

NEK 502:2016 Amendment 1:2022

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4 **Norske tillegg og avvik til NEK IEC 60884-1**

5

Plugger og Stikkontakter for boliger og liknende bruksområder

Norske tillegg og avvik til NEK IEC 60884-1 som gjelder for plugger og stikkontakter som brukes i Norge

Denne norm, som kun er utgitt på engelsk språk, omfatter og beskriver de plugger og stikkontakter som er vanlig brukt i Norge.

Normen skal anvendes sammen med gjeldende utgave av NEK IEC 60884-1.

2,5 A 250 V Klasse II plugg, SS XVI:

Alternativ I dekkes av denne norm.

Alternativ II "Euro plugg" dekkes av NEK EN 50075, og omhandles ikke i denne norm.

2,5 A 250 V Klasse II stikkontakt (Euro stikkontakt) dekkes av denne norm.

16 A 250 V Klasse 0 og Klasse I plugger og stikkontakter dekkes av denne norm.

25 A 250 V 2P+J plugg og stikkontakt for komfyrer dekkes av denne norm.

16A 400 V 3P+N+J plugg og stikkontakt for TN nett dekkes av denne norm, SS XIX og XX

Tillegg 1 skal anvendes sammen med NEK502:2016

Etter publisering av IEC 60884-1 Ed.4 planlegges en ny utgave av NEK502.

Plugs and socket-outlets for household and similar purposes

Norwegian amendments and deviations to NEK IEC 60884-1 concerning plugs and socket-outlets being used in Norway

This standard, is published in English language only, describes and includes plugs and socket-outlets for general use in Norway.

This standard shall be used in conjunction with valid edition of NEK IEC 60884-1.

2,5 A 250 V Class II plug, SS XVI:

Alternative I is covered in this standard.

Alternative II "Euro-plug" is covered by NEK EN 50075, and is not part of this standard.

2,5 A 250 V Class II socket-outlet (Euro socket-outlet) is covered by this standard.

16 A 250 V Class 0 and Class I plugs and socket-outlets are covered by this standard.

25 A 250 V 2P+E plug and socket-outlet for power supply of cookers are covered by this standard.

16A 400 V 3P+N+E plugs and socket-outlets for TN grid only are covered by this norm, SS XIX and XX

This Am.1. shall be used together with NEK502:2016

After publication of IEC 60884-1 Ed.4, it is planned a new edition of NEK502.

6

7

8 Foreword

9 This Amendment 1 shall be used in conjunction with valid edition of NEK IEC 60884-1 and
10 NEK502:2016.

11 In addition Annex NO-1, Annex NO-2 and relevant parts of Annex NO-3 and NO-4 shall be used
12 for the products according to the following part 2 and part 3 standards:

13 NEK IEC 60884-2- series,

14 Part 2-1: Particular requirements for fused plugs,

15 Part 2-2: Particular requirements for socket-outlets for appliances

16 Part 2-3: Particular requirements for switched socket-outlets without interlock for fixed
17 installations

18 Part 2-4: Particular requirements for plugs and socket-outlets for SELV.

19 Part 2-5: Particular requirements for adaptors

20 Part 2-6: Particular requirements for switched socket-outlets with interlock for fixed electrical
21 installations

22 Part 2-7: Particular requirements for cord extension sets

23 For SELV plugs and socket-outlets according to NEK IEC 60884-2-4 Annex NO-1 and NO-2
24 are not applicable. Relevant parts of NO-3 and NO-4 shall be considered.

25 NEK IEC 60884-3- series,

26 Part 3-1: Particular requirements for SO incorporating USB power supplies

27

28 4 General requirements

29 This clause of NEK 502:2016 is applicable, except as follows:

30 Delete text within brackets in fourth paragraph.(See DE DIN 49440-1)

31

32 9 Checking of dimensions

33 This clause of NEK 502:2016 applies with the following additions

34 Add the new sub clauses:

35 **9.103** For 16A 400V 3P+N+E plugs and socket-outlets shall show compliance with Standard
36 Sheets XIX and XX are checked with the applicable gauges specified in Annex NO-2.

37

38 12 Terminals

39 This clause of NEK 502:2016 is applicable, except as follows:








40 **12.1.1** Replace the first sentence by the following:

41 2.5 A 250 V Class II portable socket-outlets (Euro socket-outlets) are not used in rewirable
42 construction

43

44 **12.2.1 Table 3**

45 Replace Table 3:

Current and type of the accessory	Rigid (solid or stranded) copper conductors ¹⁾		Flexible copper conductor	
	Nominal cross-sectional area mm ²	Diameter of the largest conductor mm *)	Nominal cross-sectional area mm ²	Diameter of the largest conductor mm *)
2,5 A and 16 A 2P and 2P+  (fixed accessory)	from 1,5 up to 2 × 2,5 inclusive	Solid: 1,9 Stranded: 2,2 (NEK-EN 60228)		
2,5 A 2P (socket-outlets intended for integration in an appliance or equipment)	from 0,5 up to 1	Solid: 1,2 Stranded: 1,4 (NEK-EN 60228)	from 0,5 up to 1	1,5 (NEK-EN 60228)
2,5A and 16 A 2P and 2P+  (portable socket-outlets)			from 1 up to 1,5 inclusive	1,8 (NEK-EN 60228)
16 A 2P and 2P+  (plugs)			from 0,75 up to 1,5 inclusive	1,8 (NEK-EN 60228)
25A 2P+  (fixed accessories)	from 4 up to 6 inclusive	Solid: 2,9 Stranded: 3,3 (NEK-EN 60228)		
25A 2P+  (plugs)			from 2,5 up to 4 inclusive	3,2 (NEK-EN 60228)
16 A 3P+N+  (fixed accessory)	from 5 X 1,5 up to 5 × 2,5 inclusive	Solid: 1,9 Stranded: 2,2 (NEK-EN 60228)		
16 A 3P+N+  (plugs)			from 1,5 up to 2,5 inclusive	2,4 (NEK-EN 60228)
*) These dimensions are only given for information				

46

47 **13 Construction of fixed socket-outlets**

48 This clause of NEK 502:2016 is applicable, except as follows:

49 Replace the subclause as follows:

50 **13.101** NOTE: Requirements for the components except switches or USB power supplies
 51 according to IEC 60884-3-1 incorporated in fixed socket-outlets are given in Annex
 52 NO-3.

53

54 **14 Construction of plugs and portable socket-outlets**

55 This clause of NEK IEC 60884-1 is applicable, except as follows:

56 **14.21** Add the following after last paragraph:

57 Rewirable plugs for class II equipment are not permitted

58

59 **14.22** Add the following after the last paragraph:

60 NOTE: Requirements for the components except switches or USB power supplies
61 according to IEC 60884-3-1 incorporated in portable socket-outlets are given in Annex
62 NO-3.

63 **19 Temperature rise**

64 This clause of NEK 502:2016 is replaced by the following:

65 For screw terminals, test is carried out according to IEC60884-1 clause 19. For all kinds of screwless
66 terminals, test is carried out according to NEK 502:2016 clause 19.

67 IEC 60884-1 is applicable with the following addition

68

69 Add after NOTE 7:

70 All products shall be tested as for normal use. Flush-mounted accessories are mounted in flush-
71 mounted boxes. The box is placed in test- assembly according to the figure NO 20 after
72 connected to the circuit according to this clause.

73 The test assembly shall be placed in a draught-free environment for the test.

74 To secure non influence of temperatures between products, only one corresponding box is
75 used in each assembly and only one L and N cable in each conduit.

76 For flush-mounted socket-outlets stranded conductors shall be used. Ref. Table 15.

77 Surface mounted socket outlets are mounted and wired on a surface according to figure NO
78 20a.

79 For surface-mounted socket-outlets solid conductors shall be used. Ref. Table 15.

80 For other type of socket outlets, mounting shall be done according to manufacturer's instructions
81 before the test is carried out or, in the absence of such an instruction, in the position of normal
82 use considered to give the most onerous conditions.

83 The test assembly shall be placed in a draught-free environment for the test.

84 Socket-outlets are tested using a test plug with brass pins having the minimum specified
85 dimensions.

86 **19.102 Temperature rise test for screwless terminals**

87 For socket-outlets for fixed installation with all kinds of screwless terminals, including Insulation
88 Piercing Terminals (IPT), the following applies:

89 An additional temperature rise test concentrated to the terminals shall take place after the
90 temperature rise test of clause 19. Test conditions according to clause 19 shall be repeated
91 on three new specimens with the following test deviations.

92 *During the test the current is not passed through the socket-outlets, but only through the same*
93 *terminals. Plugs shall **not** be inserted. The conductors are connected to the L and N terminals*
94 *of the socket-outlets. The specimens are connected in series by interconnecting conductors*
95 *that shall have a length of 1m and shall be of the same type and with the same cross-sectional*
96 *area as specified in the clause.*

97 *NOTE: Connection to be done as follows: Source terminal L to L1, L1 to L2, L2 to L3, L3 to*
98 *load terminal L. Source terminal N to N1, N1 to N2, N2 to N3, N3 to load terminal N. L1: L*
99 *terminal of specimen 1.*

100 *Conductors shall have a stripping length as specified by the manufacturer, with a minimum*
101 *additional stripping length to provide space for soldering of the thermocouples. Thin thermo*
102 *couples (Ø 0,2mm) shall be cautiously soldered to the conductors as near as possible to the*
103 *terminals, with a minimum supply of tin and heat.*

104 *An alternating current 1,125 times rated current is passed through the terminals for 336 h (14*
105 *days).*

106 *The temperature is measured on both terminals on each specimen; the temperature rise shall*
107 *be measured during the test period and shall not exceed 45 K.*

108 *Additionally, after 168h (7 days), the temperatures on each terminal are measured and shall*
109 *be used as reference temperature. For the remaining 168h (7 days), the temperature for each*
110 *sample shall not exceed a variation of +/- 2K from each reference. Care shall be taken to*
111 *ensure that, during the period of the test, including the measurements, the conductors and the*
112 *measurement devices are not moved.*

113 Add the following new sub-clause after 19.3:

114 **19.103**

115 In the case of incorporated components, e.g., fuses, switches, or surge protective devices
116 etc., the components are tested according to:

- 117 - Annex D,
- 118 - relevant parts of NEK IEC 60884-2-3,
- 119 - relevant parts of NEK IEC 60884-2-6,
- 120 - for incorporated USB power supplies according to NEK IEC 60884-3-1 or
- 121 - the relevant part of annex NO-3. For these tests the components remain as incorporated
122 in the socket outlet.

123 Fixed socket-outlets with incorporated components are tested by the following two tests:

- 124 - with a current which is equal to the test current as indicated in Table 20, for Clause 19.
125 For this test the incorporated components are short circuited or disconnected if the
126 component is powered by the socket-outlet;
- 127 - with a current which is equal to the rated current of the accessory.

128 **22 Force necessary to withdraw the plug**

129 This clause of NEK 502:2016 is applicable, except as follows:

130 Add the following new paragraph:

131

132 **22.101 Force necessary to operate the shutter when inserting the plug**

133 *The socket-outlet is fixed to a mounting plate, so that the axes of the socket-contacts are vertical and*
134 *the entry holes for the pins of the plug face upwards.*

135

136 *A test plug having the dimensions of the corresponding standard sheets according to the socket-outlet*
137 *under test shall be used.*

138

139 *The test arrangement shall be such that only the force to operate the shutter is measured.*

140

141 For socket-outlets or plugs with earth contacts, it may be necessary to remove those contacts if they
 142 can
 143 influence the test result. In that case, some additional samples may be required.
 144
 145 The test plug with a supplementary mass is oriented to align the axis of the test plug pins with the axis
 146 of
 147 the socket contacts and allowed to enter the socket contact entry holes under its own weight. To
 148 facilitate
 149 the opening of the shutter the plug may be moved from side to side in any appropriate direction.
 150
 151 The test plug and the supplementary mass exert a force equal to 30 N.
 152
 153 The test plug line and neutral pins shall touch the respective socket-contacts within 5 s.
 154
 155 An electrical indicator, with a voltage between 40 V and 50 V included, is used to show contact with
 156 the relevant part.

157 23 Flexible cables and their connection

158 This clause of NEK 502:2016 is applicable, except as follows:

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160 Replace Table 17 as follows:

Rating of accessory	Number of poles	Types of flexible cable	Number of conductors and cross-sectional area in mm ²		Limits for external dimensions for flexible cables in mm			
			Rewirable plug	Rewirable portable socket-outlet	Minimum		Maximum	
					Rewirable plug	Rewirable portable socket outlet	Rewirable plug	Rewirable portable socket outlet
For 2,5 A portable Class II socket-outlet*	2	-	-	-	-	-	-	-
16 A plugs and 16 A portable socket-outlets	2	H03VVH2-F	2 x 0,75	-	3,2x3,8	3,2x3,8	5,2x6,3	-
	2	H05VV-F	-	2 x 1,0	-	-	-	-
	2	H05VV-F	2 x 1,5	2 x 1,5	6,8	6,8	8,6	8,6
	3	H05VV-F	3G0,75	3G1,0	6,0	6,3	7,6	8,0
	3	H05RR-F	3G1,5	3G1,5	7,4	7,4	10,4	10,4
For 16A 400V plug	5	H05VV-F	5G1,5	-		-		-
	5	H05RR-F	5G2,5	-		-		-
For 25 A 250 V plug	3	H05VV-F	3G2,5	-	9,2	-	11,4	-
	3	H05RR-F	3G4	-	11,3	-	14,5	-

* 2,5A Class II plugs and portable socket-outlet (including cord sets and cord extension sets) are not allowed in rewirable construction

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162

163 Replace Table 19 as follows :

Rating of accessory	Number of poles	Types of flexible cable	Number of conductors and cross-sectional area mm ²	Maximum dimensions for flexible cables mm
For accessories with rating 2,5 A 250 V *	2	-	-	-
For accessories with rating 16 A 250 V	2	H05RN-F **	2x1,5	9,8
	3	H05RN-F **	3G1,5	10,4
For accessories with rating 16 A 400 V	5	H05RN-F **	5G1,5 5G2,5	15,3
For accessories with rating 25 A 250 V	3	H05RN-F	3G4	14,5
<p>* 2,5A Class II plugs and portable socket-outlet (including cord sets and cord extension sets) are not permitted in rewirable construction</p> <p>** H05RR-F have identical maximum dimensions</p>				

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165

166 Replace Table 20 as follows:

Rating of accessory	Rewirable fixed accessories			Rewirable portable accessories			Non-rewirable portable socket-outlets			Non-rewirable plugs		
	Nominal cross-sectional area mm ²	Test Current A		Nominal cross-sectional area mm ²	Test Current A		Nominal cross-sectional area mm ²	Test Current A		Nominal cross-sectional area mm ²	Test Current A	
		Clause 19	Clause 21		Clause 19	Clause 21		Clause 19	Clause 21		Clause 19	Clause 21
2,5 A 250 V	1,5	4	2,5	-	-	-	0,75	4	2,5	Tinsel 0,5 0,75 1	1 2,5 4 4	1 2,5 2,5 2,5
16 A 250 V	2,5	22	16	1,5	20	16	1 1,5	16 16	16 16	Tinsel 0,5 0,75 1 1,5	1 2,5 10 12 16	1 2,5 10 12 16
25 A 250 V	6	32	25	4	32	25	2,5 4	25 25	25 25	2,5 4 6	25 25 31	25 25 25
16 A 400 V	2,5	22	16	1,5	20	16	-	-	-	-	-	-

NOTE 1 Tinsel cords and flexible cables having a nominal cross-sectional area of 0,5 mm² are allowed in lengths up to 2 m only.

NOTE 2 Plugs and connectors incorporated in cord sets are tested as specified in the respective relevant standard (this standard for plugs and the IEC 60320 series for connectors), each accessory being tested independently.

NOTE 3 Portable socket-outlets with rating 2,5 A 250V shall be of non-rewirable construction

NOTE 4 Portable socket-outlets with rating 16 A 250 V the following applies:

- cross-sectional area of 0,75 mm² or less are not allowed.
- cross-sectional area of 1,0 mm² are only allowed for flexible cable lengths up to 2 m.
- cross-sectional area of 1,5 mm² minimum shall be used for flexible cable lengths above 2 m.

167 **26 Screws, current-carrying parts and connections**

168 This clause of NEK 502:2016 is applicable with the following addition:

169 Note 2 Under moist conditions, metals showing a great difference of electro-chemical potential with respect to each
 170 other should not be used in contact with each other. Corrosion due to electrochemical action between dissimilar
 171 metals that are in contact is minimized if the combined electrochemical potential is below about 0,6 V.

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Annex NO-1
(normative)
Standard Sheets

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This clause of NEK 502:2016 is applicable with the following modifications:

Rename the following standard sheet as follows:

Standard Sheet XII: Outer dimensions for two-pole flush-type socket-outlets for 250 V AC

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The following additional standard sheets to NEK502:2016 sheets apply:

Standard Sheet IIIb: 16 A 250 V AC Two-pole socket-outlet with side earthing contact alternative design (for portable) with increased protection against ingress of water

Standard Sheet IVb: 16 A 250 V AC Two-pole plug with side earthing contact, alternative design (for portable) with increased protection against ingress of water

Standard Sheet VIIb 16 A 250 V AC Two-pole plug with dual earthing contacts, alternative design (for portable) with increased protection against ingress of water

Standard Sheet XIX: 16 A 400 V AC Three-pole + N socket-outlet with earth contact for TN grid only

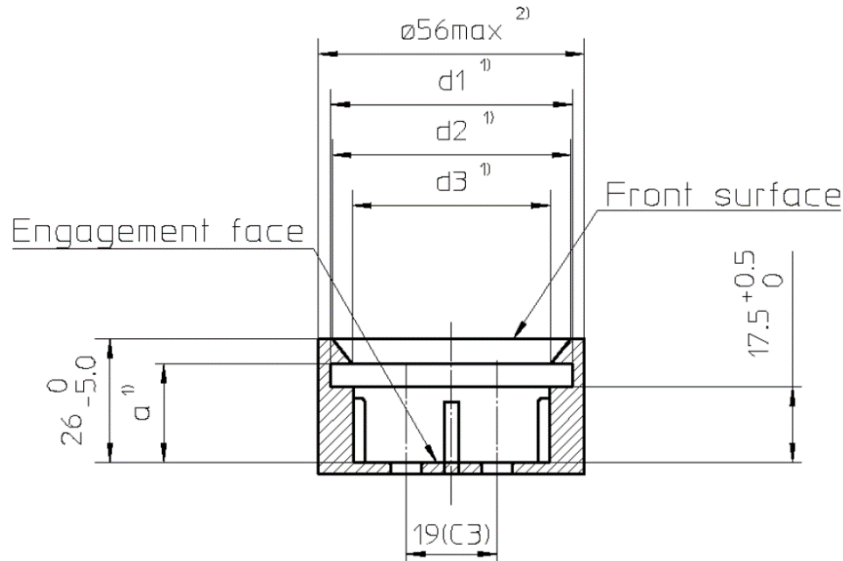
Standard Sheet XX: 16 A 400 V AC Three-pole + N plug with earth contact for TN grid only

Standard Sheet XXI Outer dimensions for Three-pole flush-type socket-outlets

187

STANDARD SHEET IIIb

16 A 250 V AC Two-pole socket-outlet with side earthing-contacts
alternative design (for portable) with increased protection against ingress of water



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192

193 The sketches are not intended to govern design except as regards the dimensions shown.

194 For other dimensions and specifications see standard sheet III.

195 It shall be possible to insert the gauge NO29 into the outlet with a force of 150 N.

196 The protection collar is removed during the tests according to clause 20, 21 and 22.

197 The IP44 test is made with and without a plug. As plug, the gauge NO30 is used. The portable socket-outlet is placed on a horizontal plane surface.

199

200 Note – IP44 without a plug inserted is only possible with an irremovable lid.

201 1) The dimensions a, d1, d2 and d3 are dependant of the material and geometry and cannot be
202 specified. They are to be defined by the manufacturer in such a way that the tests with the
203 dimension gauge and sealing gauge are passed.

204 2) This diameter may not be exceeded within a distance of 52 mm from the front surface.

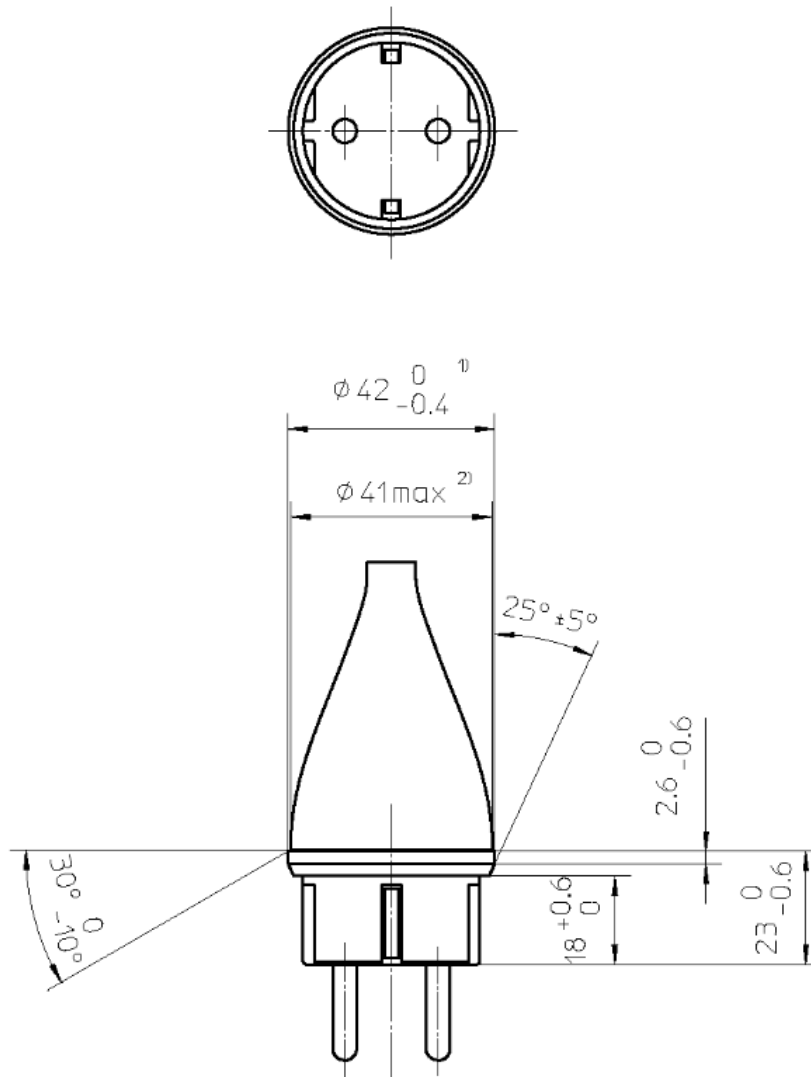
205 Dimensions in mm.

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STANDARD SHEET IVb
 16 A 250 V AC Two-pole plug with side earthing contacts
 alternative design (for portable) with increased protection against ingress of water

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209

210 For other dimensions and specifications see standard sheet IV.

211 The sketches are not intended to govern design except as regards the dimensions shown.

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213 ¹⁾This dimension is checked with gauge NO 30 and NO 31

214 ²⁾This dimension shall not be exceeded within a distance of 26 mm from the engagement face of the
 215 plug.

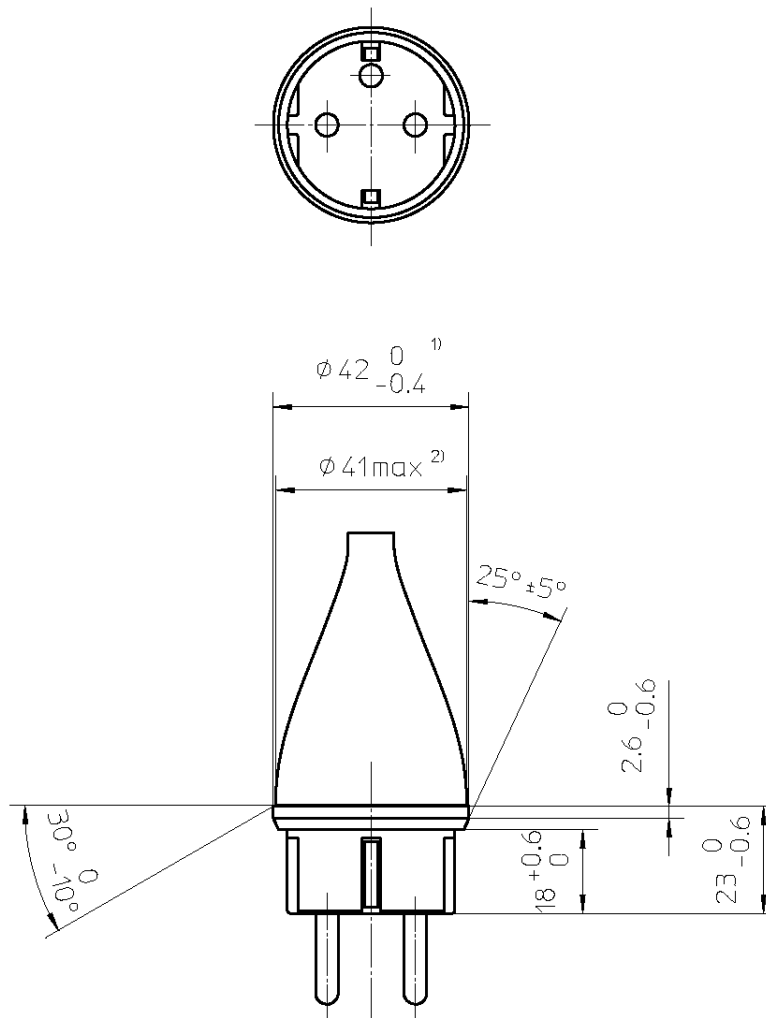
216

217 Dimensions in mm.

STANDARD SHEET VIIb

16 A 250 V AC Two-pole plug with dual earthing, alternative design (for portable)
with increased protection against ingress of water

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219

220 For other dimensions and specifications see standard sheet VII.

221 The sketches are not intended to govern design except as regards the dimensions shown.

222

223 ¹⁾This dimension is checked with gauge NO 30 and NO 31

224 ²⁾This dimension shall not be exceeded within a distance of 26 mm from the engagement face of the
225 plug.

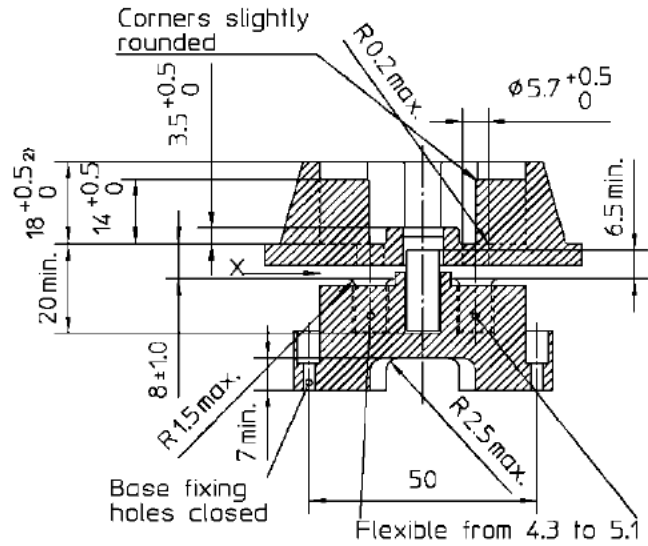
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227 Dimensions in mm.

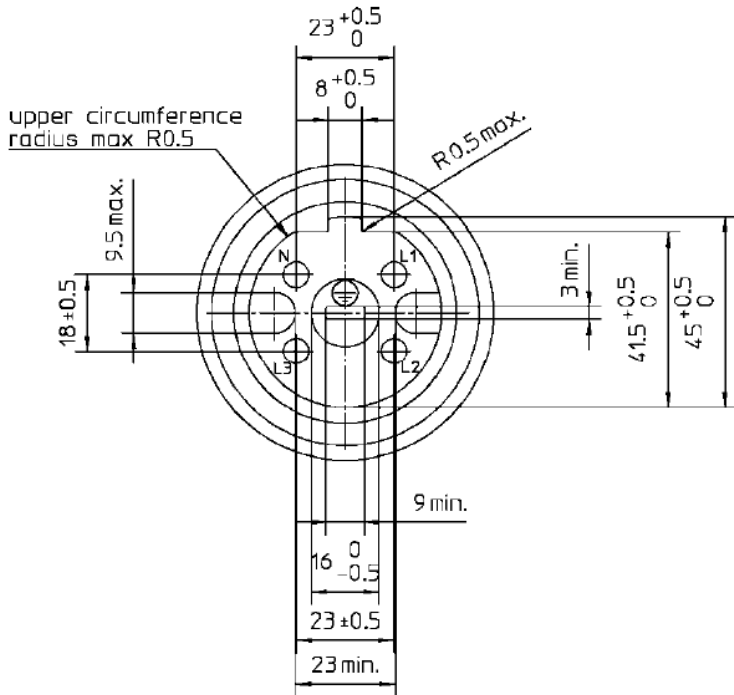
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STANDARD SHEET XIX
 16 A 400 V AC Three-pole + N socket-outlet with earth contact for TN grid only

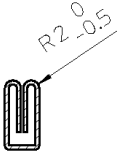
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(Only the PE contact shown)

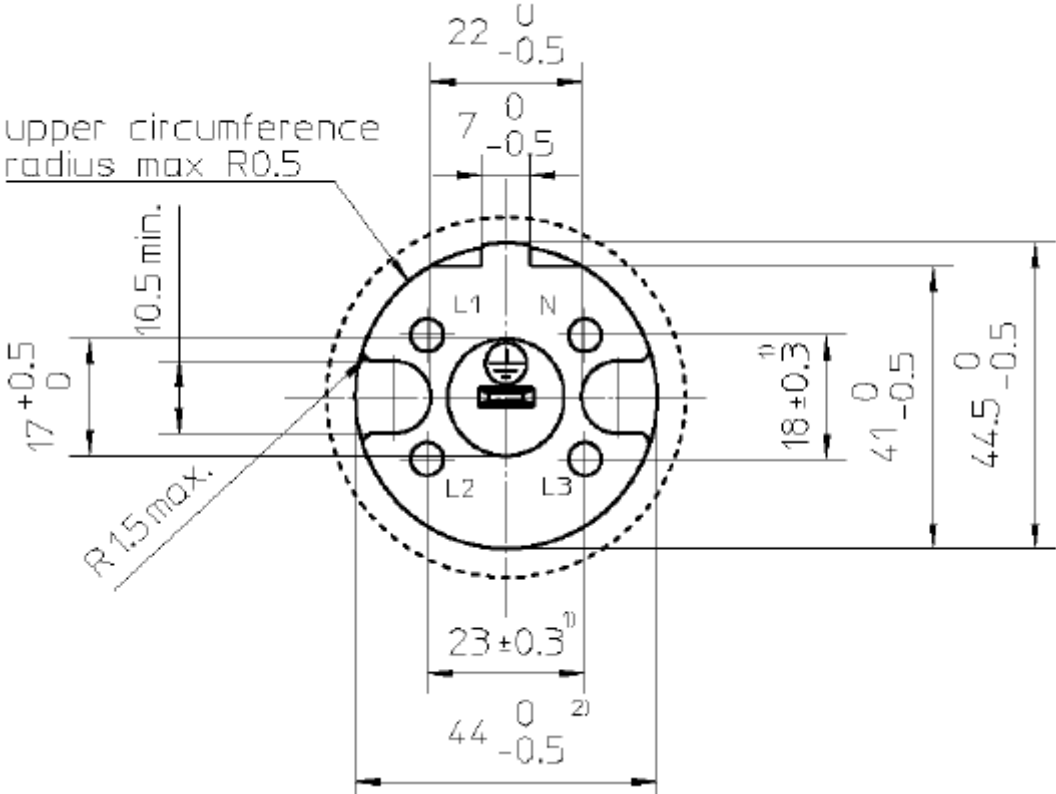


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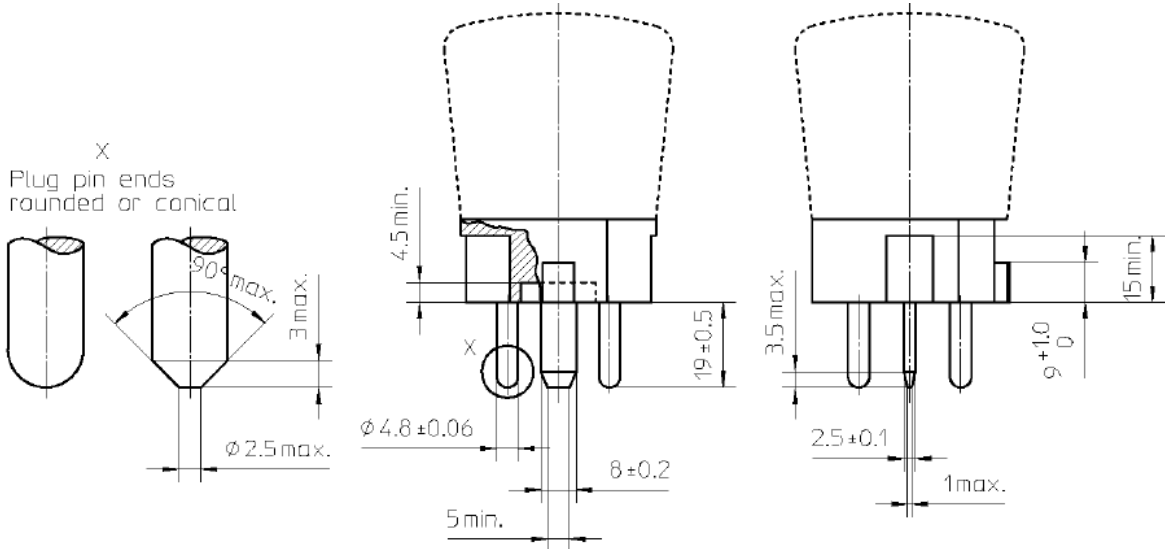
- 1) Void (not indicated in the figure)
 - 2) For interlocked outlets which are prevented from becoming live during insertion and withdrawal of the plug, the distance (18+0,5-0) can be reduced to 9 mm or if the outlet is energized by a rotation of 180°.
- Note 1 – The main part can be made with or without wiring channel at the manufacturers choice
 Note 2 – It is recommended that the non interchangeability tab on the back side of the front cover is placed on the L2 – L3 half of the socket-outlet main part.

STANDARD SHEET XX
 16 A 400 V AC Three-pole + N plug with earth contact for TN grid only

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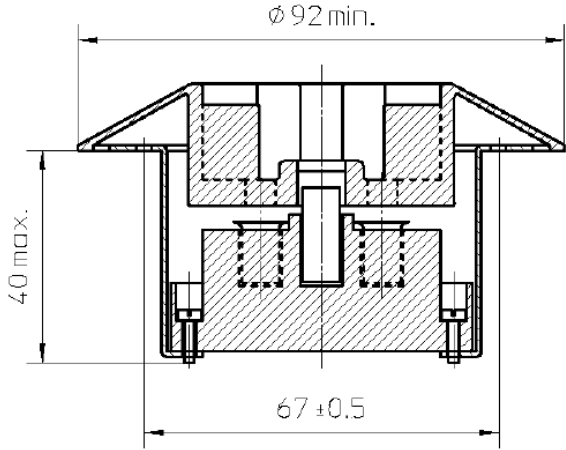
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- 1) Distance between connector pin holes.
- 2) This dimension shall not be exceeded within a distance of 19 mm from the engagement face of the plug.

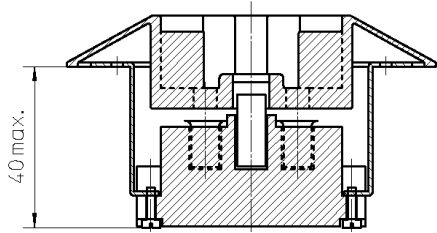
249 The sketches are not intended to govern design except as regards the dimensions shown.
 250 Dimensions in mm.

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STANDARD SHEET XXI
Outer dimensions for Three-pole flush-type socket-outlets



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Annex NO-2
(normative)
Gauges

260 This Annex NO-2 of NEK502:2016 applies with the following modification and additions:

Gauges	Test of / Test	References	
		Clause	Standard Sheet
Replace the existing Figures			
NO 2	Socket-outlets and Plugs / <i>Minimum withdrawal force</i>	9.1	I, III, VII XIX,
NO 7	Socket-outlets / <i>Distance to point of first contact</i>	9.1	I, III, XVIa, XIX
NO 7a	Void		
Add the following new gauges			
NO18a	2,5A/250V / <i>Gauge for checking impossibility of single-pole insertion of plugs</i>	10.3	XVIa
NO 28	Socket-outlets / <i>Maximum withdrawal force Three-pole + N + earth contact</i>	9.1	XIX
NO 29	Socket outlets / Gauge for checking dimensions of socket-outlets with increased protection against ingress of water	9.1	IIIb
NO 30	Socket outlets / Gauge used for test against ingress of water IP44 test	16.2.2	IIIb
NO 31	Plugs / Gauge for testing the outer diameter of plugs with increased protection against ingress of water (GO)	9.1	IVb, VIIb, XVIIIb
NO 31a	Plugs / Gauge for testing the outer diameter of plugs with increased protection against ingress of water (NO GO)	9.1	IVb, VIIb, XVIIIb
No 32	Example of test equipment for testing the outer diameter	9.1	IVb, VIIb, XVIIIb

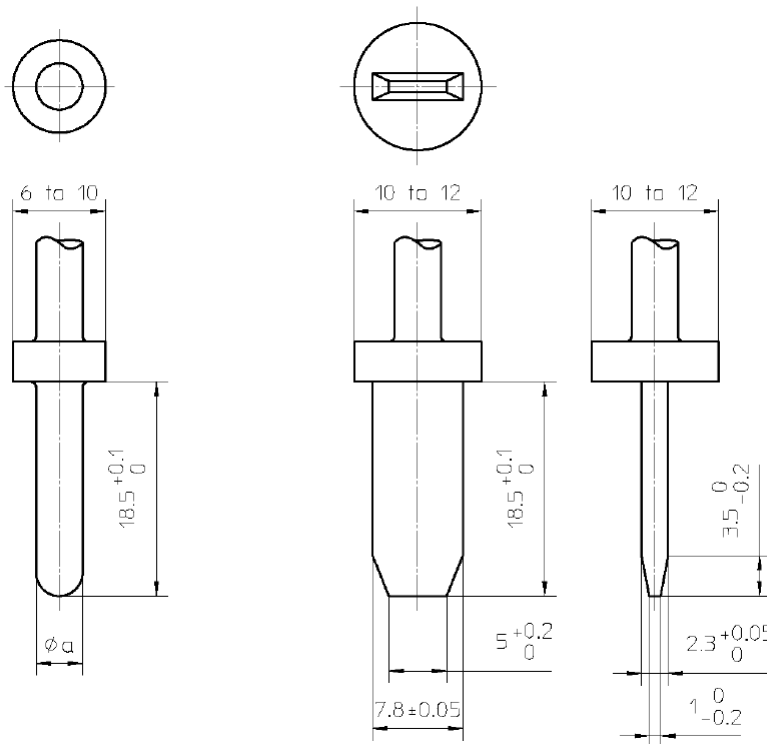
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2,5 A 250 V AC Two-pole fixed socket-outlet for plugs for Class II appliances,
 16 A 250 V AC Two-pole socket-outlet without earthing contact,
 16 A 250 V AC Two-pole socket-outlet with side earthing contact,
 16 A 400 V AC Three-pole + N socket-outlet with earth contact for TN grid only and
 16 A 250 V AC Two-pole plug with dual earthing contacts

FIGURE NO 2

Gauges C2 for checking of minimum withdrawal force

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C2A / C2B

C2C

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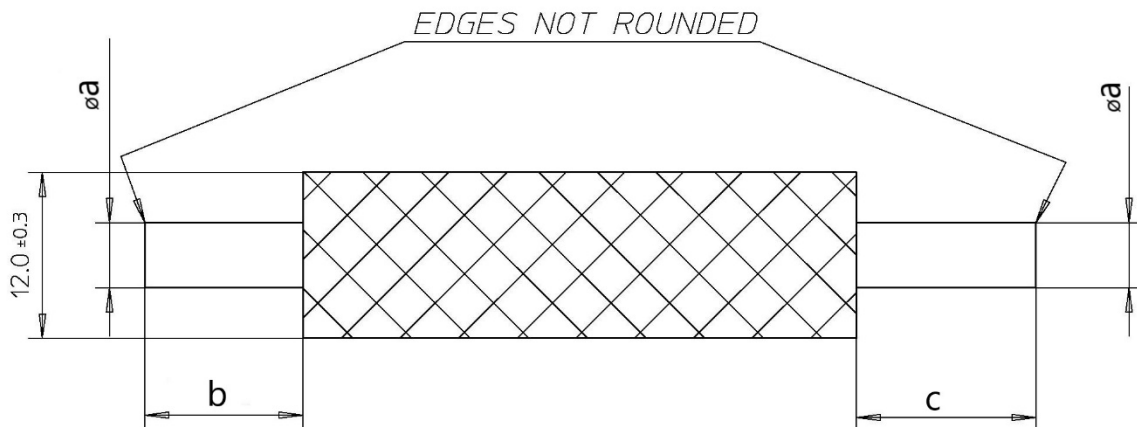
Accessory	Gauge	a	Mass (g)
2,5A socket-outlet 2P	C2A	3,8±0,05	200
16A Socket-outlet 2P and 2P+PE	C2B	4,6±0,05	
Plug 2P+PE (Standard sheet VII)		4,6±0,05	200
Socket-outlet 3P+N+PE		4,6±0,05	200
	C2C	-	300

268 The gauge shall not fall from the contact tube under its own weight within 30 seconds.

269 Dimensions in mm.

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<p>2,5 A 250 V AC Two-pole fixed socket-outlet for plugs for Class II appliances, 16 A 250 V AC Two-pole socket-outlet without earthing contact, 16 A 250 V AC Two-pole socket-outlet with side earthing contact, 16 A 400 V AC Three-pole + N socket-outlet with earth contact for TN grid only and 16 A 250 V AC Two-pole plug with dual earthing contacts</p>	<p>FIGURE NO 7</p>
<p>Gauges C7 for distance to point of first contact</p>	



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The largest of the gauges C7 A to D which will enter the entry hole for plug pins is used.
 The short pin shall not reach the contact tubes of the socket-outlet and the long pin shall touch the contact tubes when the gauge is completely inserted.
 Dimensions in mm.

Standard sheet	Gauge	Dimension a	Tolerance a	Dimension b	Dimension c	Tolerance b and c
I, III	C7A	5,45	0 -0,02	6,95	9,00	+0,05 0
I, III, XIX	C7B	5,6	0 -0,02	6,95	9,00	+0,05 0
I, III, XIX	C7C	5,75	0 -0,02	6,95	9,00	0,05 0
I, III, XIX	C7D	5,95	0 -0,02	6,95	9,00	+0,05 0
XVIa	C7E	4,7	0 -0,02	11,45	13,0	0,05 0

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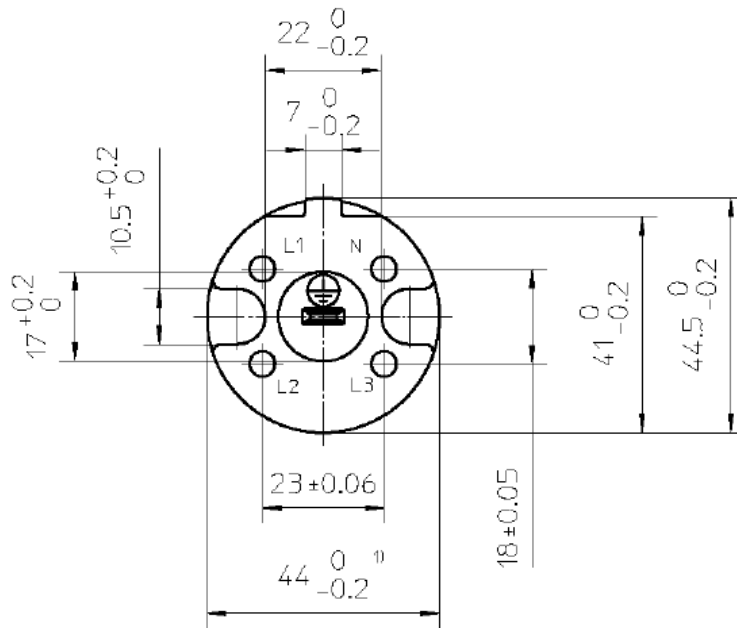
279

16 A 400 V AC Three-pole + N Socket-outlet with earth contact for TN grid only

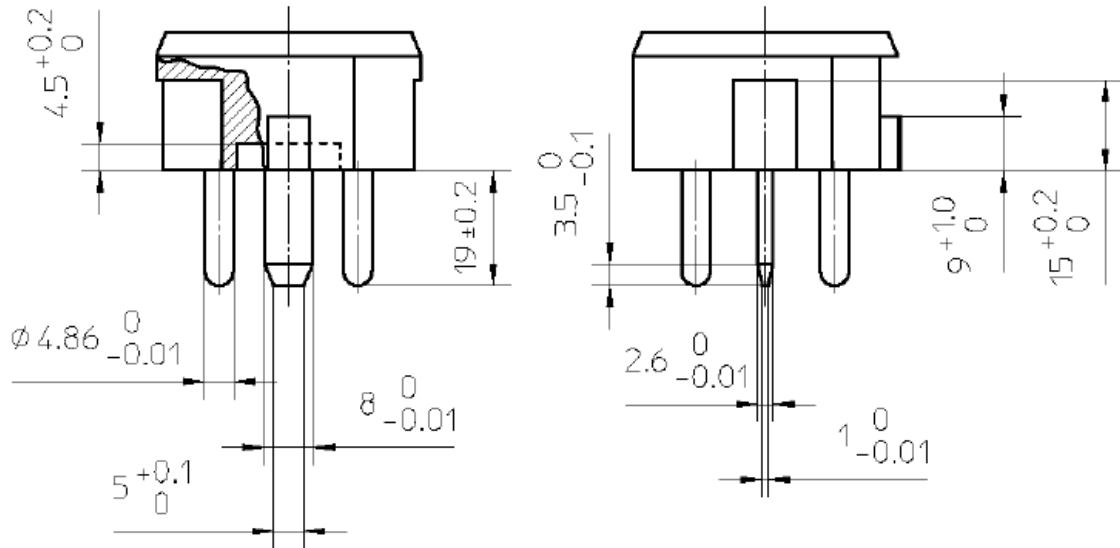
FIGURE NO 28

Gauges C2 for checking of maximum withdrawal force

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286 Dimensions in mm.

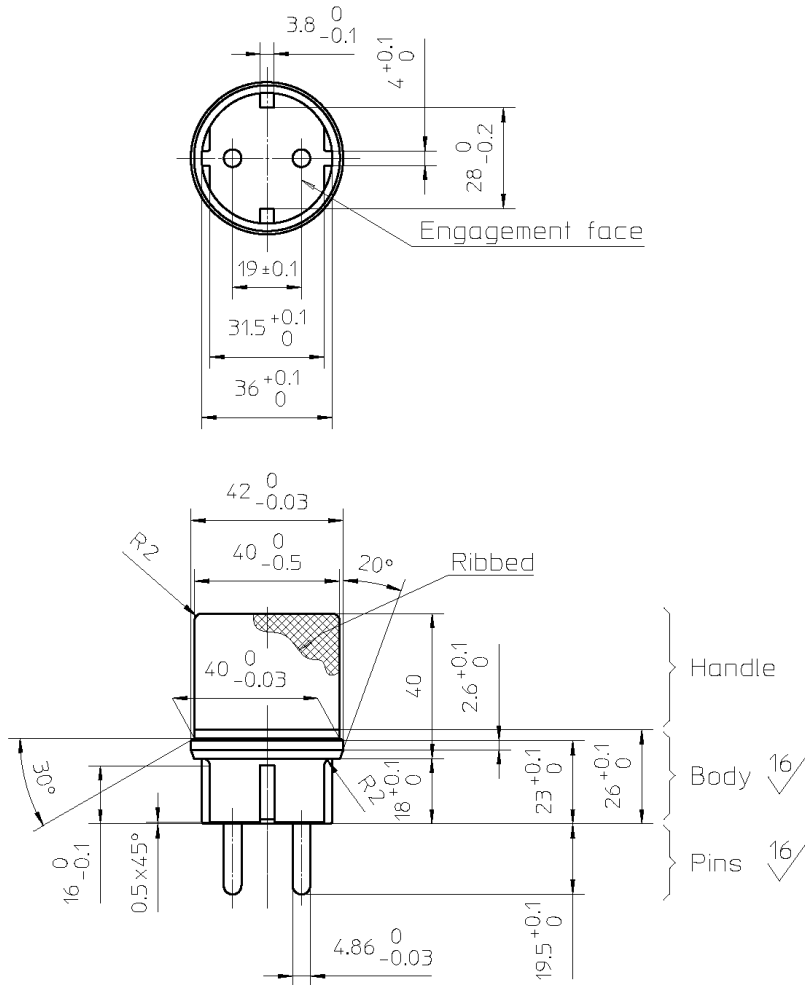
287

288

16 A/250 V Two-pole outlet with or without side earthing contacts and with increased protection against ingress of water

FIGURE NO 29

Gauge for checking dimensions of (IIIb)



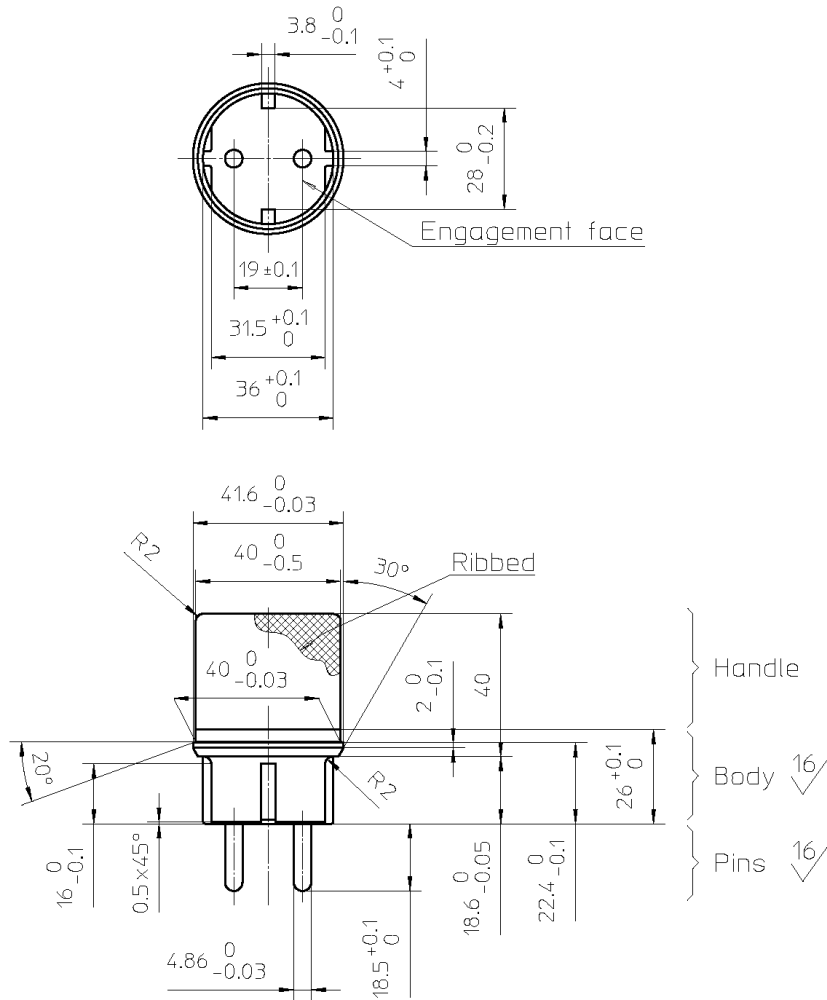
289

290

16 A/250 V Two-pole outlet with or without side earthing contacts and with increased protection against ingress of water

FIGURE NO 30

Gauge for checking dimensions of (IIIb)



291

292 The gauge NO 30 is inserted in the outlet during the testing for IP44.

293

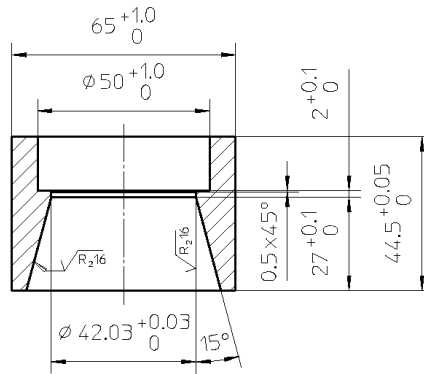
294

16 A/250 V Two-pole outlet with or without side earthing contacts or dual earthing and with increased protection against ingress of water

**FIGURE
NO 31**

Gauge for testing the outer diameter of plugs with increased protection against ingress of water

295



296

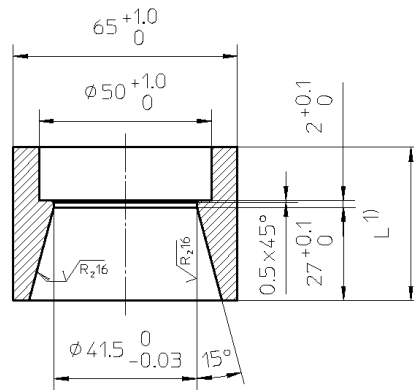
297 This gauge is used with the example of test equipment described in figure NO 32.

298

16 A/250 V Two-pole outlet with or without side earthing contacts or dual earthing and with increased protection against ingress of water

FIGURE NO 31a

Gauge for testing the outer diameter of plugs with increased protection against ingress of water



299

300 1) The dimension L is defined by the weight of the ring gauge. Estimated 45 mm.

301 The weight of the gauge is 500 +/-10g

302 This gauge is used with the example of test equipment described in figure NO 32.

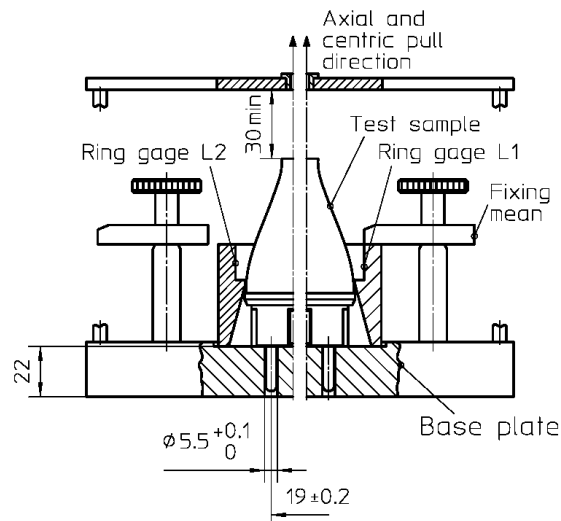
303

16 A/250 V Two-pole outlet with or without side earthing contacts and with increased protection against ingress of water

Example of test equipment for testing the outer diameter

**FIGURE
NO 32**

304



305

306 This test apparatus will be used for testing the outer diameter of the plug.

307 The ring gauge NO 31 will be fixed to the base plate during the test by the fixing mean.

308 The plug shall be possible to be pulled through the ring gauge NO 31 by a pull force of 50 N.

309 The plug shall not pass through ring gauge NO 31a. Test time 1 min.

310