TEST REPORT

Name of product: Intercom
Type of product: 2N® Helios IP Force 9151101CK, 2N® Helios IP Safety 9152101W, 2N® Helios IP Uni 9153102, 2N® Helios IP Verso 9155101, 2N® Helios IP Vario 913716KU

Ratings: ---
Serial number: 54-0542-0863, 54-0473-1074, 54-0482-0005, 54-0828-0033, 54-0653-0050
Manufacturer: 2N TELEKOMUNIKAČE a. s. Modřanská 621/72, 143 01 Praha 4, Czech Republic
Production site: dtto manufacturer
EZÚ product coding system: 06
Ordering firm: 2N TELEKOMUNIKAČE a. s. Modřanská 621/72, 143 01 Praha 4, Czech Republic
Number of tested samples: 5
Samples submitted on: 6. 5. 2014
Location of testing: EZÚ
Other data: ---
The product was tested according to: ČSN EN 62262:1997 +A1:1999, ČSN EN 60068-2-75:1999

The test results contained in this report refer to the tested items only. The values presented in this report were measured with the accuracy specified in the testing regulations. All measuring instruments used are properly traceable.

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Testing laboratory technical manager

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1. Specimen description

Five intercoms were provided for testing:

a) 2N® Helios IP Force 9151101CK
b) 2N® Helios IP Safety 9152101W
c) 2N® Helios IP Uni 9153102
d) 2N® Helios IP Verso 9155101
e) 2N® Helios IP Vario 913716KU

For purpose of testing, the specimens were fixed to an artificial wall.

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Fig. 1 - specimen 2N® Helios IP Force 9151101CK

Fig. 2 - label of the specimen 2N® Helios IP Force 9151101CK
Fig. 3 - specimen 2N® Helios IP Safety 9152101W

Fig. 4 - label of the specimen 2N® Helios IP Safety 9152101W
Fig. 5 - specimen 2N® Helios IP Uni 9153102

Fig. 6 - label of the specimen 2N® Helios IP Uni 9153102
Fig. 7 - specimen 2N® Helios IP Verso 9155101

Fig. 8 - label of the specimen 2N® Helios IP Verso 9155101
Fig. 9 - specimen 2N® Helios IP Vario 913716KU

Fig. 10 - label of the specimen 2N® Helios IP Vario 913716KU
2. Testing

2.1 Tests of protection against external mechanical impacts - IK10
according to ČSN EN 62262:1997 +A1:1999

2.1.1 Pendulum hammer test
according to ČSN EN 62262:1997 +A1:1999
ČSN EN 60068-2-75:1999, cl. 4, tab. 1 and tab. 2

Tested specimens:
  a) 2N® Helios IP Force 9151101CK
  b) 2N® Helios IP Safety 9152101W
  c) 2N® Helios IP Uni 9153102

Test apparatus:
striking element for IK10 (D = 100 mm, R = 50 mm)
clinometer CLINOTRONIC PLUS, inv. No. 551976

Test parameters:
  energy of impact: 20 J
  mass of the arm: 0,903 kg
  combined mass of striking element: 5,013 kg
  equivalent mass: 5,4645 kg
  height of fall: 366 mm
  test scheme: see Fig. 11
  impact places: all accessible external surfaces
testing: see Fig. 12

Findings:
During the test, some deflections of the enclosures occurred (see Fig. 13, 14, 15 and 16). Except the deflections, no further mechanical damage occurred.
Fig. 11 - pendulum hammer test scheme for IK 10

Fig. 12 - IK 10 pendulum hammer test (specimen 2N© Helios IP Force 9151101CK)
Fig. 13 - enclosure deflection on the specimen 2N® Helios IP Force 9151101CK

Fig. 14 - enclosure deflection on the specimen 2N® Helios IP Force 9151101CK
Fig. 15 - enclosure deflection on the specimen 2N® Helios IP Safety 9152101W

Fig. 16 - enclosure deflection on the specimen 2N® Helios IP Uni 9153102
2.2 Tests of protection against external mechanical impacts - IK08
according to ČSN EN 62262:1997 +A1:1999

2.2.1 Pendulum hammer test
according to ČSN EN 62262:1997 +A1:1999
ČSN EN 60068-2-75:1999, cl. 4, tab. 1 and tab. 2

Tested specimens:
   d) 2N® Helios IP Verso 9155101
   e) 2N® Helios IP Vario 913716KU

Test apparatus:
   striking element for IK08 (D = 60 mm, R = 25 mm)
   clinometer CLINOTRONIC PLUS, inv. No. 551976

Test parameters:
   energy of impact: 5 J
   mass of the arm: 0,214 kg
   combined mass of striking element: 1,7 kg
   equivalent mass: 1,808 kg
   height of fall: 0,277 mm
   test scheme: see Fig. 17
   impact places: all accessible external surfaces
   testing: see Fig. 18

Findings:
   During the test, some deflections of the enclosure occurred on the specimen 2N® Helios IP Verso 9155101 (see Fig. 19). Except the deflections, no further mechanical damage occurred on this specimen.
   During the test, some deflections of the enclosure (see Fig. 20) and inner cracking of the nameplate (see Fig. 21) occurred on the specimen 2N® Helios IP Vario 913716KU. Except these damages, no further mechanical damage occurred on this specimen.
Fig. 17 - pendulum hammer test scheme for IK 08

Fig. 18 - IK 08 pendulum hammer test (specimen 2N® Helios IP Vario 913716KU)
Fig. 19 - enclosure deflection on the specimen 2N® Helios IP Verso 9155101

Fig. 20 - enclosure deflection on the specimen 2N® Helios IP Vario 913716KU
3. Test result

The submitted specimens

intercoms

a) 2N® Helios IP Force 9151101CK
b) 2N® Helios IP Safety 9152101W
c) 2N® Helios IP Uni 9153102
d) 2N® Helios IP Verso 9155101
e) 2N® Helios IP Vario 913716KU

were subjected to tests of protection against external mechanical impacts - IK10 and IK 08 according to ČSN EN 62262:1997 +A1:1999 and ČSN EN 60068-2-75:1999.

The evaluation of the test results is in customer’s competence.

Tested by: J. Šašek and J. Bažant

end of Test Report

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compiled by: J. Šašek