

SANS 164-3:2007
Edition 1.1

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Plug and socket-outlet systems for household and similar purposes for use in South Africa

Part 3:
Conventional system, 6 A 250 V a.c.

1 Scope

This part of SANS 164 covers the rating and dimensions of the conventional 6 A 250 V a.c. plug and socket-outlet system and socket-outlet adaptors for household and similar purposes, for use in South Africa.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitutes provisions of this part of SANS 164. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this part of SANS 164 are encouraged to take steps to ensure the use of the most recent edition of the standard indicated below. Information on currently valid national and international standards can be obtained from Standards South Africa.

SANS 164-0, *Plug and socket-outlet systems for household and similar purposes for use in South Africa – Part 0: General and safety requirements.*

3 Definitions

For the purposes of this part of SANS 164, the definitions given in SANS 164-0 apply.

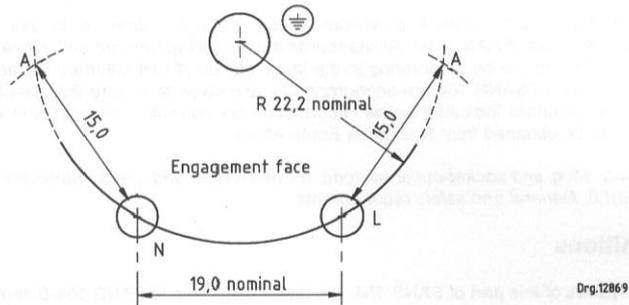
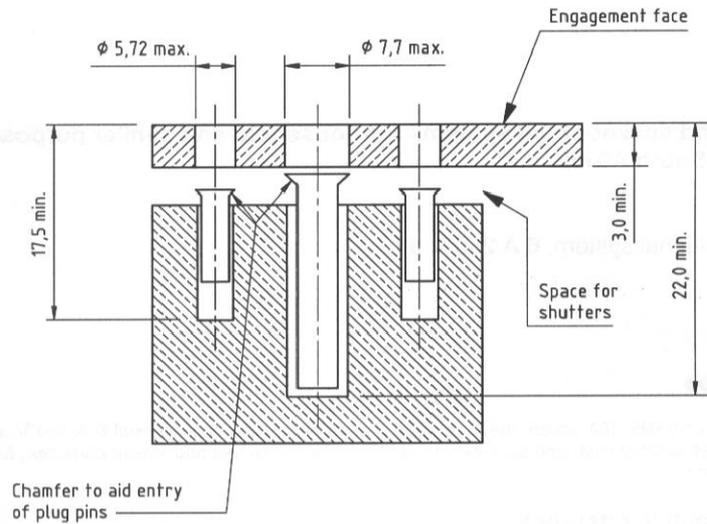
4 Requirements

- 4.1** The requirements of SANS 164-0 apply.
- 4.2** Socket-outlets, socket-outlet adaptors and rewirable plugs shall be rated at 6 A and 250 V a.c.
- 4.3** Plugs and socket-outlets shall comply with the dimensions given on the appropriate of standard sheets 3-1 or 3-2.

Use the gauges given in annexes A to F for checking the dimensions.

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Dimensions in millimetres



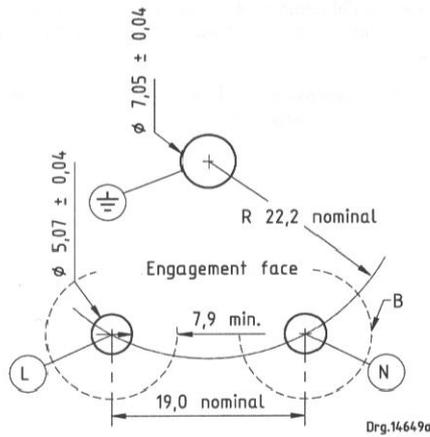
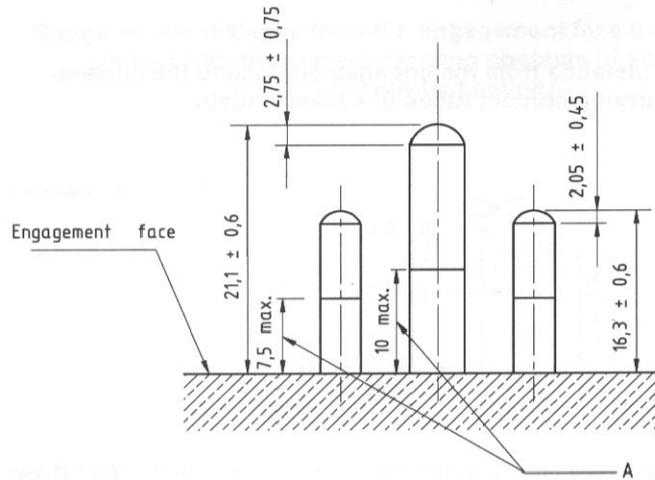
Key

- A At point A, the edge of the body of the socket-outlet shall be at least 15,0 mm from the live contact hole, to prevent single life-pin insertion.

Standard sheet 3-1 — 6 A 250 V Two-pole and earthing-contact socket-outlet

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Dimensions in millimetres



Amdt 1

Amdt 1

Amdt 1

Key

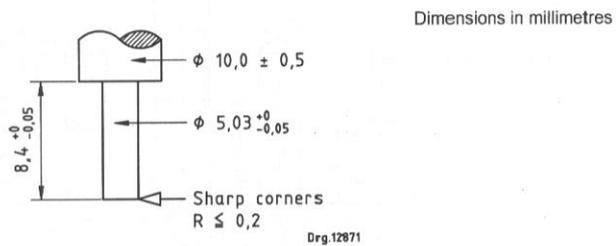
- A Maximum length of insulating sleeve
- B Minimum profile of body of plug if pins are not sleeved

Standard sheet 3-2 — 6 A 250 V Two-pole and earthing-pin plugs

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Annex A
(normative)

Gauge for the distance from the engagement face to the current-carrying contact tubes of socket-outlets



Insert the gauge as far as possible into the guidance hole of a socket-outlet, with shutters (if any) removed. Move the gauge around the periphery of the guidance hole, and ensure that it does not make contact with the socket-outlet contact tube. Indication shall be by means of a lamp connected between the gauge and the appropriate contact tube. The a.c. or d.c. voltage of the circuit shall be between 12 V and 24 V.

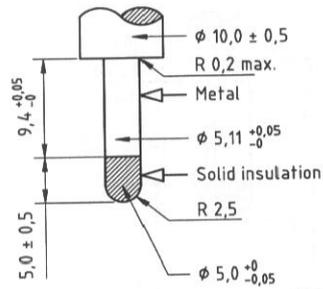
Gauges shall be made of a hard, corrosion-resistant metal such as stainless steel.

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Annex B
(normative)

**Gauge for the distance from the engagement face to the point of first contact with the current-carrying contacts of socket-outlets
(no contact gauge)**

Dimensions in millimetres



Amdt 1

Insert the gauge as far as it will go into the guidance hole of a socket-outlet. The indicator lamp described in annex A shall not light.

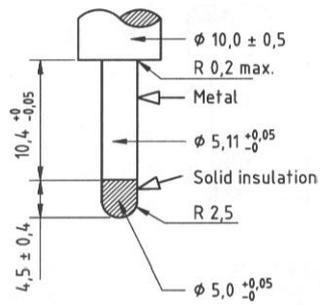
NOTE The insulated tips of the gauges are for guiding the gauges.

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Annex C
(normative)

**Gauge for the distance from the engagement face to the point
of first contact with the current-carrying contacts of socket-outlets
(contact gauge)**

Dimensions in millimetres



Amdt 1

Insert the gauge as far as it will go into the guidance hole of a socket-outlet. The indicator lamp described in annex A shall light.

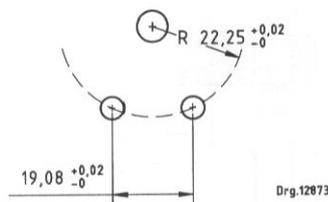
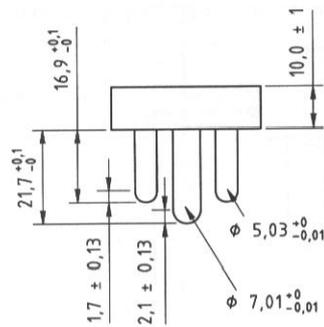
NOTE The insulating tips of gauges are for guiding the gauges.

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Annex D
(normative)

Gauge for proving that it is not possible to make a connection between a pin of a plug and a current-carrying contact of a socket-outlet while any other current-carrying pin is accessible

Dimensions in millimetres



Drg.12873

An indicator lamp as described in annex A shall be connected between a gauge plug and both socket-outlet current-carrying contact tubes. When the earth pin of the gauge plug is inserted into a sample socket-outlet, in all attitudes, the indicator lamp shall not light.

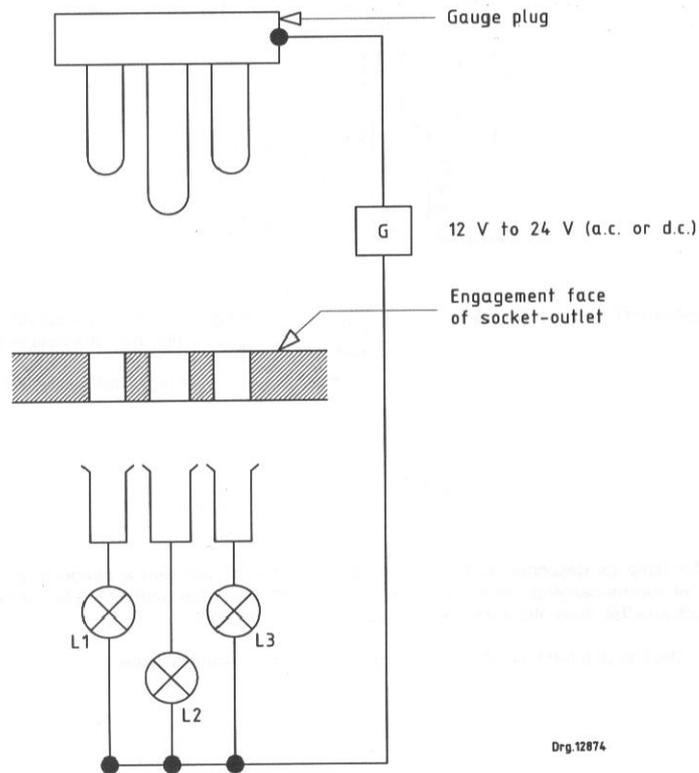
The gauge shall be of a hard, corrosion-resistant metal such as stainless steel.

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Annex E
(normative)

Gauge for proving that, during insertion of a plug, the earth pin makes a connection before either of the current-carrying pins, and that, during plug withdrawal, both current-carrying pins break connection before the earth pin (see requirements for protection against electric shock in SANS 60884-1)

Using the test plug of annex D, connect an indicator lamp as shown below.



Drg.12874

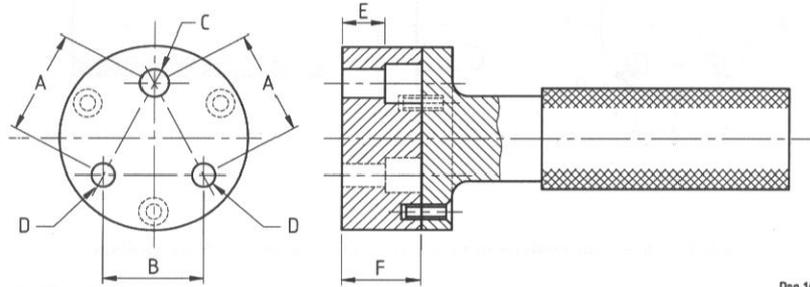
The gauge, when inserted without undue force and at any possible angle, shall cause lamp L2 to light up before either L1 or L3. When the gauge is withdrawn at any possible angle, both lamps L1 and L3 shall "go out" before lamp L2.

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Annex F
 (normative)

"GO" gauges for plugs and socket-outlets

F.1 "GO" gauge for plugs



Drg.14554

Table F.1 — Dimensions of "GO" gauge for plugs

Dimensions in millimetres									
1	2	3	4	5	6	7	8	9	10
Rated current A	A	B	Tolerance for A and B	C	D	Tolerance for C and D	E	F	Tolerance for E and F
6	22,22	19,05	± 0,03	7,22	5,23	+ 0,01 - 0,00	9,50	23	± 0,5

All plugs shall be capable of insertion into the relevant gauge without undue force.

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Annex F (continued)

F.2 "GO" gauge for socket-outlets

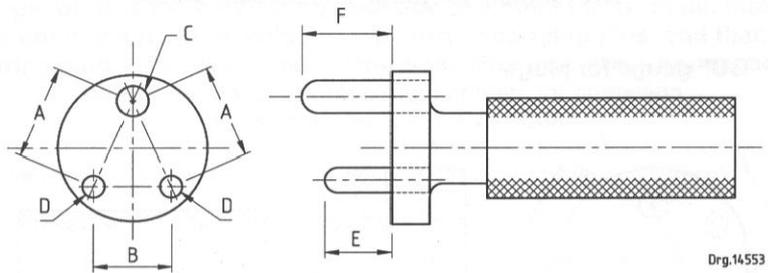


Table F.2 (a) — Dimensions of maximum "GO" gauge for socket-outlets

Dimensions in millimetres									
1	2	3	4	5	6	7	8	9	10
Rated current A	A	B	Tolerance for A and B	C	D	Tolerance for C and D	E	F	Tolerance for E and F
6	22,37	19,20	± 0,03	7,09	5,11	+ 0,00 - 0,01	17,1	21,8	+ 0,0 - 0,1

Table F.2 (b) — Dimensions of minimum "GO" gauge for socket-outlets

Dimensions in millimetres									
1	2	3	4	5	6	7	8	9	10
Rated current A	A	B	Tolerance for A and B	C	D	Tolerance for C and D	E	F	Tolerance for E and F
6	22,07	18,90	± 0,03	7,09	5,11	+ 0,00 - 0,01	17,1	21,8	+ 0,0 - 0,1

Both maximum and minimum "GO" gauges shall enter all socket-outlets without undue force.

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Bibliography

SANS 60884-1/IEC 60884-1, *Plugs and socket-outlets for household and similar purposes – Part 1: General requirements.*

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SOUTH AFRICAN NATIONAL STANDARD

**Plug and socket-outlet systems for household
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Part 3: Conventional system, 6 A 250 V a.c.

**WARNING — Can only be used
in conjunction with
SANS 164-0.**

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