

DETAIL SPECIFICATION
SPÉCIFICATION PARTICULIÈRE
BAUARTSPEZIFIKATION

CECC 75 201-804

April 1996

English version

Detail Specification:
Circular connectors
Round contacts, size diameter 1,6 mm,
threaded coupling



This CECC Detail Specification was approved on 1995-09-07.

Up-to-date lists and bibliographical references of other detail specifications relating to EN 175300:1992 may be obtained on application to the Central Secretariat or to any CENELEC member.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

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Ref. No. CECC 75 201-804:1996 E

Foreword

This Detail Specification was prepared by CLC/TC CECC/SC 48B (former WG 25), Low frequency connectors.

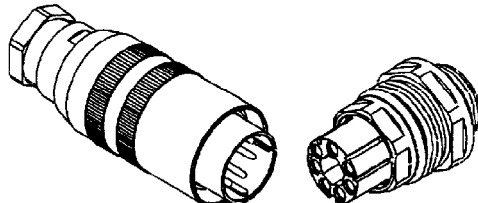
It is based on draft DIN 43651 parts 1 to 3, August 1992 and draft DIN 43563, November 1990.

It covers a range of circular connectors with round contacts, size diameter 1,6 mm, threaded coupling intended for use in industrial installations for connection or termination of sub-assemblies or components in electrical equipment or in measuring, regulating and control circuits, in equipment for power supply and other electronic devices employing similar techniques.

The text of this Detail Specification was circulated to the members of CLC/TC CECC/SC 48B and was approved for publication.

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CECC WG25: LF Connectors Specification available from the addresses shown on the blue fly sheet ELECTRONIC COMPONENTS OF ASSESSED QUALITY – DETAIL SPECIFICATION IN ACCORDANCE WITH EN 175 200: 1991	CECC 75 201-804 Issue 1 Page 3 of 49 pages
see 5 for dimensions 	1 SCOPE Detail specification for circular connectors, round contacts, size Ø 1,6 mm, threaded coupling. 6 or 11 contacts + protective earth contacts (PE) Termination: Crimp and solder Assessment levels: B and G (*)

Climatic category: see 7.1

Electrical characteristics: see 7.2

Mechanical characteristics: see 7.3

Ordering information: see 10

(*) see 8 and 9

Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00 200: (Register of Firms, Products and Services Approved under the CECC System).

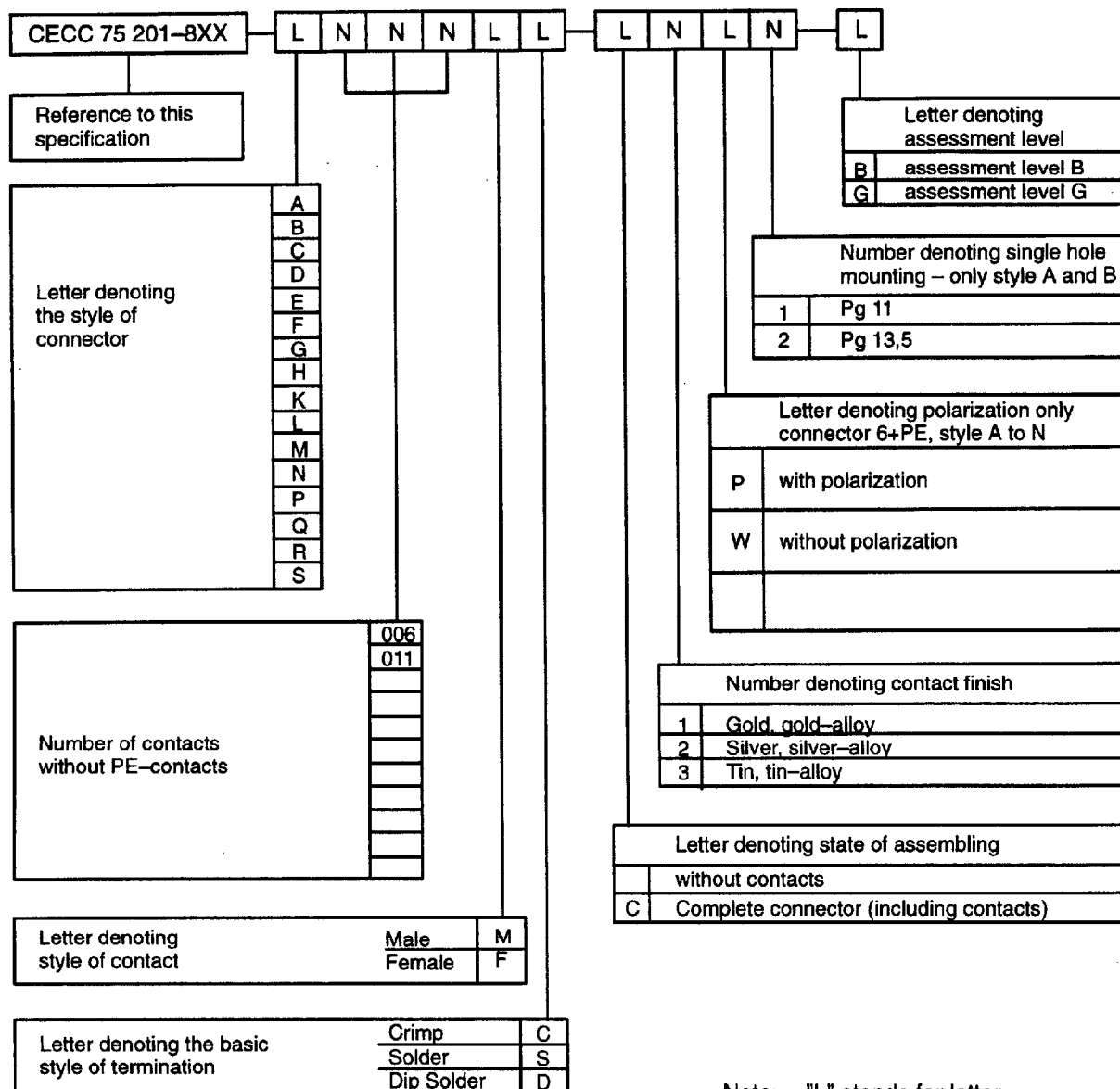
2 Related documents

The following documents contain provisions which, through reference in this text, constitute provisions of this specification. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this specification are encouraged to investigate the possibility of applying the most recent editions of the documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

EN 175 200	(1991):	(CECC 75 200, Issue 1, 1985) Circular connectors
IEC 68-1	(1988):	Environmental testing Part 1: General and guidance
IEC 352-2	(1990):	Solderless connections Part 2: Solderless crimped connections General requirements, test methods and practical guidance
IEC 410	(1973):	Sampling plans and procedures for inspections by attributes
IEC 512-1	(1984):	Electromechanical components for electronic equipment; basic testing procedures and measuring methods Part 1: General Amendment No. 1 (1988)
IEC 512-2	(1985):	Part 2: General examination, electrical continuity and contact resistance tests, insulation tests and voltage stress tests
IEC 512-3	(1976):	Part 3: Current-carrying capacity tests
IEC 512-5	(1992):	Part 5: Impact tests (free components), static load tests (fixed components), endurance tests and overload tests
IEC 512-7	(1993):	Part 7: Mechanical operating tests and sealing tests
IEC 512-8	(1984):	Part 8: Connector tests (mechanical) and mechanical tests on contacts and terminations Amendment No. 1 (1985)
IEC 512-9	(1992):	Part 9: Miscellaneous tests
IEC 529	(1989):	Degrees of protection provided by enclosures (IP code)
IEC 664-1	(1992):	Insulation co-ordination for equipment within low-voltage systems Part 1: Principles, requirements and tests
ISO 263	(1973):	ISO inch screw threads; General plan and selection for screws, bolts and nuts; Diameter range 0,06 in to 6 in
ISO 468	(1982):	Surface roughness. Parameters, their values and general rules for specifying requirements
ISO 1043-1	(1990):	Plastics; Symbols; Part 1: Basic polymers and their special characteristics
ISO 1043-2	(1990):	Plastics; Symbols; Part 2: fillers and reinforcing materials

3 Style designation

Connectors, performance level and assessment level according to this specification shall be designated by the following system:



Note: "L" stands for letter
"N" stands for number

Examples: Connector style E, having 6 male contacts with silver-alloy contact finish with crimp terminations. Complete connector without polarization but with assessment level G:
CECC 75 201-8XX-E006MC-C2W-G

Connector style A, having 11 female contacts with silver-alloy contact finish with crimp terminations. Complete connector with polarization P, single hole mounting Pg11 and assessment level B:
CECC 75 201-8XX-A011FC-C2P1-B

4 Common features

4.1 Isometric view

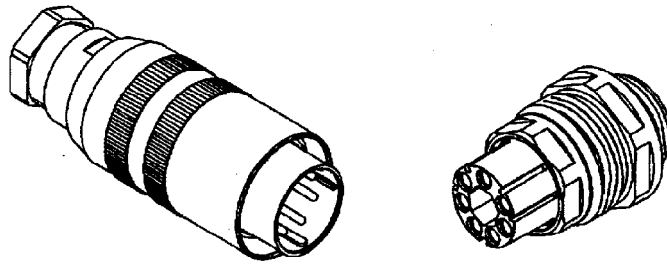


Figure 1 – Isometric view

4.2 Mating information

Arrows indicate mating direction

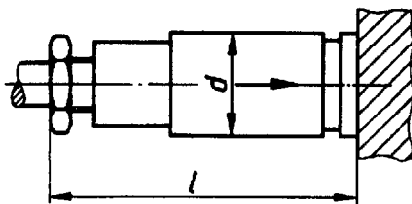


Figure 2

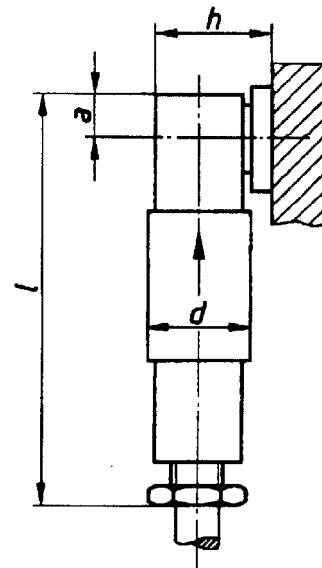


Figure 3

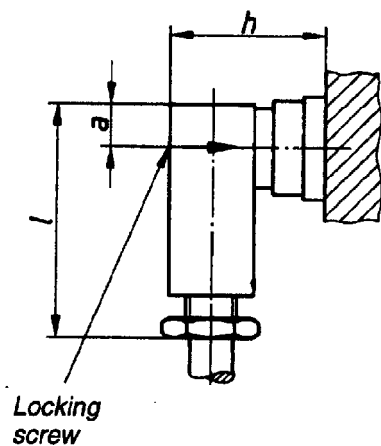


Figure 4

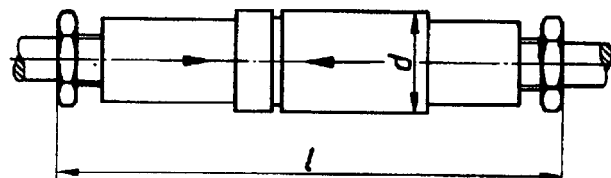


Figure 5

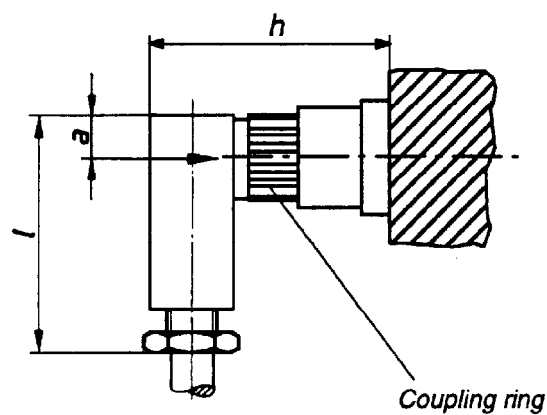


Figure 6

Table 1 – Mating dimensions of permissible styles

Figure	Combination of Styles	a max.	d	h ¹ max.	l ¹ max.
2	AM-EF AF-EM BM-EF BF-EM HM-EF HF-EM KM-EF KF-EM LM-EF LF-EM MM-EF MF-EM	–	< 30	–	105
	NM-EF NF-EM	–	< 30	–	90
	PM-RF QF-RM	–	< 29	–	96
3	CM-EF CF-EM	15	< 30	40	140
1 Dimensions in mated condition, additional space for insertion min. 15 mm					

Table 1 – Mating dimensions of permissible styles (cont'd)

Figure	Combination of Styles	a max.	d	h ¹ max.	j ¹ max.
4	AM-FF BM-FF HM-FF KM-FF LM-FF MM-FF	15	–	70	80
	NM-FF	15	–	55	80
	AF-FM BF-FM HF-FM KF-FM LF-FM MF-FM	15	–	80	80
	NF-FM	15	–	55	80
5	DM-EF	–	< 30	–	170
6	AM-GF BM-GF HM-GF KM-GF LM-GF MM-GF	15	–	75	80
	NM-GF	15	–	60	80
	AF-GM BF-GM HF-GM KF-GM LF-GM MF-GM	15	–	80	80
	NF-GM	15	–	55	80
	PM-SF QM-SF	15	–	66	90
1 Dimensions in mated condition, additional space for insertion min. 15 mm					

4.3 Survey of styles

Number of contacts: 6 + PE; 11 + PE

4.3.1 Fixed connectors

Style A

straight, single hole mounting

Variant M,
male contacts (AM)

Variant F,
female contacts (AF)

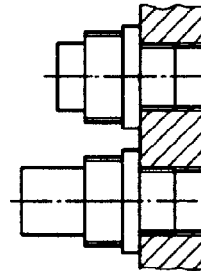


Figure 7

Style B

straight, oval flange, front mounting

Variant M,
male contacts (BM)

Variant F,
female contacts (BF)

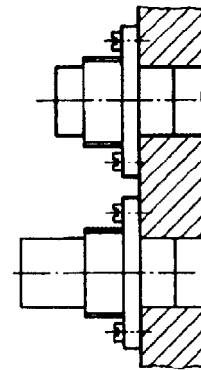


Figure 8

Style C

right angled, single hole mounting

Variant M,
male contacts (CM)

Variant F,
female contacts (CF)

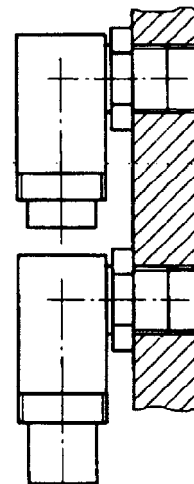
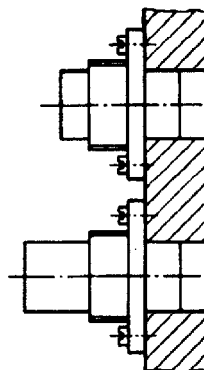


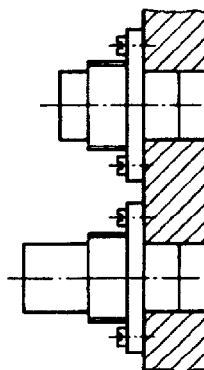
Figure 9

Style H, K and L

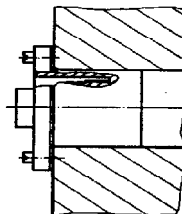
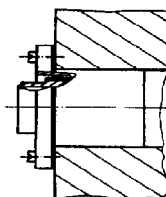
straight, square flange, front mounting

Variant M,
male contacts (HM), (KM), (LM)Variant F,
female contacts (HF), (KF), (LF)**Figure 10****Style M**

straight, rectangular flange, front mounting

Variant M,
male contacts (MM)Variant F,
female contacts (MF)**Figure 11****Style N**

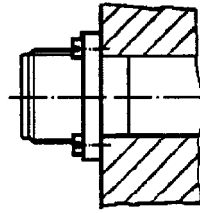
straight, oval flange, counter sink mounting

Variant M,
male contacts (NM)Variant F,
female contacts (NF)**Figure 12**

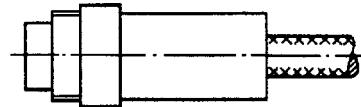
Style P and Q

square flange, front mounting

Variant M,
male contacts (PM), (QM)
(only for connection with
styles RF and SF

**Figure 15****4.3.2 Free connectors****Style D, straight**

Variant M,
male contacts (DM)
only for connection with
style EF

**Figure 13****Style E, straight with coupling ring**

Variant M¹,
male contacts (EM)

Variant F¹,
female contacts (EF), only for
connection with style DM

**Figure 14****Style R**

Variant F
female contacts (EF), only for
connection with style PM and QM

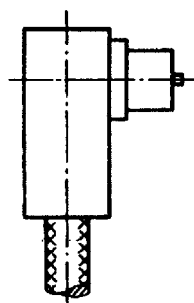
¹ Outside view of variant M and variant F are identical.

Style F

right angled, with locking screw

Variant M¹,
male contacts (FM)
only Connector 6+PE

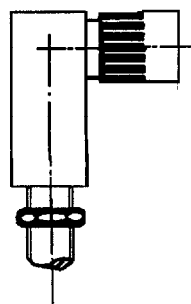
Variant F¹,
female contacts (FF)
only Connector 6+PE

**Figure 16****Style G**

right angled, with coupling ring

Variant M¹,
male contacts (GM)

Variant F¹,
female contacts (GF)

**Figure 17****Style S**

Variant F
female contacts (SF), only for
connections with Style PM
and QM

1 Outside view of variant M and variant F are identical.

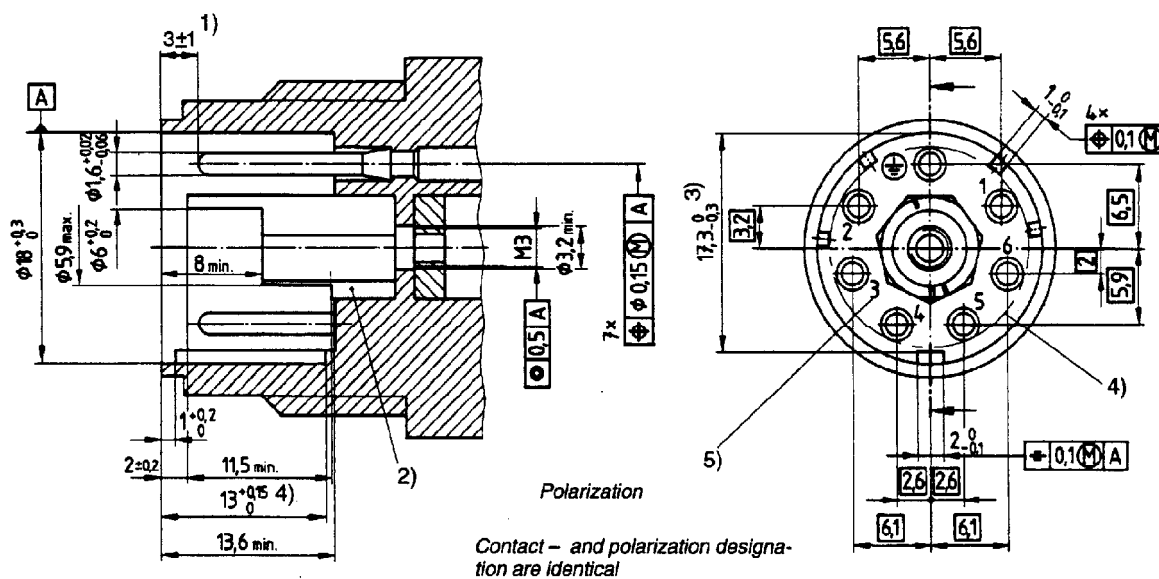
5 Dimensions

5.1 General

Dimensions in mm are original. Drawings are shown in the first angle projection. The shape of the connectors may deviate from those given in the following drawings as long as the specified dimensions are not influenced.

Missing dimensions shall be chosen according to common characteristics and the intended use.

5.2 Connectors with male contacts

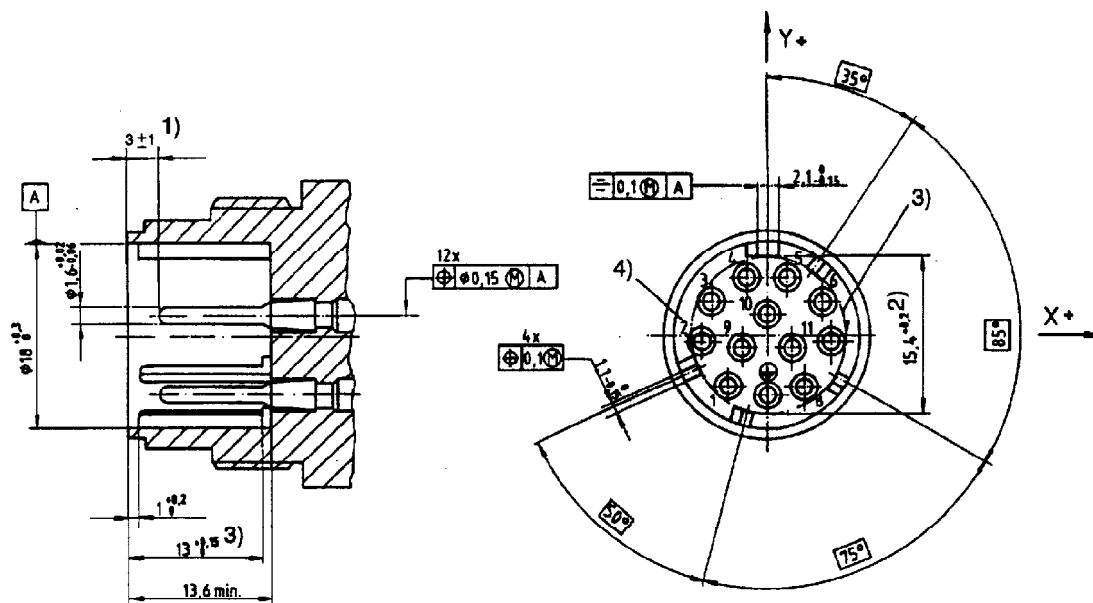


NOTES:

- 1 Including axial tolerance
- 2 Polarization optional
- 3 Dimension for 5 keys
- 4 min. 3 supporting areas on the circumference distributed.
- 5 see 5.4 and 5.5

Figure 18 – Mating dimensions, connector 6 + PE, style A to N

5.2 Connectors with male contacts (cont'd)



NOTES:

- 1 Including axial tolerance
- 2 Dimension for 5 keys
- 3 min. 3 supporting areas on the circumference distributed.
- 4 see 5.4 and 5.5

Figure 19 – Mating dimensions, connector 11 + PE, style A to N

Table 2 – Mating dimensions, connector 11 + PE

Y	mm	-5,7	-4,7	-0,5	3,4	5,4	5,4	3,4	-0,5	-4,7	-1	2	-1
X	mm	0	-3,8	-6,4	-5,5	-2	2	5,5	6,4	3,8	-2,5	0	2,5
Contact			1	2	3	4	5	6	7	8	9	10	11

5.2.1 Connector style A, straight, single hole mounting

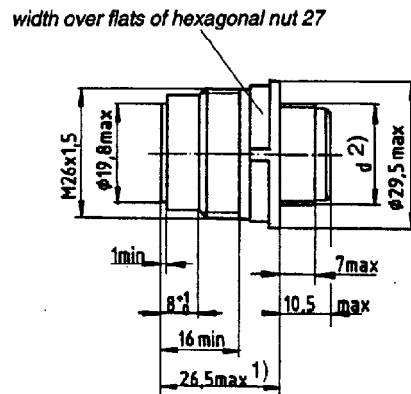


Figure 20 – Connector style A, straight, single hole mounting

5.2.2 Connector style B, straight, oval flange, front mounting

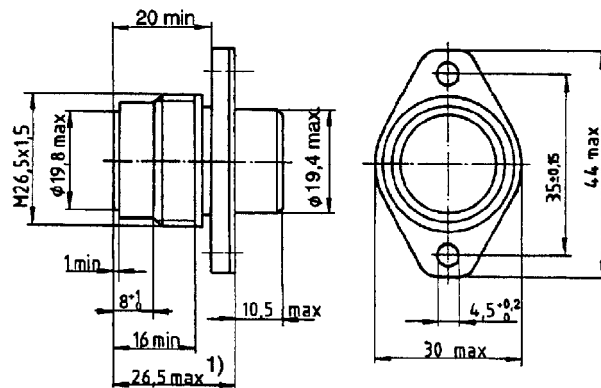


Figure 21 – Connector style B, straight, oval flange, front mounting

5.2.3 Connector style C, right angled, single hole mounting

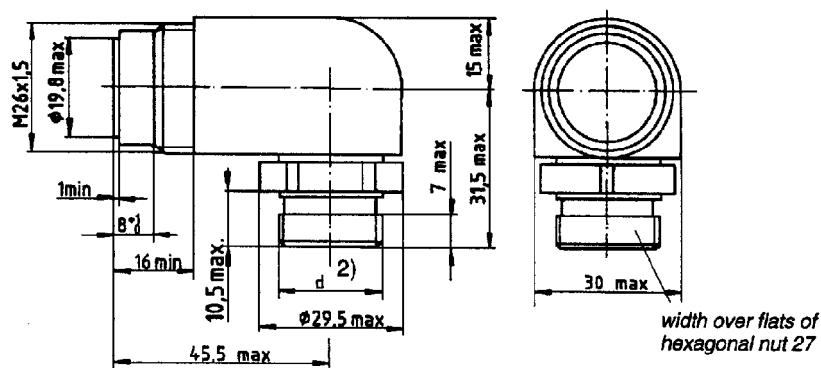


Figure 22 – Connector style C, right angled, single hole mounting

1 Dimension including gasket

2 Steel conduit thread size Pg 11 or size Pg 13,5 according to Annex A. Other sizes upon agreement.