



SLOVENSKI STANDARD
SIST EN 60130-9:2001
01-september-2001

Connectors for frequencies below 3MHz - Part 9: Circular connectors for radio and associated sound equipment (IEC 60130-9:2000)

Connectors for frequencies below 3 MHz -- Part 9: Circular connectors for radio and associated sound equipment

Steckverbinder für Frequenzen unter 3 MHz -- Teil 9: Rundsteckverbinder für Rundfunk- und verwandte elektroakustische Geräte

Connecteurs utilisés aux fréquences jusqu'à 3 MHz -- Partie 9: Connecteurs circulaires pour appareils de radiodiffusion et équipements électroacoustiques associés

<https://standards.iteh.ai/catalog/standards/sist/62dc7405-355f-4240-b4de-476adba81000/sist-en-60130-9-2001>

Ta slovenski standard je istoveten z: EN 60130-9:2000

ICS:

31.220.10 Xcā } Ácā } & Á [] ^ d !lä Plug-and-socket devices.
Connectors

SIST EN 60130-9:2001

en

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EUROPEAN STANDARD

EN 60130-9

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2000

ICS 31.220.10

Supersedes EN 60130-9:1995 + A2:1997

English version

Connectors for frequencies below 3 MHz
Part 9: Circular connectors for radio and associated sound equipment
(IEC 60130-9:2000)

Connecteurs utilisés aux fréquences
 jusqu'à 3 MHz
 Partie 9: Connecteurs circulaires pour
 appareils de radiodiffusion et équipements
 électroacoustiques associés
 (CEI 60130-9:2000)

Steckverbinder für Frequenzen
 unter 3 MHz
 Teil 9: Rundsteckverbinder für Rundfunk-
 und verwandte elektroakustische Geräte
 (IEC 60130-9:2000)

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This European Standard was approved by CENELEC on 2000-06-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Foreword

The text of document 48B/852/FDIS, future amendment to IEC 60130-9:1989, prepared by SC 48B, Connectors, of IEC TC 48, Electromechanical components and mechanical structures for electronic equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A3 to EN 60130-9:1995 on 2000-06-01.

The text of this document, together with that of IEC 60130-9:1989 and its amendments 1:1993 and 2:1995, was published by IEC as the 3rd edition of IEC 60130-9 in May 2000. According to a decision of principle taken by the Technical Board of CENELEC, the approval of EN 60130-9:1995/A3 has been converted into the approval of a new EN 60130-9.

This European Standard supersedes EN 60130-9:1995 and its amendment A2:1997.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2001-03-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-06-01

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Endorsement notice
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The text of the International Standard IEC 60130-9:2000 was approved by CENELEC as a European Standard without any modification.

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

60130-9

Troisième édition
Third edition
2000-05

**Connecteurs utilisés aux fréquences
jusqu'à 3 MHz –**

**Partie 9:
Connecteurs circulaires pour appareils
de radiodiffusion et équipements
électroacoustiques associés**

Connectors for frequencies below 3 MHz –
Part 9:
Circular connectors for radio and associated
sound equipment

**Part 9:
Circular connectors for radio and associated
sound equipment**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CONNECTORS FOR FREQUENCIES BELOW 3 MHz –

Part 9: Circular connectors for radio
and associated sound equipment

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60130-9 has been prepared by subcommittee 48B: Connectors, of IEC technical committee 48: Electromechanical components and mechanical structures for electronic equipment.

This third edition replaces the second edition of IEC 60130-9 published in 1989 and its amendments 1 (1993) and 2 (1995) and constitutes a technical revision.

The text of this standard is based on the second edition, amendments 1 and 2 and on the following documents:

FDIS	Report on voting
48B/852/FDIS	48B/864/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

Table 1

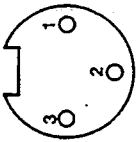
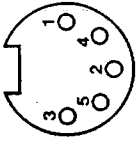
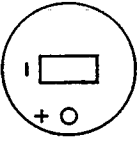
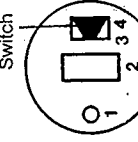
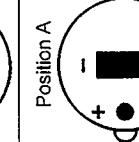
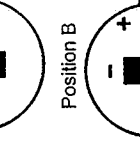
Contact arrangement	Type designation		Application	Connections				
	Male connector	Female connector		1	2	3	4	5
See note 1 	60130-9 IEC-01 Also possible in housing	60130-9 IEC-02 Also possible in housing	Microphone	Hot lead		Return lead		
	60130-9 IEC-03 Also possible in housing	60130-9 IEC-04 Also possible in housing	Microphone	Hot lead of left-hand channel	Screening; earth	Return lead of left-hand channel	Hot lead of right-hand channel	Return lead of right-hand channel
	60130-9 IEC-06	60130-9 IEC-07 60130-9 IEC-09	Record player See note 2	Hot lead		Hot lead of left-hand channel		Connected to 3
		60130-9 IEC-08 See note 4	Tape recorder See note 2	Modulating signal	See note 3	Reproducing signal	Connected to 1	Connected to 3
			Low impedance loudspeaker	Hot lead			See note 5	
	60130-9 IEC-05 See note 4		Loudspeaker connection to socket connector with or without switch					

Table 1 (continued)

Contact arrangement	Type designation		Application	Connections						
	Male connector	Female connector		1	2	3	4	5	6	7
	60130-9 IEC-10 Also possible in housing	60130-9 IEC-11 Also possible in housing	Connector for stereotape player to car radio	Modulating signal (recording)	Screening; earth See note 3	Reproducing signal (playback)	Connected to 1	Connected to 3	Return load for supply voltage	Switched supply voltage
	60130-9 IEC-12	60130-9 IEC-13	(Under consideration)							
	60130-9 IEC-14	60130-9 IEC-15 60130-9 IEC-15a	Connection between amplifier and stereo headphones	Modulating signal from demodulator (recording)	Reproducing signal to audio amplifier (playback)	Screen/earth	Switched supply voltage (max. 0,3 A)	Supply voltage	Auxiliary functions or connected to 3 or 5 for screens	
	60130-9 IEC-16 Also possible in housing	60130-9 IEC-17 Also possible in housing	Connection between mono car radio and tape recorder with power switching	Modulating signal from demodulator (recording)	Reproducing signal to audio amplifier (playback)	Screen/earth	Switched supply voltage (max. 0,3 A)	Supply voltage	Auxiliary functions or connected to 3 or 5 for screens	
	60130-9 IEC-19 Also possible in housing	60130-9 IEC-18 Also possible in housing	Connection between video tape recorder and TV receiver	(Under consideration)	(Under consideration)	(Under consideration)	(Under consideration)	(Under consideration)	(Under consideration)	(Under consideration)
	60130-9 IEC-22 60130-9 IEC-25	60130-9 IEC-23 60130-9 IEC-24	Connection between mono car radio and tape recorder with power switching	Modulating signal from demodulator (recording)	Reproducing signal to audio amplifier (playback)	Screen/earth	Switched supply voltage (max. 0,3 A)	Supply voltage	Auxiliary functions or connected to 3 or 5 for screens	
	60130-9 IEC-22 60130-9 IEC-25	60130-9 IEC-23 60130-9 IEC-24	Connection between video tape recorder and TV receiver	(Under consideration)	(Under consideration)	(Under consideration)	(Under consideration)	(Under consideration)	(Under consideration)	(Under consideration)

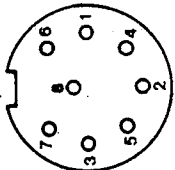
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See IEC 60268-11
(Table III)

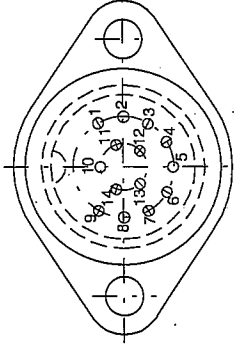
Table 1 (concluded)

Contact arrangement	Type designation		Application	Connections														
	Male connector	Female connector		1	2	3	4	5	6	7	8							
	60130-9 IEC-20 Also possible in housing 60130-9 IEC-22 60130-9 IEC-25	60130-9 IEC-21 Also possible in housing 60130-9 IEC-23 60130-9 IEC-24	For microphones in non-severe environments															

See IEC 60268-11

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Contact arrangement	Type designation		Connections													
	Male connector	Female connector	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	60130-9 IEC-26 Fixed connector	60130-9 IEC-27 Free connector	Re-verse	For-ward	(+)UB	Triac gate	Low voltage terminal	Low voltage terminal, triac A1	Focus	Triac A2	0 to 220 kΩ	0 to 220 kΩ	Megazine at zero position	Snap shutter	(-)UB	(max. +UB)
	60130-9 IEC-28 Free connector	60130-9 IEC-29 Fixed connector	Contact to 3	Contact to 3	(SELV)		Phase	Common	Contact to 3 or 13		(Lamp control circuit)		Contact to 3		(Zero volt)	(For control purposes)

CONNECTORS FOR FREQUENCIES BELOW 3 MHz –

Part 9: Circular connectors for radio and associated sound equipment

1 Scope

This standard relates to circular connectors for radio and associated sound equipment.

The design of the connectors is such that they are suitable for use with apparatus where IEC safety requirements according to IEC 60065: Audio, video and similar electronic apparatus – Safety requirements, apply.

2 IEC type designation

Connectors according to this standard shall be designated by:

- a) the reference to this standard: 60130-9 IEC;
- b) a serial number (see table 1).

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3 Contact arrangements and connections (standards.iteh.ai)

The contact arrangements and the connections of each type of connector are shown in table 1.

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NOTE 1 The contact pattern and the connections of the connectors are specified in table 1. The numbering of the contacts is shown as seen on the mating face of the female connector, unless otherwise indicated.

NOTE 2 The same connectors are used for monaural and stereophonic systems.

NOTE 3 In normal cases, it is recommended to connect the shell of the plug to terminal 2 of the connector to ensure that the screen is earthed.

In special cases, however, it may be necessary to separate the screen from earth.

The screen is then connected to the contact spring which is in contact with the protective collar of the male connector, but this termination is not shown.

NOTE 4 The male connector Type 05 can be inserted in a female connector Type 08 in either of the two positions A or B (see annex C).

The switch is actuated by the short round pin 1, when the male connector is inserted in position B.

The construction of the switch shall be such that it opens properly when the round pin is inserted and spring 4 is in contact with the pin. In this position, there shall be no connection between contact 3 and the round pin.

NOTE 5 The use of the socket connector with switch and its circuitry depend upon the switching function which is to take place when the male connector is inserted.

The circuitry shown in annex C is suggested to illustrate the use of the switch.

4 Dimensions

The dimensions in millimetres are original.

Dimensions and tolerances are given in tables 2 up to and including 33.

The size and suspension system of the sockets shall be such that the insertion and withdrawal forces are in accordance with the requirements given in clause 8.

It shall be impossible to insert a wire having a diameter of 1 mm (0,04 in) either in the entry of female contacts or in the interior of the connector.

All female connectors shall have solder tags accommodating two wires having a diameter up to 0,64 mm (0,025 in).

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FREE CONNECTOR, THREE MALE CONTACTS, FOR MICROPHONE

60130-9 IEC-01

Numbering of contacts seen at the mating face

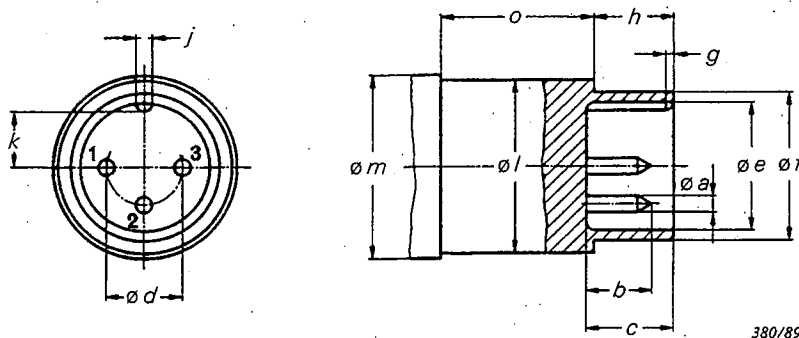
The millimetre dimensions are original dimensions

Figure 1

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Table 2

Reference	mm		in	
	Max.	Min.	Max.	Min.
$\varnothing a$	1,5	1,46	0,059	0,057
b	8,5	7,5	0,335	0,295
c	9,3	8,8	0,366	0,346
$\varnothing d$	7,05	6,95	0,278	0,274
$\varnothing e$	12,4	12,1	0,488	0,476
$\varnothing f$	13,6	13,1	0,535	0,516
g	1	—	0,039	—
h	9	8,5	0,354	0,335
j	2,4	2,2	0,095	0,087
k	4,9	4,55	0,193	0,179
$\varnothing l$	16,5	—	0,650	—
$\varnothing m$	18	—	0,709	—
o	—	15	—	0,591

First angle projection

Date: 1989

**FIXED CONNECTOR, THREE FEMALE CONTACTS,
FOR SOUND EQUIPMENT**

60130-9 IEC-02

Numbering of contacts seen at the mating face

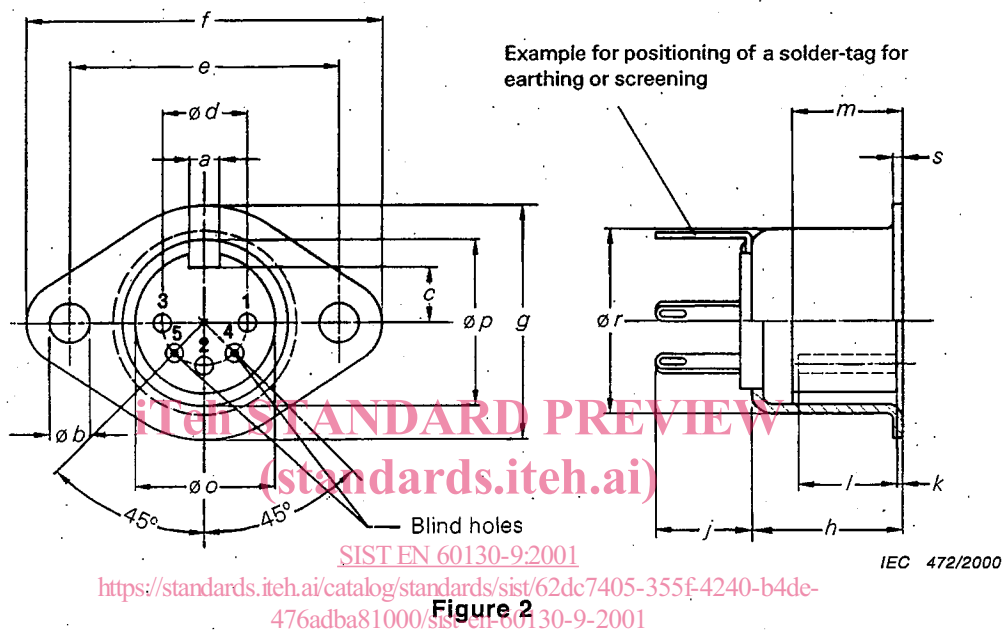
The millimetre dimensions are original dimensions


Table 3

Reference	mm		in	
	Max.	Min.	Max.	Min.
a	2,7	2,5	0,106	0,098
$\varnothing b$	3,3	3,2	0,130	0,126
c	4,5	—	0,177	—
$\varnothing d$	7,05	6,95	0,278	0,274
e	22,3	22,1	0,878	0,870
f	29	—	1,142	—
g	19	—	0,748	—
h	12,6	11,9	0,496	0,469
j	8	—	0,315	—
k	1	—	0,039	—
l	—	8,7	—	0,343
m	—	9	—	0,354
$\varnothing o$	11,8	11,6	0,465	0,457
$\varnothing p$	14,0	13,8	0,551	0,543
$\varnothing r$	16,2	—	0,638	—
s (metal)	1,3	1,0	0,051	0,039
s (plastic)	3,4	3,0	0,134	0,118

First angle projection

Date: 1989

**FREE CONNECTOR, FIVE MALE CONTACTS, FOR RECORD PLAYER
AND TAPE RECORDER**

60130-9 IEC-03

Numbering of contacts seen at the mating face

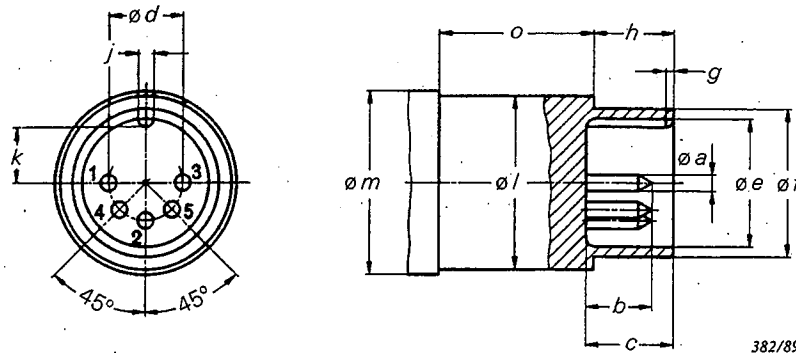
The millimetre dimensions are original dimensions


Figure 3

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Table 4

Reference	mm		in	
	Max.	Min.	Max.	Min.
$\varnothing a$	1,5	1,46	0,059	0,057
b	8,5	7,5	0,335	0,295
c	9,3	8,8	0,366	0,346
$\varnothing d$	7,05	6,95	0,278	0,274
$\varnothing e$	12,4	12,1	0,488	0,476
$\varnothing f$	13,6	13,1	0,535	0,516
g	1	—	0,039	—
h	9	8,5	0,354	0,335
j	2,4	2,2	0,095	0,087
k	4,9	4,55	0,193	0,179
$\varnothing l$	16,5	—	0,650	—
$\varnothing m$	18	—	0,709	—
o	—	15	—	0,591

First angle projection

Date: 1989