

PICO,

מס' 02SG00190



Test Report issued under the responsibility of:



משרד המבחנים בע"מ

TEST REPORT
IEC/EN 60670-22

Boxes and enclosures for electrical accessories for household and similar fixed electrical installations
Part 22: Particular requirements for connecting boxes and enclosures

Report Reference No.....: 02SG00190
Date of issue.....: 2007-06-20
Total number of pages.....: 17

CB/CCA Testing Laboratory.....: IMQ S.p.A.
Address.....: I - 20138 Milano - Via Quintiliano, 43

Applicant's name.....: BOCCHIOTTI S.p.A.
Address.....: I - Via Pelio 6, 16147 Genova (GE)

Test specification:

Standard.....: IEC 60670-22:2003 (1st Edition) with
 IEC 60 670-1:2002 (1st Edition) + corrigendum 2003 and/or
 EN 60670-22:2006 with
 EN 60670-1:2005

Test procedure.....: CB / CCA

Non-standard test method.....: N/A

Test Report Form No.....: IECEN60670_22A
Test Report Form(s) Originator.....: IMQ
Master TRF.....: Dated 2007-03

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This report is not valid as a CCA Test Report unless signed by an approved CCA Testing Laboratory and appended to a CCA Test Certificate issued by an NCB in accordance with CCA

Test item description.....: Connecting enclosures for floating connecting devices
Trade Mark.....: BOCCHIOTTI (logo) see marking
Manufacturer.....: BOCCHIOTTI S.p.A. Via Pelio 6, 16147 Genova (GE)
Model/Type reference.....: See description on Annex 1
Ratings.....: (See test item particulars)

משרד המבחנים בע"מ

ישראל חקיקה בע"מ

ישראל חקיקה בע"מ

7.101 Method of fixing the terminals or connecting devices in the connecting box	<input type="checkbox"/> 7.101.1 With integrated clamping units <input type="checkbox"/> 7.101.2 With incorporated terminals or connecting devices <input type="checkbox"/> 7.101.3 With provisions for subsequent incorporation of terminals or connecting devices <input checked="" type="checkbox"/> 7.101.4 Without fixing (for floating terminals or connecting devices)
IP code : IP44 Rated insulation voltage..... : 750 V Rated voltage of integrated or incorporated connecting device : - Rated connecting capacity..... : - Maximum number of conductors to be placed in the box (if marked or declared)..... : - Dimension sheet(s), if any : -	
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..... : 2006-12-05 Date (s) of performance of tests..... : From 2006-12-05 up to 2007-02-22	
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. "(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. This test report consist of: <ul style="list-style-type: none"> - Test Report based on IEC 60670-22:2003 (1st Edition): 17 pages - Annex 1 Description of the series PICO IP44: 1 page - Annex 2 Photographic documentation: 3 pages. The uncertainties for the tests and measurements are those listed in BOCCHIOTTI Operational Instruction PR-314.	
General product information: See description of the series on Annex 1	

משרד התעשייה והמסחר

IEC/EN 60670-22			
Clause	Requirement + Test	Result - Remark	Verdict



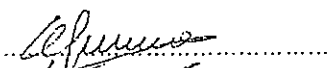
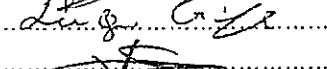
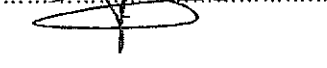
14.2	TABLE: insulation resistance		
test voltage applied between:		measured (MΩ)	required (MΩ)
Body and metal foil in contact with internal surface		≥ 100	≥ 5
supplementary information:			

14.3	TABLE: electric strength		
rated insulation voltage (V)		750 V	—
test voltage applied between:		test voltage (V)	flashover / breakdown (Yes/No)
Body and metal foil in contact with internal surface		4500	No
supplementary information:			

15.3	TABLE: impact test			
part of enclosure tested per Table 7 (A, B, C, D, E, F, G)	Total number of blows per part – Figure 10	height of fall per Table 8 (mm)	comments	
Part A	5	100	No damage	
Part E or F (*)	4	300 or 400 (*)	No damage	
supplementary information: (*) it depends of the distance from the surface (part E - 300 mm; part F - 400 mm)				

16.2	TABLE: ball pressure test of insulating materials		
allowed impression diameter (mm)		≤ 2 mm	—
part under test		test temperature (°C)	impression diameter (mm)
Box and cover		70	1
supplementary information:			

18	TABLE: glow-wire test					
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)	
Box and cover	ABS	650	N	—	—	
supplementary information:						

Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB/CCA Testing Laboratory:	IMQ S.p.A.
	Testing location/ address.....:	I - 20138 Milano - Via Quintiliano, 43
<input type="checkbox"/>	Associated CB Laboratory:	
	Testing location/ address.....:	-
	Tested by (name + signature)	Crippa Luigi 
	Approved by (+ signature)	Calveri Paolo 
<input type="checkbox"/>	Testing procedure: TMP	
	Tested by (name + signature)	--
	Approved by (+ signature)	--
	Testing location/ address.....:	--
<input checked="" type="checkbox"/>	Testing procedure: WMT	
	Tested by (name + signature)	Gemme Sergio 
	Witnessed by (+ signature).....:	Crippa Luigi 
	Approved by (+ signature)	Calveri Paolo 
	Testing location/ address.....:	ARENZANO - GE
<input type="checkbox"/>	Testing procedure: SMT	
	Tested by (name + signature)	--
	Approved by (+ signature)	--
	Supervised by (+ signature).....:	--
	Testing location/ address.....:	
<input type="checkbox"/>	Testing procedure: RMT	
	Tested by (name + signature)	--
	Approved by (+ signature)	--
	Supervised by (+ signature).....:	--
	Testing location/ address.....:	--

Test item particulars.....:			
7.1	Nature of material	<input checked="" type="checkbox"/> 7.1.1	Insulating
		<input type="checkbox"/> 7.1.2	Metallic
		<input type="checkbox"/> 7.1.3	Composite
7.2	Method of installation	<input type="checkbox"/> 7.2.1	Flush, semi-flush or embedded in:
		<input type="checkbox"/> 7.2.1.1	Non combustible walls, ceilings or floors
		<input type="checkbox"/> 7.2.1.2	Combustible walls, ceilings or floors
		<input type="checkbox"/> 7.2.1.3	Hollow walls, hollow ceilings, hollow floors or furniture
		<input checked="" type="checkbox"/> 7.2.2	Surface mounting on:
		<input type="checkbox"/> 7.2.2.1	Non combustible walls, ceilings, floors or furniture
		<input checked="" type="checkbox"/> 7.2.2.2	Combustible walls, ceilings, floors or furniture
		<input type="checkbox"/> 7.2.3	Placement:
		<input type="checkbox"/> 7.2.3.1	Suitable for installation into concrete during the casting process (see 7.6)
		<input type="checkbox"/> 7.2.3.2	Suitable for all types of installation except into concrete
7.3	Type(s) of inlets (outlets)	<input type="checkbox"/> 7.3.1	With inlets for sheathed cables for fixed installations
		<input type="checkbox"/> 7.3.2	With inlets for flexible cables
		<input checked="" type="checkbox"/> 7.3.3	With inlets for plain or corrugated conduits
		<input type="checkbox"/> 7.3.4	With inlets for threaded conduits
		<input type="checkbox"/> 7.3.5	With inlets for other types of conductors/cables or conduits
		<input type="checkbox"/> 7.3.6	With spouts (hub)
		<input type="checkbox"/> 7.3.7	Without inlets. Inlet openings are made during installation
7.4	Clamping means	<input type="checkbox"/> 7.4.1	With cable retention
		<input type="checkbox"/> 7.4.2	With cable anchorage
		<input type="checkbox"/> 7.4.3	With clamping means for flexible conduit
		<input checked="" type="checkbox"/> 7.4.4	Without clamping means
7.5	Minimum and maximum temperatures during installation	<input type="checkbox"/> 7.5.1	-5 °C to +60 °C
		<input type="checkbox"/> 7.5.2	-15 °C to +60 °C
		<input checked="" type="checkbox"/> 7.5.3	-25 °C to +60 °C
7.6	Maximum temperature during the casting process	<input type="checkbox"/> 7.6.1	+60 °C
		<input type="checkbox"/> 7.6.2	+90 °C
7.7	Boxes and enclosures for hollow walls and the like according to 7.2.1.3	<input type="checkbox"/> 7.7.1	Class Ha
		<input type="checkbox"/> 7.7.2	Class Hb:
		<input type="checkbox"/> 7.7.2.1	for walls
		<input type="checkbox"/> 7.7.2.2	for ceilings
		<input type="checkbox"/> 7.7.3	degree of protection of the part mounted in the hollow wall:
		<input type="checkbox"/> 7.7.3.1	IP2X
		<input type="checkbox"/> 7.7.3.2	>IP2X

List of test equipment used:

Clause	Measurement testing	Testing / measuring equipment / material used	Range used	Calibration date
10	Protection against electric shock	Test probe 12 mm	20 N	01.09.06
13.1.1	Resistance to ageing	Cylindrical metal rods Heating cabinet ISCO	10 -40 mm 70°C	16.12.06 09.02.07
13.1.2	Resistance to ageing of grommets	Heating cabinet ISCO Test probe 12 mm	40°C 30N	09.02.07 01.09.06
13.2	Protection against the ingress of solid objects	Steel wire 1mm	IP4X	30.09.06
13.3	Protection against harmful ingress of water	Spray nozzle	IPX4	06.09.06
14.2	Insulation resistance	Humidity cabinet Angelantoni Voltage tester	25°C - 95% 500 V	27.09.06 27.02.06
14.3	Electric strength	Humidity cabinet Angelantoni High voltage transformer	25°C - 95% 4500 V	27.09.06 24.10.05
15.3	Impact test	Pendulum hammer.	IK07	27.02.07
16.2	Resistance to heat	Heating cabinet ISCO Steel ball	70°C 20 N	09.02.07

Annex 1

Description of the enclosures series PICO IP55

Code	Type Ref. (on the package)	Cat.Ref.	Colour	Description	Dimensions (mm)
05504	IP55 01 GRI	IP55 01 GRI	Grey RAL 7035	with 6 grommets, suitable for conduit of size: 16, 20 and 25 mm	100x100x50
05505	IP55 02 GRI	IP55 02 GRI	Grey RAL 7035	with 6 grommets, suitable for conduit of size: 16, 20 and 25 mm	120x80x50
05506	IP55 03 GRI	IP55 03 GRI	Grey RAL 7035	with 6 grommets, suitable for conduit of size: 16, 20 and 25 mm	150x110x70
05507	IP55 04 GRI	IP55 04 GRI	Grey RAL 7035	with 6 grommets, suitable for conduit of size: 16, 20, 25 and 32 mm	190x140x70
05508	IP55 05 GRI	IP55 05 GRI	Grey RAL 7035	with 6 grommets, suitable for conduit of size: 16, 20, 25 and 32 mm	240x190x90
05509	IP55 06 GRI	IP55 06 GRI	Grey RAL 7035	with 6 grommets, suitable for conduit of size: 16, 20, 25, 32 and 40 mm	300x220x120
05510	IP55 07 GRI	IP55 07 GRI	Grey RAL 7035	with 6 grommets, suitable for conduit of size: 16, 20, 25, 32 and 40 mm	380x300x120
05511	IP55 05CA GRI	IP55 05CA GRI	Grey RAL 7035	High cover; with 6 grommets, suitable for conduit of size: 16, 20, 25, and 32 mm	240x190x160
05512	IP55 06CA GRI	IP55 06CA GRI	Grey RAL 7035	High cover; with 6 grommets, suitable for conduit of size: 16, 20, 25, 32 and 40 mm	300x220x180
05517	IP55 07CA GRI	IP55 07CA GRI	Grey RAL 7035	High cover; with 6 grommets, suitable for conduit of size: 16, 20, 25, 32 and 40 mm	380x300x180

Note:

- width of the cavity for the fixing means for type reference: 05504/05/06/07: 9 mm;
- width of the cavity for the fixing means for type reference: 05508/09/10/11/12/17: 22 mm.