Certification
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Applus

TEST REPORT

Test report: 08/32001827
"English translation from the original in Spanish"

Date 03/03/2008
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ilac-MRA ENAC ENSAYOS Nº 9/LE/899
LGAI Technological Center, S.A.

Costumer reference

SACOPA, S.A
P.I Pla de Politger, S/N
17854 St.Jaume de Llierca

The received material

Limit switch boxes marca **Sacopa**, modelo **30825**, with internal identification number 2008434/2.

Has been tested and found in conformity with specifications of the standard/s

UNE 20324: 1993 + 1ª MOD: 2000 (EQV a EN 60529:1991 + Erratum:1993 + A1:2000)+ ERRATUM:2004

With the follow Protection Degree (IP Code) in the terminals box:

IP X5

LGAI Technological Center, S.A.

Albert Marginet Morales
Center responsible
Products and Systems - ETE
LGAI Technological Center, S.A.

LGAI Technological Center, S.A.

José Luis Medina Abellán
Product responsible
Products and Systems - ETE
LGAI Technological Center, S.A.

TEST REPORT UNE 20324: 1993 + 1ª modif. 2000+ ERRATUM:2004 **Degrees of protection provided by enclosures (IP code)**	
Report reference No..... :	08/32001827
Date of reception of test item..... :	18/02/2008
Date of perfomance of test (start).. :	03/03/2008
Date of perfomance of test (end)	03/03/2008
Testing laboratory..... :	APPLUS+ CTC (LGAI Technological Center, S.A.)
Address..... :	Campus de la UAB Aptdo. Correos 18 08193 Bellaterra
Applicant..... :	SACOPA, S.A
Address..... :	P.I Pla de Politger, S/N 17854 St.Jaume de Llierca
Test item despcription:	Limit switch boxes
Trademark..... :	Sacopa
Model/type reference..... :	30825
Manufacturer..... :	Sacopa S.A

Environmental conditions during the tests..	
Temperature (ºC) ..... :	23 ± 2
Relative humity (%)..... :	44 ± 10

Uncertainty of measurement

The reported uncertainty is an expanded uncertainty calculated using a coverage factor k of 2 which gives a level of confidence of approximately 95 %. The typical uncertainty of measurement has been determined according to EAL-R2.

Temperature = ± 1 ºC Dimensions = ± 0,06 mm

Test case verdicts	
Test case does not apply to the test object ..... :	N(ot)A(pplied)
Test item does meet the requirement ..... :	P(ass)
Test item does not meet the requirement ..... :	F(ail)
The test requirements had'nt been checked ..... :	N(oy)T(ested)
Observation over the test results (Num)..... :	OBS(ervation)

General remarks

The results reported in this document relate only to the sample, product or item submitted to the Laboratory and described above, having been tested under the conditions stablished in this document. In case of discrepancies between the English and Spanish versions, the Spanish version prevalish over the English one.

Service Quality Assurance

Applus+, guarantees that this work has been made in accordance with our Quality and Sustainability System, fulfilling the contractual conditions and legal norms.

Within our improvement program we would be grateful if you would send us any commentary that you consider opportune, to the person in charge who signs this document, or to the Quality Manager of Applus+, in the following e-mail address: satisfaccion.cliente@appluscorp.com

6	DEGREES OF PROTECTION AGAINST INGRESS OF WATER INDICATED BY THE SECOND CHARANTERISTIC NUMERAL		P
	Second characteristic numeral:	**IPX5**	P
	Test conditions according to sub-clause 14.2.1 to 14.2.8 as applicable	---	P
	Compliance checked	---	P

9	IP CODE DESIGNATIONS		---

11	GENERAL REQUERIMENTS FOR TESTS		P
11.1	Atmospheric conditions for water or dust tests	---	P
	- temperature	23,4 ºC	P
	- relative humidity	44 %	P
	- air pressure	**1018 mbar**	P
11.2	Test samples	---	P
	- number of samples tested	1	P
	- conditions for mounting assembling and positioning of the samples	According to installation	P
	- pre-conditioning, ig any	---	P
	- tested energized or not	---	P
	- tested in motion or not	---	NA
	The manufacturer's instructions shall apply in the absence, of such specifications	---	NA
11.3	Application of test requirements and interpretation of test results	---	P
	- responsibility of the relevant technical committee		NA
	- in the absence of such specification the requirement of this standard shall apply	---	P

11.4	Combination of test conditions for the first characteristic numeral	---	P
	First characteristic numeral:	IP6X	P
11.5	Empty enclosures		NA
	Detailed requirements shall be indicated by the enclosure manufacturer in his instructions for the arrangement and spacing of hazardous parts or parts which might be affected by the penetration of foreign objects or water	---	NA
	The manufacturer of the final assembly shall ensure that after the electrical equipment is enclosed the enclosure meets the declared degree of protection of the final product.	---	NA

14	TESTS FOR PROTECTION AGAINST WATER INDICATED BY THE SECOND CHARACTERISTIC NUMERAL		P
14.1, 14.2	Test means and test conditions are performed according to table VIII	---	P
14.2.1	Test for second characteristic numeral 1 with drip box	---	NA
14.2.2	Test for second characteristic numeral 2 with drip box	---	NA
14.2.3	Test for second characteristic numeral 3 with oscillating tube or spray nozzle	---	NA
14.2.4	Test for second characteristic numeral 4 with oscillating tube or spray nozzle	---	NA
14.2.5	Test for second characteristic numeral 5 with the 6,3 mm nozzle	---	P
14.2.6	Test for second characteristic numeral 6 with the 12,5 mm nozzle	---	NA
14.2.7	Test for second characteristic numeral 7, temporary immersion between 0,15 m and 1 m	---	NA
14.2.8	Test for second characteristic numeral 8: continuous immersion subject to agreement.	---	NA

14.3	Acceptance conditions	IPX5	P
	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	---	NA
	In general, if any water has entered, it shall not	IPX5	P
	- be sufficient to interfere with the correct operation of the equipment or impair safety	IPX5	P
	- deposit on insulation parts where it could lead to tracking along the creepage distances	IPX5	P
	- reach live parts or windings not designed to operate when wet	IPX5	P
	- accumulate near the cable end or enter the cable if any	IPX5	P
	For enclosure with drain-holes, it should be proved	---	NA
	By inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment	---	NA
	For enclosures without drain-holes; the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts	---	NA

PHOTOGRAPHS OF THE TESTED EQUIPMENT