Test Report issued under the responsibility of

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

Report Reference No.....:	632077.01
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Date of issue.....:	2021/06/22
Total number of pages.....:	23
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Address.....:	Boulevard Internationalelaan 55, Bld K B-1070 Brussels Belgium
Testing location/ procedure .....:	CBTL ☒ RMT ☐ SMT ☐ WMT ☐ TMP ☐
Testing location/ address.....:	Same as above
Applicant's name.....:	REDDY S.A.
Address.....:	Parc industriel de Tyberchamps 7180 SENEFFE
Test specification:	
Standard .....:	NBN EN 60670-1:2005 + A1:2009 + A2:2013 NBN C 61-112 : 2019
Test procedure.....:	CB/CCA
Non-standard test method……..:	N/A
Test Report Form No.....:	EN60670_1A
Test Report Form(s) Originator .....:	IMQ
Master TRF.....:	Dated 2006-06

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Test item description..... :	Flush-type mounting box
Trade Mark .....:	REDDY
Manufacturer.....:	REDDY S.A.
Model/Type reference.....:	B45, B65, B45SV, B65SV
Ratings.....:	See General Product Information

Summary of testing:

All applicable tests have been performed on model B65

Dimensional verifications according to Belgian Standard NBN C 61-670:2019 have been performed.

Test item particulars..... :			
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 type
	☒	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, floors or furniture
	☐	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 Nature of material	☒	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 will be 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 during the casting process	☐	7.6.1	+60 °C
	☐	7.6.2	+90 °C
7.7 Boxes and enclosures for hollow walls and the like according to 7.2.1.3	☐	7.7.3	degree of protection of the part mounted in the hollow wall
	☐	7.7.3.1	IP2X
	☐	7.7.3.2	> 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

Possible test case verdicts:	
- test case does not apply to the test object..... :	N/A
- test object does meet the requirement ..... :	P(Pass)
- test object does not meet the requirement ..... :	F(Fail)
Testing..... :	
Date of receipt of test item..... :	April 2021
Date (s) of performance of tests..... :	June 2021

General remarks:

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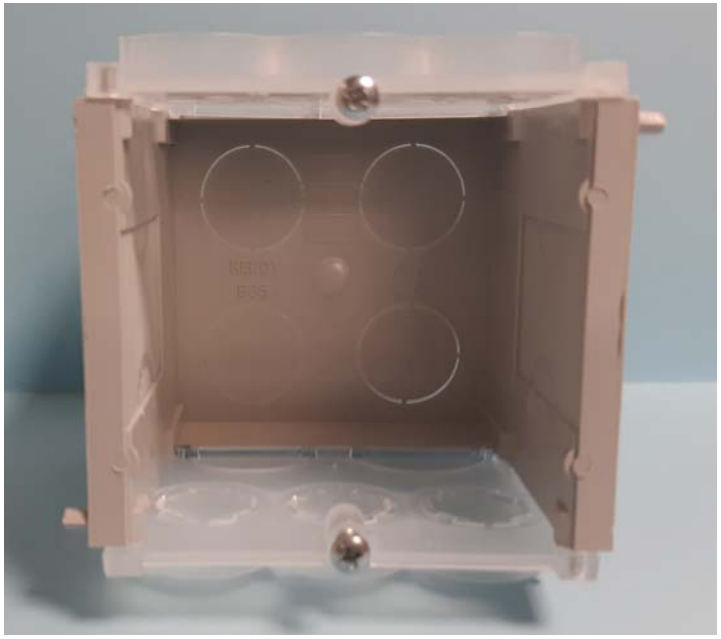
"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

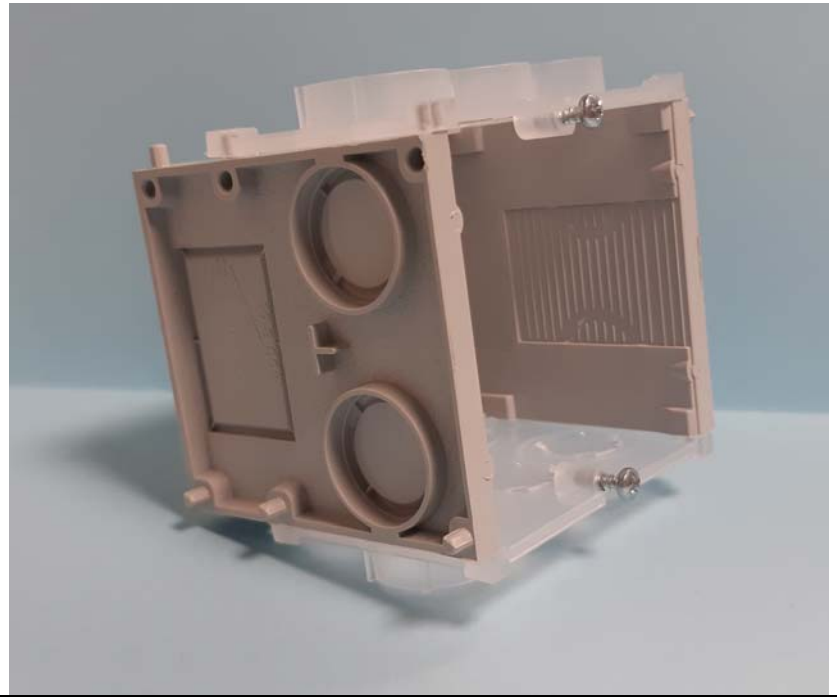
Throughout this report a comma (point) is used as the decimal separator.

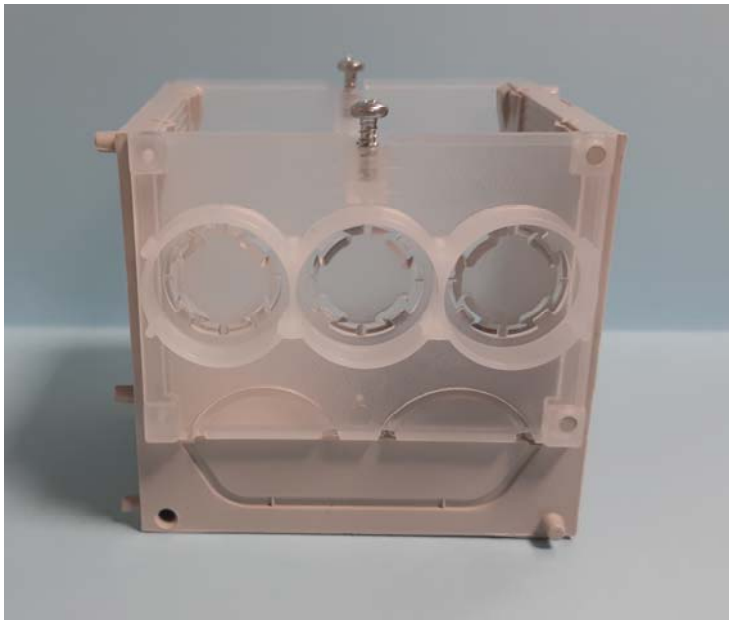
General product information:

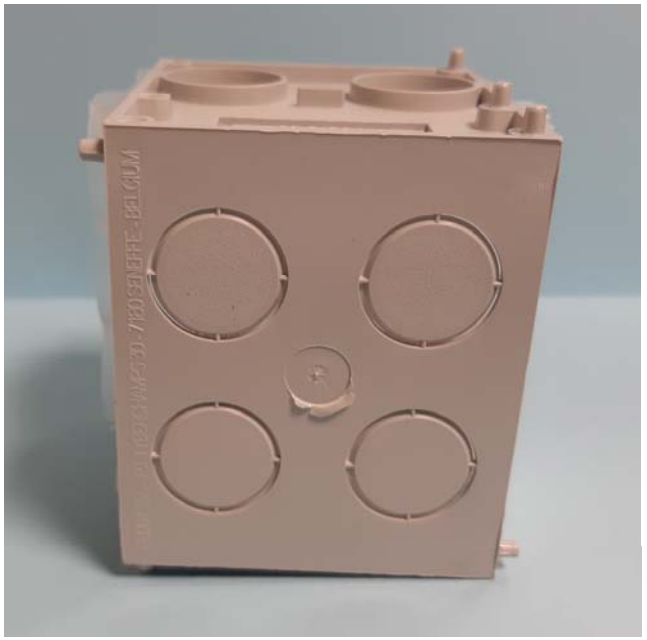
Type	Ref.	Screws	Width x Height x Deep (mm)	Side circular knock-outs inlets	Side rectangular knock-outs inlets	Rear circular knock-outs inlet
	Centre distance 71 mm					
B45	0119	2 mounted	60x60x45	10 x 20 mm	2 x 33 x 10 mm	4 x 20 mm
B45SV	0121	None	60x60x45	10 x 20 mm	2 x 33 x 10 mm	4 x 20 mm
B65	0120	2 mounted	60x60x65	14 x 20 mm	2 x 33 x 24 mm	4 x 20 mm
B65SV	0122	None	60x60x65	14 x 20 mm	2 x 33 x 24 mm	4 x 20 mm

Picture of the tested product:









NBN EN 60 670-1			
Clause	Requirement + Test	Result - Remark	Verdict
8	MARKING		P
8.1	Boxes and enclosures marked with:		—
	a) manufacturer's or responsible vendor's name, trade mark or identification mark ..... :	REDDY	P
	In addition enclosures marked with:		—
	b) IP code against ingress of solid objects if higher than IP2X ..... :	IP	N/A
	c) IP code against harmful ingress of water if higher than IPX0 ..... :	IP	N/A
	d) on cover of flush enclosures for rough surfaces IPXX ^^^ ..... :	IP ^^^	N/A
	e) type reference, which may be a catalogue number..... :	B65	P
	IP code on the outside of the enclosure easily discernible when the enclosure is mounted and wired as for normal use		N/A
	Information marked on the boxes and enclosures or provided by the manufacturer on the smallest package unit or in the instructions of the manufacturer:		—
	f) maximum temperature during the building process if 90 °C ..... :		N/A
	g) necessary information concerning the openings which can be made during installation for boxes and enclosures classified according to 7.3.7 ..... :		N/A
	h) minimum temperature during installation for boxes classified according to 7.5.2 and 7.5.3..... :		N/A
	j) letter H or information for boxes and enclosures classified according to 7.2.1.3.....:		N/A
	Further information given in the manufacturer's catalogue or in an instruction sheet ..... :	Catalogue	P
8.2	Marking durable and easily legible		P
	Rubbing test 15 s with water and 15 s with petroleum spirit	Marking moulded, test not necessary	N/A
	After the test: marking still legible		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
9	DIMENSIONS		
	Boxes and enclosures comply with the appropriate standard sheets ..... :	See Appendix Standard Sheets II	P
10	PROTECTION AGAINST ELECTRIC SHOCK		
	Boxes and enclosures assembled, equipped and installed as for normal use in accordance with the manufacturer's instructions: live parts not accessible		P
	Enclosures ≥ IPXXB assembled, equipped and installed as for normal use in accordance with the manufacturer's instructions		P
	Test with probe 11 of IEC 61032 applied to parts which are accessible after installation: 20 N for 1 min		P
	Test probe not entered that part of the enclosure where live parts are to be installed according to manufacturer instructions		P
	Additional test with probe 11 of IEC 61032 on enclosures according to 7.1.1 and 7.1.3 with parts of thermoplastic or elastomeric material applied to:		—
	- all places, except membranes or the like, where yielding of insulating material could impair the safety with a force of 75 N at (35 ± 2) °C		P
	- knock-outs with a force of 10 N at (35 ± 2) °C		P
	Test probe not entered that part of the enclosure where live parts are to be installed according to manufacturer instructions		P
11	PROVISION FOR EARTHING		N/A
11.1	Boxes and enclosures with exposed conductive parts		—
	- provided with an earthing means of low resistance		N/A
	- have provision for the fitting of such an earthing means		N/A
	Exposed conductive parts: connected through a low resistance connection to earthing means		N/A
	Resistance ≤ 0,05 Ω ..... :	Ω	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
12	CONSTRUCTION		P
12.1	Lids, covers or cover-plates or part of them		N/A
	Lids, covers or cover-plates or parts of them, which are intended to ensure protection against electric shock held in place effectively		N/A
12.1.1	Screw-type fixing		
	Fixing checked by inspection		N/A
12.1.2	Non-screw-type fixing operable without the use of a tool or a key		
	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:		—
	- removal give access (with test probe A of IEC 61032) to live parts		N/A
	- removal give access (with test probe A of IEC 61032) to non-earthed conductive parts separated from live parts by basic insulation		N/A
	- removal give access (with test probe A of IEC 61032) only to insulating parts, earthed conductive parts, conductive parts separated from live parts by double or reinforced insulation, or live parts of SELV circuits		N/A
12.1.2.1	Verification of the non removal of the lids, covers or cover-plates		N/A
	Force according to Table 2 applied for 1 min perpendicular to the mounting surface .....:	N	N/A
	Lids, covers or cover-plates not come off		N/A
	For flush-mounting boxes or enclosures test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted around the supporting frame according to Figure 12		N/A
	Force according to Table 2 applied for 1 min perpendicular to the mounting surface .....:	N	N/A
	Lids, covers or cover-plates not come off		N/A
12.1.2.2	Verification of the removal of the lids, covers or cover-plates		N/A
	Force according to Table 2 applied 10 times perpendicular to the mounting / supporting surface .....:	120 N	N/A
	Lids, covers or cover-plates come off		N/A
	After the test: no damage		N/A

NBN EN 60 670-1			
Clause	Requirement + Test	Result - Remark	Verdict
	For flush-mounting boxes or enclosures test repeated on new specimens with a sheet of hard material, (1 ± 0,1) mm thick, fitted around the supporting frame according to Figure 12		N/A
	Force according to Table 2 applied 10 times perpendicular to the mounting / supporting surface ..... :	120 N	N/A
	Lids, covers or cover-plates come off		N/A
	After the test: no damage		N/A
12.1.2.3	Verification of the outline of lids, covers and cover-plates		N/A
	Gauge according to Figure 13 applied according to Figure 14		N/A
	Distances between face C of gauge and outline of side under test, not decrease		N/A
12.1.2.4	Verification of grooves, holes and reverse tapers		N/A
	Gauge according to Figure 16 applied according to Figure 17 with a force of (1 ± 0,2) N		N/A
	Gauge not enter more than 1mm		N/A
	Test with gauge according to figure 5 applied as shown in figure 11 (1 N):		N/A
12.1.3	Other fixings		N/A
	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 according to the manufacturer's:		—
	Tests according to 12.1.2		N/A
	During the tests according to 12.1.2.2: lids, covers or cover-plates not come off		N/A
12.2	Drain holes		N/A
	Surface and semi-flush mounting enclosures having IPX1 to IP X6 have provision for opening a drain hole ≥ 5 mm in diameter, or 20 mm^2 in area with a width or length ≥ 3mm ..... :	mm Ø mm^2 mm	N/A
	Drain hole: effective		N/A
12.3	Mounting of enclosures		P
	Enclosures have provisions for their suitable attachment according to the method of installation		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Conductive parts of internal fixing means surrounded by insulation which projects above the top of the fixing means by an amount of ≥ 10 % of the maximum width of the cavity for the fixing means.. :	10% of mm ≥ mm	N/A
12.4	Boxes and enclosures with inlets for flexible cables		N/A
	Inlets (outlets) provided in boxes and enclosures classified according to 7.3.2: flexible cables can be easily introduced		N/A
12.5	Boxes and enclosures with inlets for applications other than flexible cables		P
	Inlet openings other than such according to 7.3.2 allow the introduction of:		
	- a conduit or a suitable fitting		P
	- the protective covering of the cable		P
	Inlet opening for conduit entries:		—
	- capable of accepting conduit sizes or a combination of sizes according to IEC 60423	Conduits of dia 20 mm	P
	- at least two of them if there are more than one		P
12.6	Boxes and enclosures with a cable anchorage(s)		N/A
	Boxes and enclosures according to 7.4.2 provided with clamping means such that the connection of the conductors are relieved from strain		N/A
	Clear how relief from strain and prevention of twisting is intended to be effected		N/A
	Cable anchorages:		—
	- suitable for the different types of flexible cable		N/A
	- at least one part is integral with, or permanently fixed to, one of the component parts of the box		N/A
	- of insulating material or provided with an insulating lining fixed to the metal parts		N/A
	Cable anchorage applied as in normal use:		—
	- external dimensions of flexible cable..... :	mm Ø	N/A
	- clamping screws tightened with a torque equal to 2/3 of that specified in table 4 ..... :	Nm	N/A
	- glands tightened with a torque equal to that specified in table 5 ..... :	Nm	N/A
	- not possible to push the cable into the specimen > 1 mm with a force specified in table 3..... :	N	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- pull force as specified in table 3 applied 50 times for 1 s ..... :	N	N/A
	- torque as specified in table 3 applied for (15 ± 1) s ..... :	Nm	N/A
	After the test: no damage, Displacement ≤ 2 mm . :	mm	N/A
	- external dimensions of flexible cable..... :	mm Ø	N/A
	- clamping screws tightened with a torque equal to 2/3 of that specified in table 4 ..... :	Nm	N/A
	- glands tightened with a torque equal to that specified in table 5 ..... :	Nm	N/A
	- not possible to push the cable into the specimen > 1 mm with a force specified in table 3..... :	N	N/A
	- pull force as specified in table 3 applied 50 times for 1 s ..... :	N	N/A
	- torque as specified in table 3 applied for (15 ± 1) s ..... :	Nm	N/A
	After the test: no damage, Displacement ≤ 2 mm . :	mm	N/A
12.7	Boxes and enclosures with cable retention means		N/A
	Cable retention means according to 7.4.1 retain the cable in place		N/A
	Cable of maximum nominal cross-sectional area fitted according to the manufacturer's instructions . :		N/A
	(20 ± 1) N applied for 1 min		N/A
	After the test: displacement ≤ 3 mm ..... :		N/A
	Cable of minimum nominal cross-sectional area fitted according to the manufacturer's instructions . :		N/A
	(20 ± 1) N applied for 1 min		N/A
	After the test: displacement ≤ 3 mm ..... :		N/A
12.8	Knock-out inlets (outlets) intended to be removed by mechanical impact		P
	Removing of knock-out inlets (outlets) without damaging the box		P
	Knock-out inlets (outlets) for cables: no chips or burrs		P
	Knock-out inlets (outlets) for conduits and/or for use with a grommet or a membrane: chips and burrs disregarded		P
12.8.1	Knock-out retention		N/A
	Boxes and enclosures having knock-outs accessible after installation:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	(30 ± 1) N applied for (15 ± 1) s by means of a 6 mm diameter mandrel		N/A
	During the test: knock-out remain in place		N/A
	1 h after the test: degree of protection unchanged		N/A
12.8.2	Knock-out removal		P
	Removal of knock-outs with a tool as stated by the manufacturer:		—
	- without conditioning		P
	- with conditioning at the minimum temperature specified according to 7.5..... :	60°C	P
	During the test: no displacement of a larger stage of multi-stage knock-outs		P
	After the test: no chips or burrs, no damage		P
12.9	Screw fixings		P
	Fixing means withstand mechanical stresses		P
	Thread-forming or thread-cutting screws used only if supplied together with one of the pieces with which they are intended to be assembled		P
	Screws tightened and loosened:		—
	- 10 times for metal screws in engagement with a thread of insulating material		P
	- 5 times for all other cases		N/A
	- fixing means for covers: screw diameter / torque / times..... :	mm / Nm / times	N/A
	- fixing means for accessories: screw diameter / torque / times..... :	3 mm / 0.4 Nm / 10 times	P
	- fixing means for terminals: screw diameter / torque / times..... :	mm / Nm / times	N/A
	- fixing means for connecting devices: screw diameter / torque / times..... :	mm / Nm / times	N/A
	- fixing means for strain reliefs: screw diameter / torque / times..... :	mm / Nm / times	N/A
	- other fixing means: screw diameter / torque / times..... :	mm / Nm / times	N/A
	During the test: no damage		P
12.10	Fixing of boxes and enclosures		P
	Fixing means provided for flush type boxes and enclosures other than for hollow walls……..…..:		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Flush type boxes and enclosures other than for hollow walls not provided with at least one of the fixing means tested as follow:		—
	- if having an internal volume less than 0,4 dm³ is mounted into the mounting block show in Figure Z1		N/A
	- the block is filled by the following material……..:		N/A
	- assembly is kept at ambient temperature for 10 (+1/0) days		N/A
	- auxiliary device described in Figure Z2 is mounted on the specimen and the screw are tightened with a torque equal to 2/3 of that specified in table 4. :		N/A
	After the test, according to Figure Z3, displacement of the specimen from the mounting block ≤ 0,5 mm:		N/A
12.11	Boxes and enclosures classified according to 7.2.3.1		N/A
	Boxes and enclosures for hollow walls provided with suitable means for fixing the box or the enclosure to hollow walls		N/A
	Box mounted in a test wall:		—
	- according to the manufacturer's instructions		N/A
	- of (500 X 500) mm plywood, (10 ± 1) mm thick		N/A
	a) Pull and torque test: lever loaded with a torque of 3 Nm (Figure 18a) and a force of 100 N (Figure 18b) for 1 min		N/A
	After the test: no damage, displacement of the lever ≤ 2 ° ..... :	°	N/A
	b) Displacement test: lever loaded with a torque of 3 Nm (Figure 18c) for 1 min		N/A
	After the test: displacement of the box ≤ 1 mm :	mm	N/A
12.13	Cable gland entry		N/A
	Glands (provided with a metal rod) tightened 10 times with a torque according to Table 5 for 1 min ± 5 s ..... :	Nm	N/A
	After the test: no damage		N/A
12.14	Boxes and enclosures with inlets (outlets) for conduits or spouts (hubs)		N/A
	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		N/A
	Boxes and enclosures classified according to 7.4.3 withstand the tests of 12.14.1 and 12.14.2		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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		N/A
	During the test: no further entry of the conduit		N/A
12.14.2	Pull-out test after the test according to 12.14.1:		N/A
	Minimum size piece of conduit loaded with an axial tensile force of (20 ± 2) N for 1 min		N/A
	During the test: conduit not come loose		N/A
12.14.3	Resistance to bending strain of an inlet spout:		N/A
	Piece of conduit inserted into the inlet spout with a compressile 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)		N/A
	During the test: inlet spout not come loose		N/A
	After the test: no damage, conduit stay within the inlet spout		N/A
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, seals, grommets and replaceable membranes resistant to ageing		P
	Glands tightened with a torque equal to 2/3 of the torque applied during the test of 12.13 .....:	Nm	N/A
	Specimen placed in a heating cabinet at (70 ± 2) °C for (168 + 4) h		P
	After removal from heating cabinet specimen are kept at room temperature for (96 + 4) h		P
	After the test: no harmful deformation or similar damage		P
13.1.2	Grommets and entry membranes in inlet openings and protecting membranes reliably fixed and not be displaced by mechanical and thermal stresses		P
	Specimen that have been subjected to the treatment specified in 13.1.1 placed in a heating cabinet at (40 ± 2) °C for 2 h ± 15 min		P
	Immediately after the treatment probe 11 of IEC 61032 is applied for (5 ± 1) s with (30 -2) N to grommets and/or membranes		P

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Clause	Requirement + Test	Result - Remark	Verdict
	During the tests: grommets and/or membranes not be deformed to such an extent that live parts of any included accessory become accessible		P
	After the test: no damage		P
13.1.3	Grommets and entry membranes in inlet openings of boxes and enclosures classified according to 7.5.2 and 7.5.3 designed and made of such material that the introduction of the cables is permitted when ambient temperature is low		N/A
	Boxes and enclosures classified according to 7.5.2:		N/A
	Specimen placed in a refrigerator at (-15 ± 2) °C for 2 h		N/A
	Immediately after conditioning: it is possible to pierce any blind grommets and entry membranes and to introduce cables		N/A
	After the test: no harmful deformation cracks or similar damage		N/A
	Boxes and enclosures classified according to 7.5.3:		N/A
	Specimen placed in a refrigerator at (-25 ± 2) °C for 2 h		N/A
	Immediately after conditioning: it is possible to pierce any blind grommets and entry membranes and to introduce cables		N/A
	After the test: no harmful deformation cracks or similar damage		N/A
13.2	Protection against the ingress of solid objects		N/A
	Enclosures provide a degree of protection against the ingress of solid objects in accordance with the declared IP Code .....:	IP2X	P
	Enclosures mounted as in normal use according to the manufacturer's instructions		P
	Enclosures with screwed glands or grommets fitted with cables as declared by the manufacturer:		—
	- type of cable, largest cross-sectional area ..:	mm²	N/A
	- type of cable, smallest cross-sectional area :	mm²	N/A
	Enclosures with screwed glands or grommets fitted with conduits as declared by the manufacturer:		—
	- largest diameter or dimension of conduit ...:	mm	N/A

NBN EN 60 670-1			
Clause	Requirement + Test	Result - Remark	Verdict
	- smallest diameter or dimension of conduit.. :	mm	N/A
	Fixing screws of the cover or cover-plate tightened with a torque equal to 2/3 of the values given in table 4 ..... :	Nm	N/A
	Test performed as specified in IEC 60529 (category 2 for IP 5X) ..... :	IP2X	P
	- ≥ IP 4X: test probe does not pass through any opening other than drain holes		N/A
	- ≥ IP 4X: test probe applied on drain holes does not touch live parts		N/A
	- IP 5X: dust does not cover the whole inner surface		N/A
	- IP 6X: no dust inside the box or enclosure		N/A
13.3	Protection against harmful ingress of water		N/A
13.3.1	Enclosures > IP X0 provide a degree of protection against the ingress of solid objects in accordance with the declared IP Code ..... :	IPX0	N/A
	Appropriate test performed on surface, flush or semi-flush enclosures as specified in IEC 60529 under the following conditions:		—
	- dimension S ≤ 0,04 m² or perimeter ≤ 0,8 m according to 13.3.2 and 13.3.3 ..... :	m² m	N/A
	- dimension S > 0,04 m² or perimeter > 0,8 m according to 13.3.2 and 13.3.4 ..... :	m² m	N/A
	Enclosures with screwed glands or grommets fitted with conduits as declared by the manufacturer:		—
	- largest diameter or dimension of conduit ..... :	mm	N/A
	- smallest diameter or dimension of conduit ... :	mm	N/A
	Fixing screws of the cover or cover-plate tightened with a torque equal to 2/3 of the values given in table 4 ..... :	Nm	N/A
13.3.2	Flush type and semi-flush type enclosures fixed in a test wall:		—
	- according to the manufacturer's instructions		N/A
	- according to Figure 5		N/A
	- fitted with cables having conductors of the largest and smallest cross-sectional		N/A
13.3.3	Immediately after the test no more than 0,2 ml x S (cm²) water in the enclosure ..... :	≤ ml	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Within 5 min after the test :		—
	- electric strength test according to 14.3..... :	V	N/A
	- during the test: no flashover or breakdown		N/A
13.3.4	Immediately after the test: indicator paper still dry		N/A
14	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
14.1	Adequate insulation resistance		P
	Enclosures classified IPX0:		—
	Specimens placed in a humidity cabinet, relative humidity 91 .... 95 %, temperature 20 .... 30 °C for 48 h		P
	After treatment: no damage		P
	Enclosures classified >IPX0:		—
	Specimens placed in a humidity cabinet, relative humidity 91 .... 95 %, temperature 20 .... 30 °C for 168 h		N/A
	After treatment: no damage		N/A
14.2	Insulation resistance measured with 500 V d.c. for 1 min between the body and a metal foil in contact with the internal surface of the box or enclosure ≥ 5 MΩ ..... :	> 100 MΩ	P
14.3	Electric strength tested with a.c. voltage for 1 min between a metal foil in contact with the internal surface and a metal foil in contact with the external surface of the box or enclosure ..... :	2000 V	P
	During the test: no flashover or breakdown		P
15	MECHANICAL STRENGTH		N/A
	Boxes and enclosures have adequate mechanical strength		N/A
15.1	Impact test at low temperature		N/A
	Non-metallic boxes and enclosures for use in cast concrete according to 7.3.2.1 withstand the mechanical stresses occurring during concrete work		N/A
	Boxes and enclosures classified according to 7.5.1:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Arrangement of impact test apparatus according to figure 8 together with the specimens placed in a refrigerator at (-5 ± 2) °C for 2 h ± 15 min		N/A
	5 blows with 1 kg from 100 mm		N/A
	After the test: no damage		N/A
	Boxes and enclosures classified according to 7.5.2:		—
	Arrangement of impact test apparatus according to figure 8 together with the specimens placed in a refrigerator at (-15 ± 2) °C for 2 h ± 15 min		N/A
	5 blows with 1 kg from 100 mm		N/A
	After the test: no damage		N/A
	Boxes and enclosures classified according to 7.5.3:		—
	Arrangement of impact test apparatus according to figure 8 together with the specimens placed in a refrigerator at (-25 ± 2) °C for 2 h ± 15 min		N/A
	5 blows with 1 kg from 100 mm		N/A
	After the test: no damage		N/A
15.2	Compression test		N/A
	Boxes and enclosures according to 7.6.2 suitable for mounting in heated moulds or in heated concrete withstand the mechanical stresses occurring during the casting of concrete		N/A
	Specimen placed in a heating cabinet at (90 ± 5) °C for (60 + 15) min		N/A
	After cool down to ambient temperature: neither deformation nor damage		N/A
	Specimen placed between two flat hardwood plates, loaded with (500 ± 5) N for 1 min ± 5 s		N/A
15.3	Impact test for boxes and enclosures		N/A
	Specimens are subjected to blows by means of an impact test apparatus as described in Annex D of IEC 60068-2-75 on		—
	- parts A: 5 blows from 100 mm		N/A
	- parts B: 4 blows from 150 mm		N/A
	- parts C: 4 blows from 200 mm		N/A
	- parts D: 4 blows from 250 mm		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- parts E: 4 blows from 300 mm		N/A
	- parts F: 4 blows from 400 mm		N/A
	- parts G: 4 blows from 500 mm		N/A
	After the test: no damage		N/A
16	RESISTANCE TO HEAT		P
16.1	Parts of insulating material necessary to retain current-carrying parts		N/A
	Parts of insulating material necessary to retain current-carrying parts and/or parts of the earthing circuit in position, even though in contact with them:		—
	Ball-pressure test at (125 ± 2)°C for 1 h		N/A
	After the test: diameter of impression ≤ 2 mm .:	mm	N/A
16.2	Parts of insulating material not necessary to retain current-carrying parts		P
	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:		—
	Ball-pressure test at (70 ± 2)°C for 1 h		P
	After the test: diameter of impression ≤ 2 mm .:	< 2mm	P
	Parts of insulating material of flush-mounted enclosures classified according to 7.6.2:		—
	Ball-pressure test at (90 ± 2)°C for 1 h		N/A
	After the test: diameter of impression ≤ 2 mm .:	mm	N/A
17	CREEPAGE DISTANCES, CLEARANCES AND DISTANCES THROUGH SEALING COMPOUND		N/A
	See relevant Part 2		N/A
18	RESISTANCE OF INSULATING MATERIAL TO ABNORMAL HEAT AND FIRE		P
	Parts of insulating material necessary to retain current-carrying parts and/or parts of the earthing circuit in position:		—
	Glow-wire test performed according to Clauses 4 to 10 of IEC 60695-2-11, test temperature 850 °C		N/A
	No visible flame and no sustained glowing		N/A
	Flame and glowing extinguish within 30 s .....:	s	N/A
	No ignition of the tissue paper		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Parts of insulating material of enclosures classified according to 7.7:		—
	Glow-wire test performed according to Clauses 4 to 10 of IEC 60695-2-11, test temperature 850 °C		N/A
	No visible flame and no sustained glowing		N/A
	Flame and glowing extinguish within 30 s ..... :	s	N/A
	No ignition of the tissue paper		N/A
	Parts of insulating material not necessary to retain current-carrying parts and parts of the earthing circuit in position, even though they are in contact with them:		—
	Glow-wire test performed according to Clauses 4 to 10 of IEC 60695-2-11, test temperature 650 °C		P
	Housing Material: ABS 4136		
	No visible flame and no sustained glowing		P
	Flame and glowing extinguish within 30 s ..... :	s	N/A
	No ignition of the tissue paper		P
	Housing Alternative material: PVC IR4649554AA		
	No visible flame and no sustained glowing		P
	Flame and glowing extinguish within 30 s :	s	N/A
	Side parts: Polypropylene HB12XF		
	No visible flame and no sustained glowing		P
	Flame and glowing extinguish within 30 s :	s	N/A
	Parts of insulating material retaining earthing terminals in position:	—	
	Glow-wire test performed according to Clauses 4 to 10 of IEC 60695-2-11, test temperature 650 °C		N/A
	No visible flame and no sustained glowing		N/A
	Flame and glowing extinguish within 30 s :	s	N/A
	No ignition of the tissue paper		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
19	RESISTANCE TO TRACKING		N/A
	Parts of insulating material retaining live parts in position of boxes and enclosures having IP>X0: PTI 175, 50 drops, solution A of IEC 60112		N/A
	No flashover or breakdown		N/A
20	RESISTANCE TO CORROSION		P
	Ferrous parts adequately protected against rusting:		N/A
	Test made after having removed all grease by immersion in a degreasing agent for (10 ± 1) min: (10 ± 1) min in a 10 % solution of ammonium chloride, (10 ± 1) min in a box containing air saturated with moisture and (10 ± 1) min at (100 ± 5) °C. No signs of rust		N/A
21	ELECTROMAGNETIC COMPATIBILITY (EMC)		P
	No tests necessary		—

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Clause	Requirement + Test	Result - Remark	Verdict

Appendix

Standard sheet II