

## TEST REPORT

Client Name/Address	IP ENCLOSURES PTY. LTD. ACN: 168 921 319 ABN: 17 168 921 319 8 Conara Rd, Kunda Park QLD 4556 Australia		
Name and Identity of Test Item	2020 X 600 X 400 mm Free Standing Modular Type IP55 Test Enclosure		
Order No.	1902.14	Sample Acceptance Date	25.03.2019
Num. Of Pages of The Report	7 + 1 pages of annexes 8 pages in total	Test Date(s)	26.03.2019-08.04.2019
Test Standard(s)	IEC 60529: 04.03.1997 Degrees of protection provided by enclosures (IP code) (For electrical equipments)		
Test Result(s)	POSITIVE / Details, are given on the following pages which are part of this report.		

### Remarks

*The test results relate only to the items tested.*

*Tests marked (#) in this test report are not included in the TÜRKAK accreditation schedule for this laboratory.*

*TESTLA Elektrik Laboratuvarları accredited by TÜRKAK under registration number AB-0386-T for IEC ISO/IEC 17025:2012 as test laboratory.*

*Turkish Accreditation Agency (TURKAK) is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the recognition of test reports.*

*The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.*

Seal	Report Date	Person in Charge of Test	Laboratory Manager
	11.04.2019	 Mehmet ŞUMNU	 Dep. Lab. Manager Erol APAYDIN

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## 1. Participants of Tests

Sequence No.	Name, Last Name	Position	Company
1.	Caner Eren	Head of Laboratory	TESTLA
2.	Mehmet Şumnu	Laboratory Chief / Test Personnel	
3.	Mehmet Kalyoncu	Test Personnel	
4.	Selçuk Aygün	Prepared By	

## 2. Performed Test

Sequence No.	Test name	IEC 60529 Clause	Result
1.	Dust test for first characteristic numeral 5	13.4	P
2.	Test for second characteristic numeral 5 with the 6,3 mm nozzle	14.2.5	P

The test details are given in the following pages (Chapter 5).

## 3. General Ambient Conditions

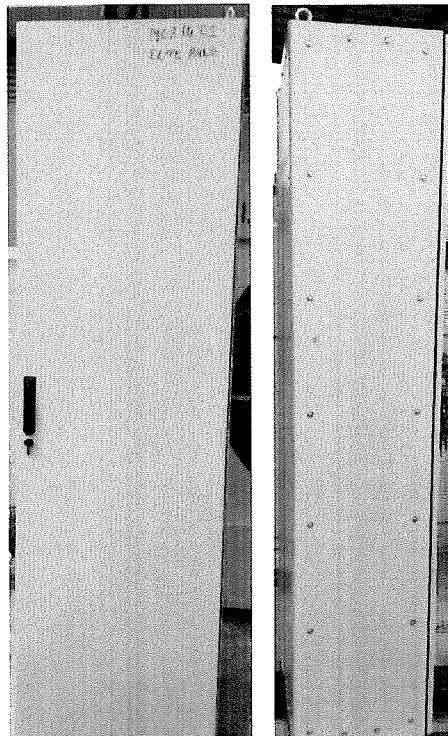
Ambient temperature (°C)	Ambient Humidity (RH%)	Atmospheric pressure (mbar)
18,1-20,3	37-48	1001-1005

Laboratory Indoor ambient conditions are climatically controlled and registered. Special ambient conditions are specified separately in relevant test.

## 4. Rated Values of Test Item

Manufacturer	ELTE PANO
Type	2020 X 600 X 400 mm Free Standing Modular Type IP55 Test Enclosure
Degree of protection (IP)	IP55

Photograph of the test sample



## 5. Test Results

### Explanations on the presentation and reporting of results.

This report applies only to samples for which tests have been carried out.

Tests marked in this test report (#) are not within the scope of accreditation obtained from TÜRKAK.

Since the test sample was provided by the customer, the contribution resulting from sampling was not included in the measurement uncertainty. The test sample was tested as received.

### In line with customer requests,

Tests according to IEC 60529 standard was shown as follows in the table in the column of the test standard, as "IEC 60529"

IEC 60529			
Clause	Required-Requirement	Measured-Observed	Result

### In this table,

#### 1. Column: **Clause**

The clause number of the standard specified in the top line. (The clauses of the test standard cited to the other standards are specified under the Requirement-Necessity section-column)

#### 2. Column: **Required -Requirement**

Structural requirements-conditions-guidelines for the described tests to determine the suitability of the sample described in the relevant standard clause and the property defined in the relevant standard clause of this sample.

#### 3. Column: **Measured-Observed**

The results of measurements and observations (if any, are made in the NOTES section of this section and / or in the last-bottom section of the relevant test page, if the customer requests, technical or other reasons are omitted)

#### 4. Column: **Result**

### Display of decisions in Possible Tests Results:


— Non-applicable for the sample	:	NA	(Not Apply)
— Sample meets the requirements	:	P	(Pass) (if any) *
— Sample does not meet the requirements	:	F	(Fail) (if any) *
— Given information and topics	:	--	Out of Assessment

### It is signed as above.


### (\*) Situations in which the "passed" / "failed" evaluation can not be made with regard to the tests made:

- Deviations, additions and removals from standards (to affect to the results positively) related with customer request or other situations.
- The possibility that the numerical results obtained from the sample in the tests are positive / negative when the measurement uncertainties of the relevant test-device participate in the calculation (In such cases the measurement uncertainty values of the relevant tests are specified in the report)
- Absence of declaration values (necessary for evaluation of the suitability of the results) of the samples in relation to the experiments performed.
- By the nature of the Test being undertaken there is no limit or criterion for assessing compliance (the relevant test-product standard or the customer's pre-determined) of the results obtained to be positive or negative.



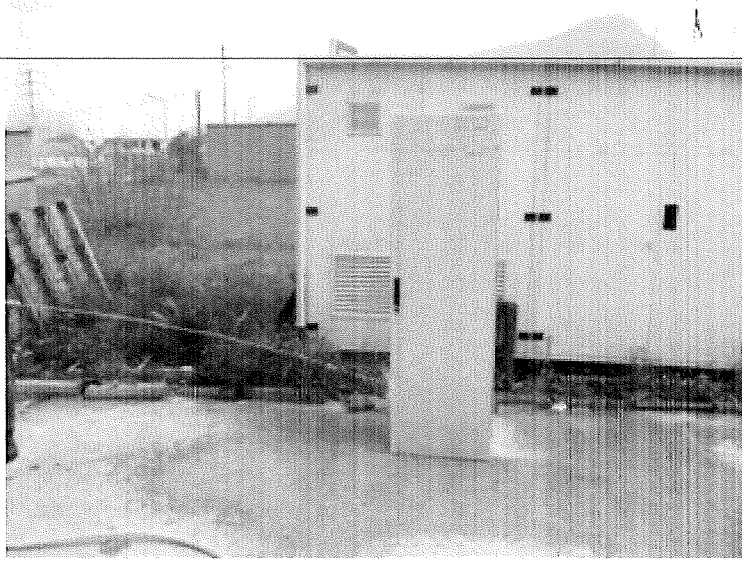
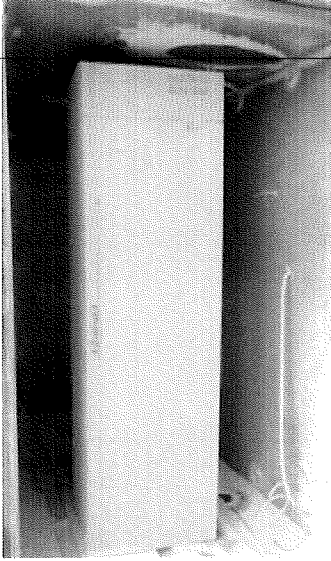
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			Report No	1902.14.01/00
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IEC 60529				
Clause	Required-Requirement	Measured-Observed		Result
11	General requirements for tests			
11.1	Atmospheric conditions for water or dust tests			
	Unless otherwise specified in the relevant product standard, Temperature range: 15 °C-35 °C Relative humidity: %25-%75 Air pressure: 860 mbar-1060 mbar	Temperature= 18,9 °C Relative humidity= 37 %RH Air pressure= 1001 mbar		--
13.4	Dust test for first characteristic numeral 5			
	Declared IP= IP55 Category 2			--
	Category 2 Enclosures			
	The enclosure under test is supported in its normal operating position inside the test chamber, but is not connected to a vacuum pump. Any drain-hole normally open shall be left open for the duration of the test. The test shall- be continued for a period of 8 h.	Test duration= 8 h.		--
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.	No dust ingress.		P
<b>Notes:</b> Sample, against dust meets the requirements specified in Clause 13.5.2 of IEC 60529 for Protection Degree IP5X, which is indicated by the first characteristic numeral.				



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IEC 60529			
Clause	Required-Requirement	Measured-Observed	Result
14	<b>Tests for protection against water indicated by the second characteristic numeral</b>		
14.2	<b>Test conditions</b>		
	During the tests for IPX1 to IPX6 the water temperature should not differ by more than 5 K from the temperature of the specimen under test. If the water temperature is more than 5 K below	Water temperature= 14,1 °C Equipment temperature= 16,4 °C Difference (K)= 2,3 K	--
14.2.5	<b>Test for second characteristic numeral 5 with the 6,3 mm nozzle</b>		
	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: - internal diameter of the nozzle: 6,3 mm - delivery rate: 12,5 l/min $\pm$ 5 %; - test duration per square metre of enclosure surface area likely to be sprayed: 1 min; - minimum test duration: 3 min; - distance from nozzle to enclosure surface: between 2,5 m and 3 m.	Delivery rate= 12,5 l/min Enclosure surface area = 4,4012 m <sup>2</sup> Test duration= 5 min Distance from nozzle to enclosure surface= 2,5-3 m	--
14.3	<b>Acceptance conditions (Water)</b>		
	After testing in accordance with the appropriate requirements of 14.2.1 to 14.2.8 the enclosure shall be inspected for ingress of water. it is the responsibility of the relevant technical committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dielectric strength test, if any. in general, if any water has entered, it shall not: - be sufficient to interfere with the correct operation of the equipment or impair safety; - deposit on insulation parts where it could lead to tracking along the creepage distances; - reach live parts or windings not designed to operate when wet; - accumulate near the cable end or enter the cable if any. 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.	No water ingress.	P
<b>Notes:</b> Sample, against water meets the requirements specified in Clause 14.3 of IEC 60529 for Protection Degree IPX5, which is indicated by the second characteristic numeral.			



## 6. Test Assembly and Test Item Photographs



## 7. List of Annexes

- 1 pages technical document.

**END OF REPORT**



