TEST REPORT
EN 60670-1
Boxes and enclosures for electrical accessories for household and similar fixed electrical installations
Part 1: General Requirements

Report Number ..... :	**1299.004.3.01**
Date of issue ..... :	**25/07/2019**
Total number of pages ..... :	21 (Attachments 1 page)
Applicant's name ..... :	DABLER S.A.
Address ..... :	Dimokratias 11, Makrigialos Pieria, 60066, Greece
Test specification:	
Standard(s) ..... :	EN 60670-1:2005+A1:2013
Test procedure ..... :	As above mentioned standards
Non-standard test method ..... :	NA
Test Report Form No ..... :	EN 60670-1 V1.0
Test Report Form(s) Originator ..... :	Labor S.A.
Master TRF ..... :	13/1/2015
Test item description ..... :	Box for electrical switch
Trade Mark ..... :	DABLER S.A.
Manufacturer ..... :	DABLER S.A.
Model/Type reference ..... :	5000/72

Tested by (name + signature) :	**Approved by (name + signature) :**
AGAMEMNON FRETZAGIAS MECHANICAL ENGINEER NTUA	ANTONIOS POLITIS ELECTRICAL ENGINEER LAB MANAGER

Testing procedure and testing location:

☑ Testing Laboratory ..... :	LABOR S.A.
Testing location/ address ..... :	84 ETHNIKIS ANTISTASEOS STR 15351 PALLINI
☐ Associated Testing Laboratory..... :	NA
Testing location/ address ..... :	NA

List of Attachments (including a total number of pages in each attachment):

Attachment 1: General instructions (1 page)

Summary of testing:

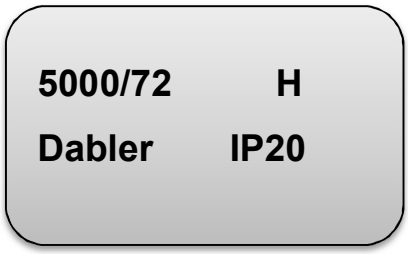
SAMPLES OF THE PRODUCT HAVE BEEN TESTED ACCORDING TO THE ABOVE MENTIONED STANDARDS AND COMPLIED WITH THEIR APPLICABLE REQUIREMENTS

Tests performed (name of test and test clause):	**Testing location:**
All applicable clauses	LABOR S.A. 84 ETHNIKIS ANTISTASEOS STR 15351 PALLINI

Summary of compliance with National Differences: ----

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



Test item particulars :

.....:

Possible test case verdicts:

- test case does not apply to the test object ..... : NA (Not Applicable)
- test object does meet the requirement ..... : P (Pass)
- test object is not tested the requirement..... : NT (Not Tested)
- test object does not meet the requirement ..... : F (Fail)

Testing:

Date of receipt of test item ..... : 11/07/2019

Date (s) of performance of tests ..... : 12/07/2019 - 25/07/2019

General remarks:

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

This test report does not entitle to carry or approval any safety mark on this or similar(s) products.

General product information:

Box for electrical switch

Clause	Requirement - Test	Result - Remark	Verdict

7	Classification	
7.1	Nature of material	☒ 7.1.1 Insulating ☐ 7.1.2 Metallic ☐ 7.1.3 Composite
7.2	Method of installation	☒ 7.2.1 Flush , semi-flush or embedded in ☐ 7.2.1.1 Non combustible walls, ceilings or floors ☐ 7.2.1.2 Combustible walls, ceilings or floors ☒ 7.2.1.3 Hollow walls, hollow ceilings, hollow floors or furniture ☐ 7.2.2 Surface mounting on: ☐ 7.2.2.1 Non combustible walls, ceilings or floors ☐ 7.2.2.2 Combustible walls, ceilings, floors or furniture ☒ 7.2.3 Placement: ☐ 7.2.3.1 Suitable for installation into concrete during the casting process (see 7.6) ☒ 7.2.3.2 Suitable for all types of installation except into concrete
7.3	Type(s) of inlets (outlets)	☒ 7.3.1 With inlets for sheathed cables for fixed installations ☐ 7.3.2 With inlets for flexible cables ☒ 7.3.3 With inlets for plain or corrugated conduits ☐ 7.3.4 With inlets for threaded conduits ☐ 7.3.5 With inlets for other types of conductors/cables or conduits ☐ 7.3.6 With spouts (hub) ☐ 7.3.7 Without inlets. Inlet openings are made during installation
7.4	Clamping means	☐ 7.4.1 With cable retention ☐ 7.4.2 With cable anchorage ☐ 7.4.3 With clamping means for flexible conduit ☒ 7.4.4 Without clamping means
7.5	Minimum and Maximum temperatures during installation	☒ 7.5.1 -5 °C to +60 °C ☐ 7.5.2 -15 °C to +60 °C ☐ 7.5.3 -25 °C to +60 °C
7.6	Maximum temperature during the casting process	☐ 7.6.1 +60 °C ☐ 7.6.2 +90 °C

Clause	Requirement - Test	Result - Remark	Verdict
7.7	Boxes and enclosures for hollow walls and the like according to 7.2.1.3	☒ 7.7.3 According to the degree of protection of the part mounted in the hollow wall ☒ 7.7.3.1 Degree of protection IP2X ☐ 7.7.3.1 Degree of protection > IP2X	
7.8	The provision for fixing accessories to boxes	☐ 7.8.1 Boxes supplied with screws ☒ 7.8.2 Boxes intended to receive screws ☒ 7.8.3 Boxes intended to receive claws ☐ 7.8.4 Boxes intended to receive other means	

Clause	Requirement - Test	Result - Remark	Verdict
8	**MARKING**		P
8.1	Enclosures shall be marked with:		-
	a) name, trade mark or identification mark of the manufacturer or the responsible vendor	DABLER marking	P
	b) IP code against ingress of solid foreign objects if higher than IP2X in which case the second IP numeral shall also be marked	IP20	P
	c) the IP code against harmful ingress of water if higher than IPX0 in which case the first IP numeral shall also be marked	IP20	P
	d) the appropriate marking on cover of flush enclosures intended to be mounted on rough surfaces and where the IP is dependent on the surface		NA
	When the declared IP code is higher than IP4X or higher than IPX2 it shall be on the outside of the enclosure so as to be easily discernible when the enclosure is mounted and wired as for normal		NA
	The following information shall be marked on the boxes and enclosures or provided by the manufacturer on the smallest package unit or in the instructions of the manufacturer:		-
	e) the type reference, which may be a catalogue number;	5000/72	P
	f) the maximum temperature during the building process if 90 °C		NA
	g) the necessary information concerning the openings which can be made during installation in the case of boxes and enclosures classified according to 7.3.7	Not classified according to 7.3.7	NA
	h) the minimum temperature during installation for boxes classified according to 7.5.2 and 7.5.3	Minimnum temperature -5 °C	NA
	i) void		-
	j) the letter H or information for boxes and enclosures classified according to 7.2.1.3		P
	Unless self-evident, further information for the correct use of the enclosure shall be given in the manufacturer's catalogue or in an instruction sheet.		P
	In special cases, in order to achieve a higher degree of protection by the use of special parts an instruction sheet should be provided and should indicate the higher degree of protection. In such a case, the marking covers the initial degree of protection.		NA
8.2	Marking is durable and easily legible	Rubbing test 15 s with water and 15 s with petroleum spirit. After the test marking still legible.	P

Clause	Requirement - Test	Result - Remark	Verdict
9	**DIMENSIONS**		P
	Boxes and enclosures comply with the appropriate standard sheets, if any		P
10	**PROTECTION AGAINST ELECTRIC SHOCK**		P
	Boxes and enclosures shall be so designed that, when they are assembled, equipped and installed as for normal use in accordance with the manufacturer's instructions, live parts are not accessible	No accessible parts after installation as for normal use	P
	Where enclosures are supplied without a cover, cover-plate or an accessory they are tested with the appropriate parts fitted according to the information given in the manufacturer's instructions	No accessible parts after installation as for normal use	P
11	**PROVISION FOR EARTHING**		NA
11.1	Boxes and enclosures with exposed conductive parts shall be provided with an earthing means of low resistance or have provision for the fitting of such an earthing means. For the purpose of this requirement, small screws and the like, for fixing bases, covers or cover plates, etc. isolated from live parts, are not considered as exposed conductive parts.	No exposed conductive parts	NA
	The earthing means or the provision for the fitting of such an earthing means shall be located so that:		NA
	- the means is readily accessible through the open face of the box		NA
	- the removal of an accessory mounted in the box does not disturb the continuity of the earthing circuit		NA
	- the means is not part of a removable cover, back, or side of the box or enclosure		NA
	Exposed conductive parts of covers or cover-plates shall be connected through a low resistance connection to the earthing means when fitted as for normal use		NA
11.3	Boxes or enclosures with removable sides according to 7.1.2		NA
	A box or enclosure classified according to 7.1.2 that has removable sides shall be constructed so that the electrical bond between separable parts includes at least one threaded screw connection	Box made of insulating material	NA
11.4	Earthing terminal threads		NA
	The threads of the earthing terminal delivered with or integrated in boxes and enclosures shall not be		NA

Clause	Requirement - Test	Result - Remark	Verdict
	stripped when the torque shown in the relevant column of Table 4 is applied		
12	**CONSTRUCTION**		P
	Boxes and enclosures shall be constructed without sharp edges		P
	Burrs shall be removed from mould lines of interior surfaces so that there are no sharp edges or undue obstructions to the passage of wiring or coupling of parts in the intended use of the product		P
	The inner and outer surfaces of a box or cover shall not be subject to peeling, scaling or flaking and shall be smooth and free from blisters, cracks, and other defects		P
12.1	Lids, covers or cover-plates or part of them		NA
	Lids, covers, or cover-plates or parts of them, such as protective membranes, which are intended to ensure protection against electric shock, shall be held in place effectively		NA
12.1.1	Screw-type fixing		NA
	A box or enclosure intended to accept a lid, cover, or cover plate by means of screw fixing shall be provided with means to accommodate the intended screws		NA
12.1.2	Non-screw-type fixing operable without the use of a tool or a key		NA
	For lids, covers or cover-plates whose fixing is not dependent on screws and whose removal is obtained by applying a force according to Table 2 in a direction approximately perpendicular to the mounting/supporting surface		NA
	when their removal may give access, with test probe B of IEC 61032, to live parts;		NA
	when their removal may give access, with test probe B of IEC 61032, to non-earthed conductive parts separated from live parts by basic insulation;		NA
	– when their removal may give access, with test probe B of IEC 61032, only to • insulating parts, or, • earthed conductive parts, or • conductive parts separated from live parts by double or reinforced insulation, or • live parts of SELV circuits according to IEC 61140 having a voltage not greater than 25 V a.c. or 60 V d.c.		NA
12.1.2.1	Verification of the non-removal of the lids, covers or cover-plates		NA

Clause	Requirement - Test	Result - Remark	Verdict
	Forces are gradually applied without jerks in a direction perpendicular to the mounting surfaces, in such a way that the resulting force acting on the centre of the lids, covers or cover-plates, or parts of them, is as specified in the relevant column of table 2. The force is applied for 1 min. The lids, covers or cover-plates, shall not come off.		NA
	For flush-mounting boxes or enclosures, the test is then repeated on new specimens, the lid, cover or cover-plate is mounted on the box, after a sheet of hard material (1 ± 0,1) mm thick, has been fitted on the wall around the supporting frame, as shown in Figure 12.		NA
12.1.2.2	Verification of the removal of the lids, covers or cover-plates		NA
	A force not exceeding that specified in the relevant column of Table 2 is gradually applied without jerks, in a direction perpendicular to the mounting/supporting surfaces, to lids, covers or cover-plates, or parts of them by means of a hook placed in turn in each of the grooves, holes, spaces or the like, provided for removing them. The lids, covers or cover-plates shall come off. (10 times on each separable part the fixing of which is not dependent on screws the removal force is applied each time to the different grooves, holes or the like provided for removing the separable part).		NA
	For flush-mounting boxes or enclosures, the test is then repeated on new specimens, the lid, cover or cover-plate is mounted on the box being fitted, after a sheet of hard material (1±0,1) mm thick, has been fitted on the wall around the supporting frame, as shown in Figure 12. After the test, the specimens shall show no damage within the meaning of this standard		NA
12.1.2.3	Verification of the outline of lids, covers and cover-plates		NA
	The gauge shown in Figure 13 is pushed towards each side of each lid, cover or cover-plate which is fixed without screws on a mounting or supporting surface, as shown in Figure 14. The face B resting on the mounting/supporting surface, with the face A perpendicular to it, the gauge is applied at right angles to each side under test.		NA
	In the case of a lid, cover or cover-plate fixed without screws to another lid, cover or cover- plate or to a mounting box, having the same outline dimensions, the face B of the gauge shall be placed at the same level as the junction; the outline of the lid, cover or cover-plate shall not exceed the outline of the supporting surface.		NA

Clause	Requirement - Test	Result - Remark	Verdict
	The distances between the face C of the gauge and the outline of the side under test, measured parallel to face B, shall not decrease (with the exception of grooves, holes, reverse tapers or the like, placed at a distance less than 7 mm from a plane including face B and complying with the test of 12.1.2.4) when measurements are repeated starting from point X in the direction of the arrow Y (see Figure 15).		NA
12.1.2.4	Verification of grooves, holes and reverse tapers		NA
	A gauge according to Figure 16, applied with a force of (1 ± 0,2) N, shall not enter more than 1,0 mm from the upper part of any groove, hole or reverse taper or the like when the gauge is applied parallel to the mounting/supporting surface and at right angles to the part under test, as shown in Figure 17.		NA
12.1.3	Non screw-type fixing operable with the use of a tool or a key		NA
	For lids, covers or cover-plates whose fixing is not dependent on screws and whose removal is obtained by using a tool and/or a key, in accordance with the manufacturer's instructions, compliance is checked by the same tests of 12.1.2 except that the lids, covers or cover plates, or parts of them need not come off when applying a force not exceeding 120 N in directions perpendicular to the mounting/supporting surface.		NA
12.2	Drain holes		NA
	Surface and semi-flush mounting enclosures having IPX1 to IPX6 allow the opening of a drain hole > 5 mm in diameter (mm 0) or 20 mm^2 in area (mm2) with a width or length > 3mm (mm)		NA
	Drain holes shall be so located and available in such a number that one of the holes can always become effective in any intended mounting position of the enclosure.		NA
12.3	Mounting of enclosures		P
	Enclosures have provisions for their suitable attachment according to the method of installation (see 7.2)		P
	Enclosures of insulating material shall be constructed in such a way that any conductive parts of fixing means inside the box or enclosure intended to be used for mounting the enclosure are surrounded by insulation which projects above the top of the fixing means by an amount of not less than 10 % of the maximum width of the cavity for the fixing means.	Fixing screws surrounded by insulation as specified	P
	In case there is a cavity, the head of the screw can be protected by an additional cap of insulating		NA

Clause	Requirement - Test	Result - Remark	Verdict
	material. In this case the manufacturer's instruction shall give information concerning the cap to be used.		
	In case there is no cavity the head of the screw shall be protected with a cap of insulating material in this case, the cap shall be delivered with the box. The cap shall stay in position during normal use		NA
	The caps are fixed to the boxes according to the manufacturer's instructions and subjected to the ageing test of 13.1. After 1 h, the boxes are then turned to a position with the opening in the direction of the floor. The cap shall not come detached.		NA
12.4	Boxes and enclosures with inlets for flexible cables		P
	Inlets (outlets) provided in boxes and enclosures classified according to 7.3.2 shall be so designed and constructed that the flexible cables can be easily introduced, and will not damage the flexible cable where it enters the box or enclosure impairing its further use.		P
12.5	Boxes and enclosures with inlets for applications other than flexible cables		P
	Inlet openings classified according to 7.3 other than 7.3.2, if any, allow the introduction of: - a conduit or a suitable fitting, and/or - the protective covering of the cable so as to provide mechanical protection of the conductors where they enter the box or enclosure	Inlets for plain or corrugated conduits	P
	An inlet opening for conduit entries, or at least two of them if there are more than one, shall be capable of accepting either conduits of sizes, or a combination of sizes, in accordance with the requirements of IEC 60423		P
12.6	Boxes and enclosures with a cable anchorage(s)		NA
	Clamping means of boxes and enclosures classified according to 7.4.2 shall be such that the connection of the conductors of the flexible cable are relieved from strain when this flexible cable is accessible and likely to be stressed after installation.		NA
	Clear how relief from strain and prevention of twisting is intended to be effected		NA
	Cable anchorages are - suitable for the different types of flexible cable for which the box is intended to be used; - at least one part of it is integral with, or permanently fixed to, one of the component parts of the box - of insulating material or provided with an insulating lining fixed to the metal parts		NA
	After the tests the cable anchorage shall not show any damage		NA

Clause	Requirement - Test	Result - Remark	Verdict
12.7	Boxes and enclosures with cable retention means		NA
	Cable retention means of boxes and enclosures classified according to 7.4.1 retain the cable in place		NA
	Type of cable/maximum nominal cross-sectional area (mm^2) ..... :		NA
	After the test: displacement < 3 mm (mm)..... :		NA
	Type of cable/minimum nominal cross-sectional area (mm^2) ..... :		NA
	After the test: displacement < 3 mm (mm)..... :		NA
12.8	Knock-outs		P
12.8.1	General		P
	It shall be possible to remove knock-outs without damaging the box.		P
	Knock-outs intended for use with cables shall be free from chips or burrs.		P
	Knock-outs intended for use with conduits and/or a grommet or a membrane, chips and burrs are disregarded		P
	This requirement does not apply to a blanking-plug which is assembled by threading into a threaded inlet		NA
12.8.2	Knock-out retention		NA
	For boxes and enclosures having knock-outs that		-
	Do not provide access to live parts and are accessible after installation, a force of (30 +-1) N shall be applied to a knock-out for (15+- 1) s,	No accessible knock-outs after installation	NA
	Provide direct access to live parts after installation, a force of (40 1) N shall be applied to a knock-out for (60 +- 1) s, by means of a 6 mm diameter mandrel with a flat end	No accessible knock-outs after installation	NA
	The knock-out shall remain in place and the degree of protection of the box or enclosure shall be unchanged when measured 1 h after the force has been removed.	No accessible knock-outs after installation	NA
12.8.3	Knock-out removal		P
	The knock-outs shall be removed by means of a tool, as stated by the manufacturer. The side edge of a screwdriver may be run along the edge of the knock-out opening once to remove any fragile tabs remaining along the edge.		P
	For boxes or enclosures according to 7.1.1 or 7.1.3 the test is repeated with one previously untested box or enclosure which has been conditioned for 5 h ±10		P

Clause	Requirement - Test	Result - Remark	Verdict
	min in air maintained at the minimum temperature during installation as specified according to 7.5. Immediately following this conditioning, the knock-out is to be removed as above.		
	For a box or enclosure employing multi-stage knock-outs, there shall be no displacement of a larger stage when a smaller stage is removed.		P
	After the test, there shall be no sharp edges, except for knock-outs for conduits and/or for use with a grommet or a membrane, and the box and enclosure shall not be damaged.		P
12.8.4	Flat surfaces surrounding knock-outs		NA
	Knock-outs intended for the use of grommets, glands or fittings shall be located in flat surfaces to permit grommets, glands or fittings to be placed fully against these surfaces when installed as intended.	Not intended for the use of grommets, glands or fittings	NA
	Projections or indentations in the flat surface area shall be prohibited, however holes shall be allowed. The flat surface areas of adjacent knock-outs that partially or wholly overlap meet the intent of this requirement.		NA
	Compliance is checked by inspection and by measurement according to the appropriate national standard sheet, if any.		NA
12.9	Screw fixings		NA
	Fixing means for covers, accessories, terminals, connecting devices, strain reliefs, etc. effected by screws shall be so designed and constructed that these means withstand the mechanical stresses occurring during installation and normal use.	No fixings affected by screws	NA
	Screws or other fixing means made from insulating material similar to screws without standardised thread which have to be tightened by any tool for fixing covers shall be tested according to the manufacturer's instructions (e.g. torque value which could be different from Table 4, nature of the tool).	No such parts	NA
	Thread-forming and thread-cutting screws intended only for mechanical assembly may be used provided they are supplied together with one of the pieces with which they are intended to be assembled. For thread-forming and thread-cutting screws, the screw assembly operation shall be done before carrying out the tests.		NA
12.10	Fixing of boxes and accessories		NA
	Flush type boxes and enclosures other than for hollow walls, and as otherwise indicated below, shall be provided with fixing means for their suitable attachment to the wall.	Box for hollow wall	NA
	Screws intended to fix the box or enclosure to the building structure need not be supplied with the box or enclosure but can be provided by the installer according to the manufacturer's instructions		NA

Clause	Requirement - Test	Result - Remark	Verdict
	Separately supplied fixing means for a box or enclosure shall comply with the requirements for the fixing means of the box or enclosure with which they are intended to be used and shall include a means for fixing to the box or enclosure		NA
	Screws, additional mechanical supports or design features, which prevent the displacement of the box or the enclosure, are considered to be adequate fixing means		NA
12.11	Boxes and enclosures classified according to 7.2.1.3		P
	Boxes and enclosures for hollow walls classified according to 7.2.1.3 shall provide suitable means for fixing the box or the enclosure to hollow walls.	Screws incorporated in box	P
	The fixing means shall not rely on the cable management system.		P
12.13	Cable gland entry		NA
	Cable glands shall not damage the box or enclosure when used as intended		NA
	Torque test: glands provided with a metal rod tightened and loosened 10 times with a torque specified in Table 5 (with a tolerance of (+5 , 0)%) for 1 min ± 5 s		NA
	- diameter of test rod (mm) .....:		NA
	- type of material (metal / insulating).....:		NA
	- torque (Nm) .....:		NA
	After the test: no damage		NA
12.14	Boxes and enclosures with inlets (outlets) for conduits or spouts (hubs)		NA
	Boxes and enclosures classified according to 7.3.4 and conical spouts as in 7.3.6 withstand the tests of 12.14.1, 12.14.2 and 12.14.3		NA
	Boxes and enclosures classified according to 7.4.3 shall withstand the tests of 12.14.1 and 12.14.2.		NA
12.14.1	Enclosures with inlet spout for conduits: a minimum size piece of conduit pressed for 1 min ±5 s with a force of (100 ± 2) N		NA
	During the test: inlet spout prevents further entry of the conduit into the box		NA
12.14.2	Pull-out test after the test according to 12.14.1: conduit with the minimum size corresponding to the insert opening loaded for 1 min with a tensile force of (20 ± 2) N		NA
	During the test: conduit not come loose from the inlet spout of the enclosure		NA

Clause	Requirement - Test	Result - Remark	Verdict
12.14.3	Resistance to bending strain of an inlet spout: piece of conduit inserted into the inlet spout with a compressible force of (100 ± 2) N and loaded with a bending moment of 3 Nm for 1 min in six different directions with an interval of (60 ± 2) °		NA
	During the test: inlet spout not come loose or damaged and conduit stays within the inlet spout		NA
12.15	Internal volume of boxes and enclosures		P
13	**RESISTANCE TO AGEING, PROTECTION AGAINST INGRESS OF SOLID OBJECTS AND AGAINST HARMFUL INGRESS OF WATER**		P
13.1	Resistance to ageing		P
13.1.1	Insulating and composite boxes and enclosures, glands, seals, grommets and replaceable membranes shall be resistant to ageing	After the test there was no harmful deformation or similar damage	P
13.1.2	Grommets blanking plug and entry membranes in inlet openings and protecting membranes are reliably fixed and are not displaced by the mechanical and thermal stresses occurring in normal use	No grommets, blanking plugs or entry membranes	NA
13.1.3	Grommets, blanking plug and entry membranes in inlet openings of boxes and enclosures classified according to 7.5.2 and 7.5.3 shall be so designed and made of such material that the introduction of the cables and conduits is permitted when ambient temperature is low.	No grommets, blanking plugs or entry membranes	NA
13.2	Protection against the ingress of solid objects	IP20	P
13.3	Protection against harmful ingress of water		P
13.3.1	Enclosures with IP code higher than IPX0 provide a degree of protection against harmful ingress of water in accordance with the declared IP code	Not higher than IPX0	NA
	Enclosure dimensions: reference surface S (m2)/ perimeter		NA
	Appropriate test performed on surface , flush or semi flush enclosures as specified in IEC 60529 under the following conditions :		NA
	- Dimension S≤0,04 or perimeter ≤0,8(m) according to 13.3.2 and 13.3.3		NA
	- Dimension S>0,04 or perimeter >0,8(m) according to 13.3.2 and 13.3.4		NA
	Enclosures with screwed glands or grommets fitted with cables as declared by the manufacturer :		NA
	- type of cable , smallest cross sectional area (mm2)		NA
	- type of cable , largest cross sectional area (mm2)		NA
	Enclosures with screwed glands or grommets fitted with cables as declared by the manufacturer:		NA

Clause	Requirement - Test	Result - Remark	Verdict
	-smallest diameter or dimensions (mm)		NA
	- largest diameter or diamensions (mm)		NA
	Fixing screws of the cover or cover-plate tightened with a torque equal to 2/3 of the value of Table 4 used for the test of 12.9 (Nm) :		NA
13.3.2	Surface-mounting enclosures mounted as for normal use	Not surface mounted	NA
	Flush type and semi-flush type enclosures fixed in a test wall		NA
	- according to the manufacturer's instructions		NA
	- according to Figure 5		NA
	Enclosures fitted with cables having conductors of the largest and smallest cross-sectional area as declared by the manufacturer :		NA
	IPX3 and IPX4 enclosures: use of oscillating tube (Figure 4) or spray nozzle according to IEC 60529 (Figure 5) ..... :		NA
13.3.3	Immediately after the test no more than 0,2 ml x S (cm2) water in the enclosure (ml)..... :		NA
	Specimens withstand an electric strength test specified in 14.3 started within 5 min of the completion of IP test		NA
13.3.4	Immediately after the test: indicator paper still dry Ingress of water is verified by the use of dry absorbent paper positioned to occupy the base area of the protected volume. For doors or covers a strip of paper, bent to form a 90° angle profile, is attached to the cover or lid in the lowest position in order to protrude inside the box until it reaches the internal protected volume of the box		NA
14	**INSULATION RESISTANCE AND ELECTRIC STRENGTH**		P
14.1	Insulation resistance and electric strength of enclosures classified according to 7.1.1 and 7.1.3 is adequate		P
	Specimens placed in a humidity cabinet containing air with relative humidity between 91 % and 95 % and air temperature between 20 °C and 30 °C for:		-
	- 2 days (48 h) for enclosures classified IPX0		P
	- 7 days (168 h) for enclosures classified IP>X0		NA
	After this treatment: no damage		P
14.2	Insulation resistance measured 1 min after application of 500 V d.c.	See appendix table 14.2	P

Clause	Requirement - Test	Result - Remark	Verdict
14.3	Electric strength: a.c. test voltage applied for 1 min	See appendix table 14.3	P
15	**MECHANICAL STRENGTH**		P
	Boxes and enclosures shall have adequate strength to withstand the mechanical stresses occurring during installation and normal use		P
15.1	Impact test at low temperature		NA
15.2	Compression test		NA
15.3	Impact test for boxes and enclosures		P
16	**RESISTANCE TO HEAT**		P
16.1	Parts of insulating material necessary to retain current-carrying parts and/or parts of the earthing circuit in position: ball-pressure test according to IEC 60695-10-2 at (125 + 2) °C for (60 +5) min		NA
16.2	Parts of insulating material not necessary to retain current-carrying parts and/or parts of the earthing circuit in position, even though in contact with them, and parts necessary to retain earthing terminals in position: ball-pressure test according to 16.1 but at (70 + 2) °C	See appendix table 16.2	P
	Parts of insulating material of flush-mounted enclosures classified according to 7.6.2: ball- pressure test according to 16.1 but at (90 + 2) °C	Not classified according to 7.6.2	NA
17	**CREEPAGE DISTANCES, CLEARANCES AND DISTANCES THROUGH SEALING COMPOUND**		P
18	**RESISTANCE OF INSULATING MATERIAL TO ABNORMAL HEAT AND FIRE**		P
	Parts of insulating material which might be exposed to thermal stresses due to electric effects, the deterioration of which might impair safety, shall not be unduly affected by abnormal heat and by fire.		P
	Glow-wire test according to Clauses 4 to 10 if IEC 60695-2-11	See appendix table 18	P
19	**RESISTANCE TO TRACKING**		NA
	For boxes and enclosures with protection degree higher than IPX0, all parts of the insulating material retaining live parts in position shall be made of a material resistant to tracking.	Not higher than IPX0	NA
20	**RESISTANCE TO CORROSION**		P
	Ferrous parts of boxes and enclosures shall be adequately protected against rusting.		P
21	**ELECTROMAGNETIC COMPABILITY (EMC)**		NA

Clause	Requirement - Test	Result - Remark	Verdict

12.9	**TABLE: Mechanical strength of screws**					NA
Threaded part identification (e.g. fixing means for cover)	Diameter of screw thread (mm)	Column number - Table 4 (I, II, III or IV)	Applied torque - Table 4 (Nm)	Times (5/10)	No damage	
Supplementary information:-						

14.2	**TABLE: Insulation resistance**	P
Test voltage applied between: in-/outside enclosure:	measured	required (MQ)
500 V	> 5 MΩ	1 min.
Supplementary information:		

14.3	**TABLE: Electric strength**	P
Rated insulation voltage (V) .....:	450 V	—

Test voltage applied between: in-/outside enclosure	Test voltage (V)	Flashover/ breakdown (Yes/No)
Cover	3750	No
supplementary information: Applied for 1 min		

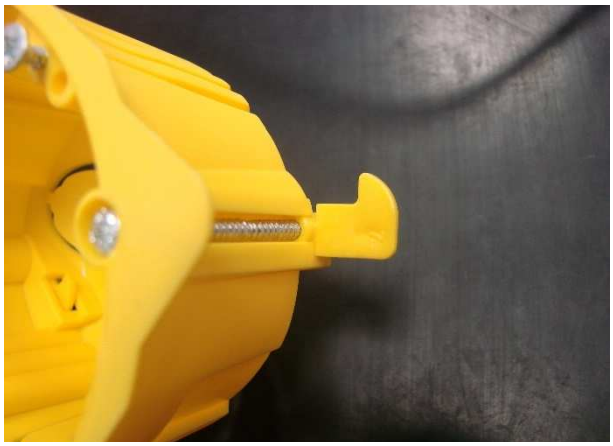
16.1-16.2	**TABLE: Ball pressure test of insulating materials**	P
Allowed impression diameter (mm) .....:	< 2 mm	—

Part under test	test temperature (°C)	impression diameter (mm)
Cover	70	1,4
supplementary information: 1h, 20N (material samples 2mm thick)		

Clause	Requirement - Test	Result - Remark	Verdict

18	**TABLE: Glow-wire test**					P
Part under test	Material designation	Test temperature (°C)	Visible flame and sustained glowing (Y/N)	Flames and glowing extinction time	Ignition of the tissue paper (Y/N)	
Cover	insulating	650	N	0	N	
Supplementary information: -						

19	**TABLE: Resistance to tracking**		NA
Part under test	Material designation	Test voltage (V)	Flashover/ breakdown (Yes/No)
Supplementary information: -			

PHOTO DOCUMENTATION	
DIFFERENT VIEWS OF EUT	
	
Image 1	Image 2
	
Image 3	Image 4
	
Image 5	Image 6

DABLER
Electrical Equipment

ΚΟΥΤΙ ΔΙΑΚΟΠΤΟΥ ΓΥΨΟΣΑΝΙΔΑΣ

- Κυτίο γυψοσανίδας για διακόπτη
- Ελάχιστη θερμοκρασία εφαρμογής-εγκατάστασης: -5 °C
- Μέγιστη θερμοκρασία εφαρμογής-εγκατάστασης: +60 °C
- Αποτελείται από μονωτικό αυτοσβενόμενο υλικό
- Να εγκατασταθεί σε οπή Φ72 στη γυψοσανίδα
- Οπές για σωλήνες Φ20 και Φ25 καθώς και οπές για καλώδια