L 1045.1

TEST REPORT
32-10798/2/IP

Product:	Intercom
Type designation:	2N® IP One
Order No.:	9158101
Customer:	2N TELEKOMUNIKACE a.s. Modřanská 621/72 143 00 Praha 4 Czech Republic Company ID: 26183960
Manufacturer:	2N TELEKOMUNIKACE a.s. Modřanská 621/72 143 00 Praha 4 Czech Republic
Employee responsible:	Michal Bauer
Report issue date:	2022-06-21
Distribution list:	1 copy to the Customer 1 copy to the Engineering Test Institute

I. Description of product tested

Intercom, type designation 2N® IP One, order no. 9158101 was submitted for the test of the enclosure.

The product is intended for installation into a wall and for this installation a flush box is used (order number 9158001).

Mass:	355g the unit 465g unit with flush box
Dimensions of the unit in (mm):	78 (W) x 172 (H) x 45 (D)
Dimensions of the flush box in (mm):	123 (W) x 195 (H) x 83.5 (D)

The purpose of the test is to verify the degree of protection provided by enclosures for IP 6X of the sample.

II. Sample tested

SZU reg. no.	Product name	Date of submission
0231.22.36728.002	Intercom, type designation 2N® IP One, Order No. 9158101	2022-05-17

Fig. 1 Sample in the laboratory premises installed in a wall simulation

The visual inspection, tests and verification were carried out by Michal Bauer at the test station 052 of SZU.

The tests were performed using measuring and testing equipment with valid calibration.

III. Measuring and test equipment:

No.	Description	Inventory number
1.	Equipment for the protection against water jet test	11-4158
2.	Floater flowmeter, type FLV SSIGKEIT	ME 590
3.	Deformation manometer Thermis	ME 583
4.	Temperature sensor Suku	ME 584
5.	Test equipment for the IK test – vertical impact hammer	IK-a
6.	Tape measure ASSIST	ME 489
7.	Electronic stopwatch CASSIO	ME 562
8.	Thermometer – hygrometer Comet, type C4130	11-7286

IV. Methods, results of tests and verifications

No.	Test objective	Requirement	Method of test	Documentation	Test evaluation/ verification *
1.	Degrees of protection provided by enclosures IP X6	ČSN EN 60529:1993, Art. 14		Page 4 to 9	+

*) **Evaluation / statement of conformity:**
+ ..... Requirement fulfilled
- ..... Requirement not fulfilled
0..... Not applicable
x..... Not evaluated

Note:
The stated extended measurement uncertainties are calculated as a factor of the measurement uncertainty and the extension coefficient k=2, corresponding to the coverage certainty of 95% as regards standard classification.

If a statement of conformity is provided, the decision rule pursuant to ILAC-G8:09/2019, Art. 4.2.1 - binary statement for the simple acceptance rule shall apply.

Test objective:	Degrees of protection provided by enclosures IP X6
Exact name of the test procedure:	E 016* - Test of protection degree (except heavy waves)
Test method:	ČSN EN 60529:1993
Sample tested:	0231.22.36728.002
Measuring equipment used:	see Chapter III
Date of test:	2022-05-24

Ambient conditions:	24 °C	51 %	1015 mbar
	Temperature	Relative humidity	Barometric pressure

The second figure indicates that the enclosure:
- provides protection against penetration of water

Protection against penetration of water IP X6

Test method:	ČSN EN 60529:1993, Art. 14
Test equipment:	See chapter III., items 1 to 8
Jet diameter:	12,5 mm
Distance between the jet and the sample surface:	2,5 m to 3 m
Flow rate:	12,5 l . min^{-1} ± 5 %
Test duration:	1 min . m^{-2} of the surface, at least 3 min
Test medium:	Water
Temperature of the medium:	22,1 °C
Temperature of the tested sample:	24,3 °C
Position of the sample's enclosure during test:	see fig. 2
Test description:	The sample was exposed to the flow of water, spouting from every direction according to the above mentioned specifications.
Approval conditions:	The protection is satisfactory if the water does not penetrate into the enclosure at all. The water that penetrated into the enclosure shall generally not: - be in such quantity to worsen the safety or disrupt the correct function of the equipment - remain on isolating parts to provide possibility of creepage currents - be in contact with live parts or windings that are not intended to work in wet conditions - gather itself near cable endings or penetrate into these endings
Test results:	**After opening the enclosure of the tested sample no water was found inside the sample (see fig. 3 to fig. 10).**

Fig. 2 Sample after the test

Fig. 3 Sample after removing part of the back cover

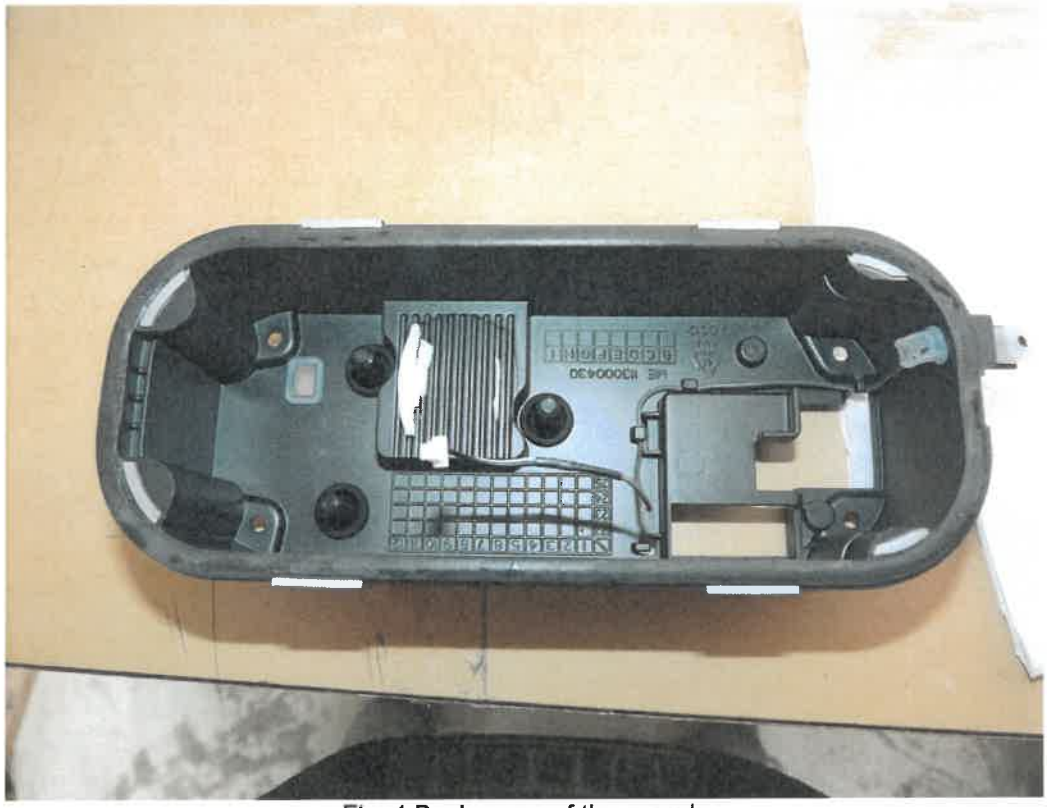

Fig. 4 Back cover of the sample

Fig. 5 Sample after removing the back cover

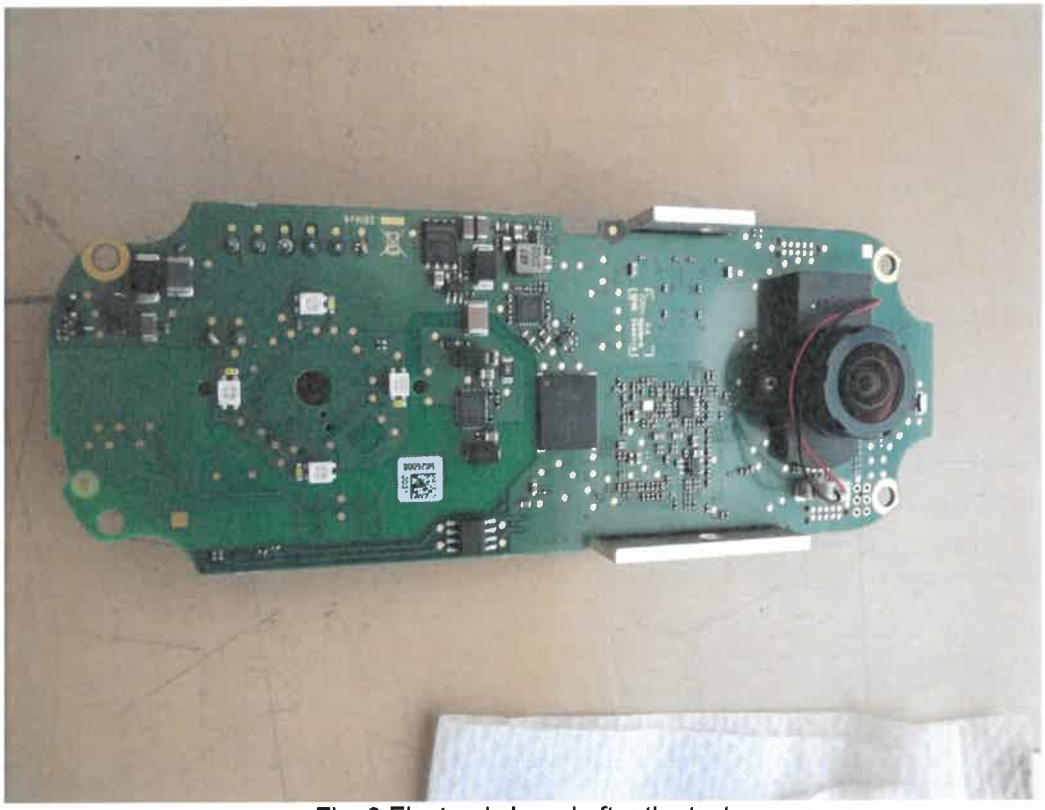

Fig. 6 Electronic board after the test

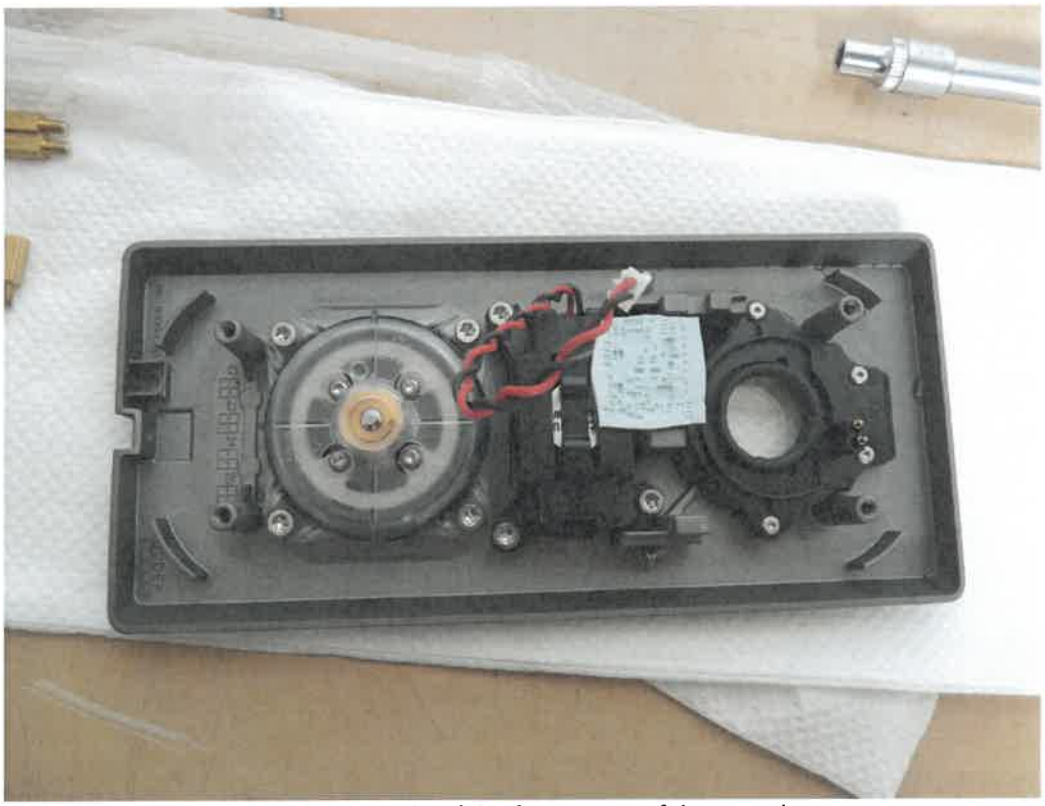

Fig. 7 Inner side of the front cover of the sample

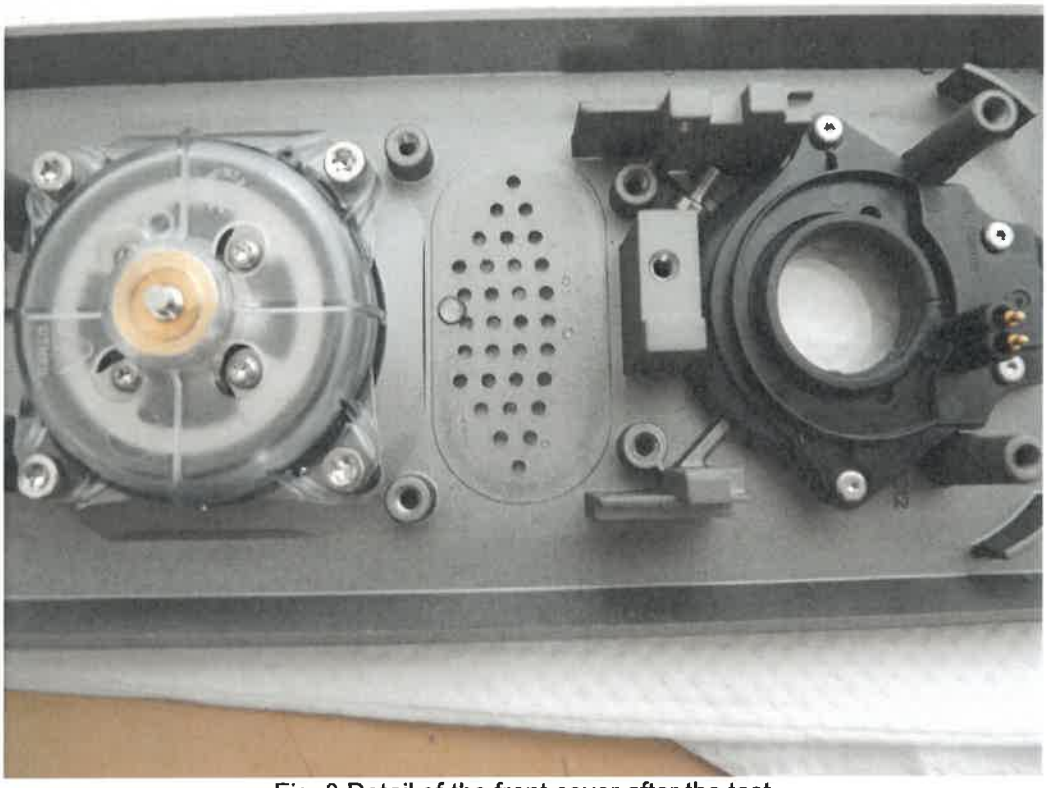

Fig. 8 Detail of the front cover after the test
Water is only in parts not protected by the cover – behind the speaker grating

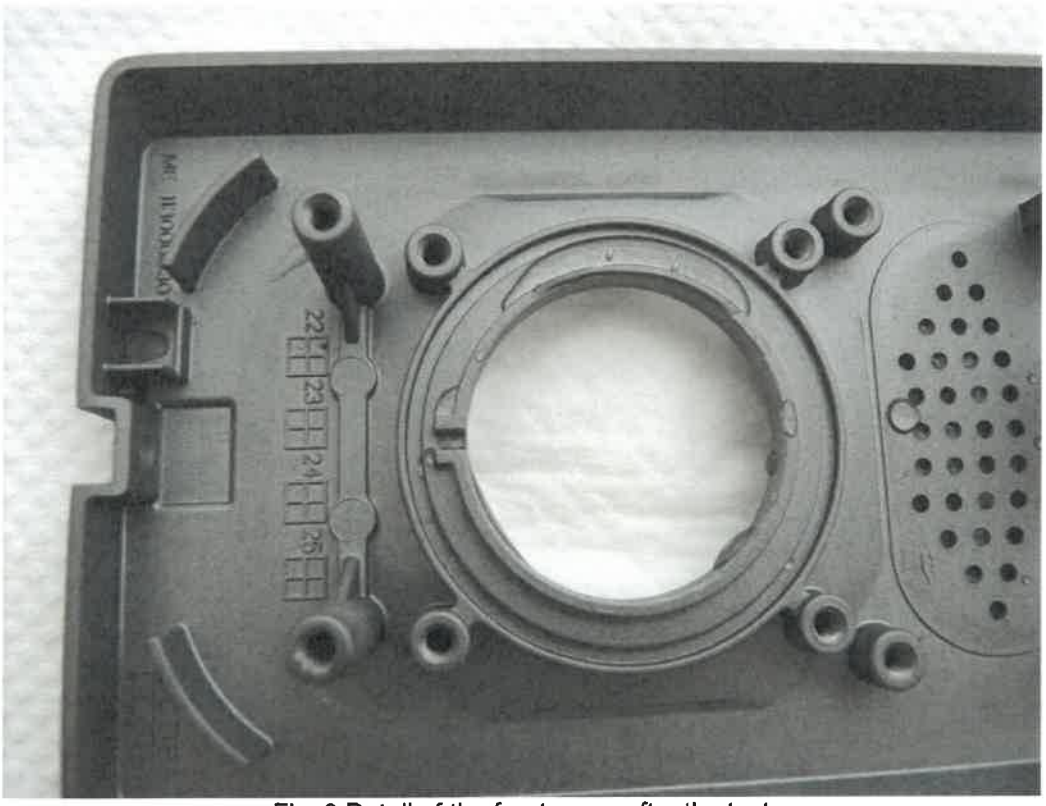

Fig. 9 Detail of the front cover after the test
Water is only in parts not protected by the cover – around the button

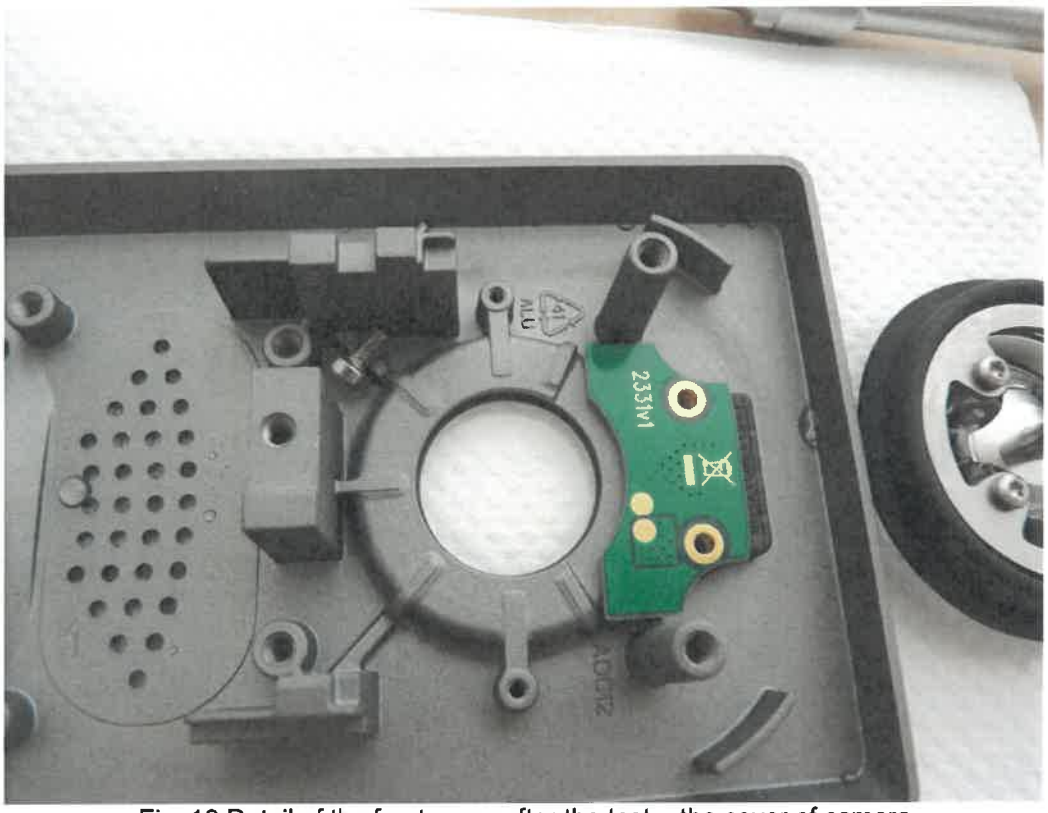

Fig. 10 Detail of the front cover after the test – the cover of camera

The tests results apply only to the submitted test sample.

Tested by:	Michal Bauer	Date:	2022-06-21	Signed:	
Reviewed and approved by:	Ing. Antonín Heitl	Date:	2022-06-21	Signed:	

V. A list of referenced documents

- Order OPV-0003025 of 2022-05-03 (Order reg. no. B-76333, received on 2022-05-04)
- Contract B-76333/32

- ČSN EN 60529:1993 - Degrees of protection provided by enclosures (IP Code)

- A list of technical documentation:
  - Drawing VILLA PANEL, part number ME 11300033x B, revision B.2 of 2022-05-30
  - Drawing VILLA BACK, part number ME 113000430 B, revision B.2 of 2022-06-13

Test Report compiled by: Michal Bauer

Test Report approved by: Ing. Antonín Heitl
Head of Electrical Equipment Test Station

– End of Test Report –