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# INTERNATIONAL STANDARD



# 1185

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

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## Road vehicles – Electrical connections between towing vehicles and towed vehicles with 24 V electrical equipment – Type 24 N (normal)

*Véhicules routiers – Liaisons électriques entre véhicules tracteurs et véhicules remorqués avec équipement électrique 24 V – Type 24 N (normal)*

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## FOREWORD

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Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 1185 was drawn up by Technical Committee ISO/TC 22, *Road vehicles*, and circulated to the Member Bodies in November 1974.

It has been approved by the Member Bodies of the following countries:

Australia	Germany	Portugal
Austria	Hungary	Romania
Belgium	Iran	Spain
Bulgaria	Ireland	Sweden
Chile	Italy	Switzerland
Czechoslovakia	Japan	Turkey
Finland	Netherlands	Yugoslavia
France	Poland	

The Member Body of the following country expressed disapproval of the document on technical grounds:

United Kingdom

This International Standard cancels and replaces ISO Recommendation R 1185-1970, of which it constitutes a technical revision.

# Road vehicles – Electrical connections between towing vehicles and towed vehicles with 24 V electrical equipment – Type 24 N (normal)

## 1 SCOPE

This International Standard establishes specifications which will permit, by means of a socket and a plug, type 24 N, interchangeability of electrical connections between towing vehicles and towed vehicles (see figure 3).

## 2 FIELD OF APPLICATION

These specifications apply to vehicles fitted with electrical equipment operating at a nominal voltage of 24 V.

## 3 GENERAL REQUIREMENTS

### 3.1 Number of necessary contacts

The essential signalling lights for road safety require seven contacts, the functions of which are as follows :

- 1 Common return.
- 2 Left-hand rear position and end-outline marker light, and rear-registration-plate illuminating device.
- 3 Left-hand direction-indicator light.
- 4 Stop lights.
- 5 Right-hand direction-indicator light.
- 6 Right-hand rear position and end-outline marker light, and rear-registration-plate illuminating device.
- 7 Braking control for trailers.

NOTE – The rear-registration-plate illuminating device shall be connected in such a manner that no lamp of such a device has a common connection with both contacts 2 and 6.

### 3.2 Arrangement of the contacts

The arrangement of the contacts is shown in figures 1 (socket) and 2 (plug).

The numbers designating the contacts correspond to those indicated in 3.1.

### 3.3 Socket

The socket shall be mounted on the rear of the towing vehicle in the case of a road train. It shall be mounted on the semi-trailer in the case of an articulated road train.<sup>1)</sup>

The socket is provided with :

6 contact pins (Nos. 2 to 7)

- 1 larger contact pin (No. 1).

Contact No. 1 shall be insulated, as are the other contacts. After fitting, contact No. 1 may be connected to the common return of the vehicle.

The rear terminals shall each be capable of receiving two conductors of at least 1,5 mm<sup>2</sup> cross-section.

The contact designations shall be permanently marked on the inside of the socket cover and on the terminal face in symbols not less than 2 mm high. These symbols, which need not necessarily be numbers, may be different from those indicated in figure 1, provided that the specified pin locations of the different functions are complied with.

The socket shall be provided with a splashproof cover which shall close automatically when the plug is disengaged. The hinged cover on the socket shall be provided with a locking lug to retain the plug when it is engaged.

All metallic parts of the socket shall be made of corrosion-resistant material or shall be adequately protected against corrosion.

1) If desired, a socket may also be mounted on the front of the trailer or on the towing vehicle in the case of an articulated road train.

**3.4 Plug**

The plug shall be mounted on the trailer in the case of a road train and on the towing vehicle in the case of an articulated road train.<sup>1)</sup>

The plug is provided with :

- 6 spring tubes corresponding to pins Nos. 2 to 7.
- 1 larger spring tube corresponding to pin No. 1.

The internal diameter of the tubes shall be such that the corresponding pins of the socket can be connected with a moderate push, but they shall ensure a good electrical contact.

The rear terminals shall each be capable of receiving one conductor of at least 2,5 mm<sup>2</sup> cross-section.

The contact designations shall be permanently marked on the terminal face in symbols not less than 2 mm high. These symbols, which need not necessarily be numbers, may be different from those indicated in figure 2, provided that the specified pin locations of the different functions are complied with.

It shall be impossible to connect pin No. 1 to any of the tubes Nos. 2 to 7.

All metallic parts of the plug shall be made of corrosion-resistant material or shall be adequately protected against corrosion.

The manufacturer shall provide means for fixing and sealing the cable.

**3.5 Allocation of cable colours**

The cable colours of the seven-core connecting cable shall be allocated to the different circuits as follows :

Contact No.	Circuit	Cable colour
1	Common return	white
2	Left-hand rear position and end-outline marker light, and rear-registration-plate illuminating device	black
3	Left-hand direction-indicator light	yellow
4	Stop lights	red
5	Right-hand direction-indicator light	green
6	Right-hand rear position and end-outline marker light, and rear-registration-plate illuminating device	brown
7	Braking control for trailers	blue

**3.6 Distinguishing marking**

The 24 N connector shall be distinguished from the 24 S connector (see ISO 3731) by means of a different colouring at least of the insulating parts.

A dark and permanent colour, preferably black, shall be used for the 24 N connector.

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1) If desired, a socket may also be mounted on the front of the trailer or on the towing vehicle in the case of an articulated road train.

Dimensions in millimetres

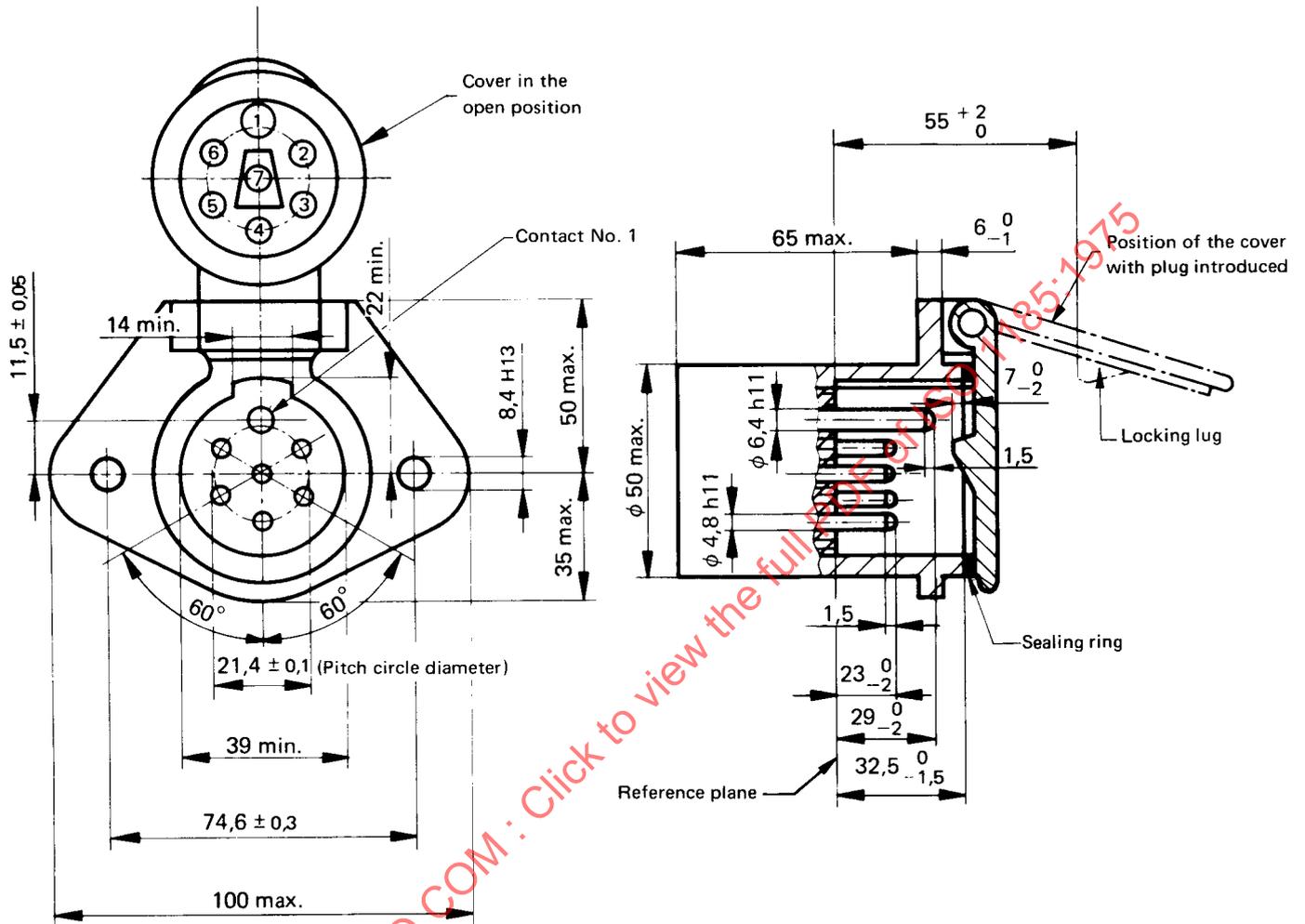


FIGURE 1 – Socket

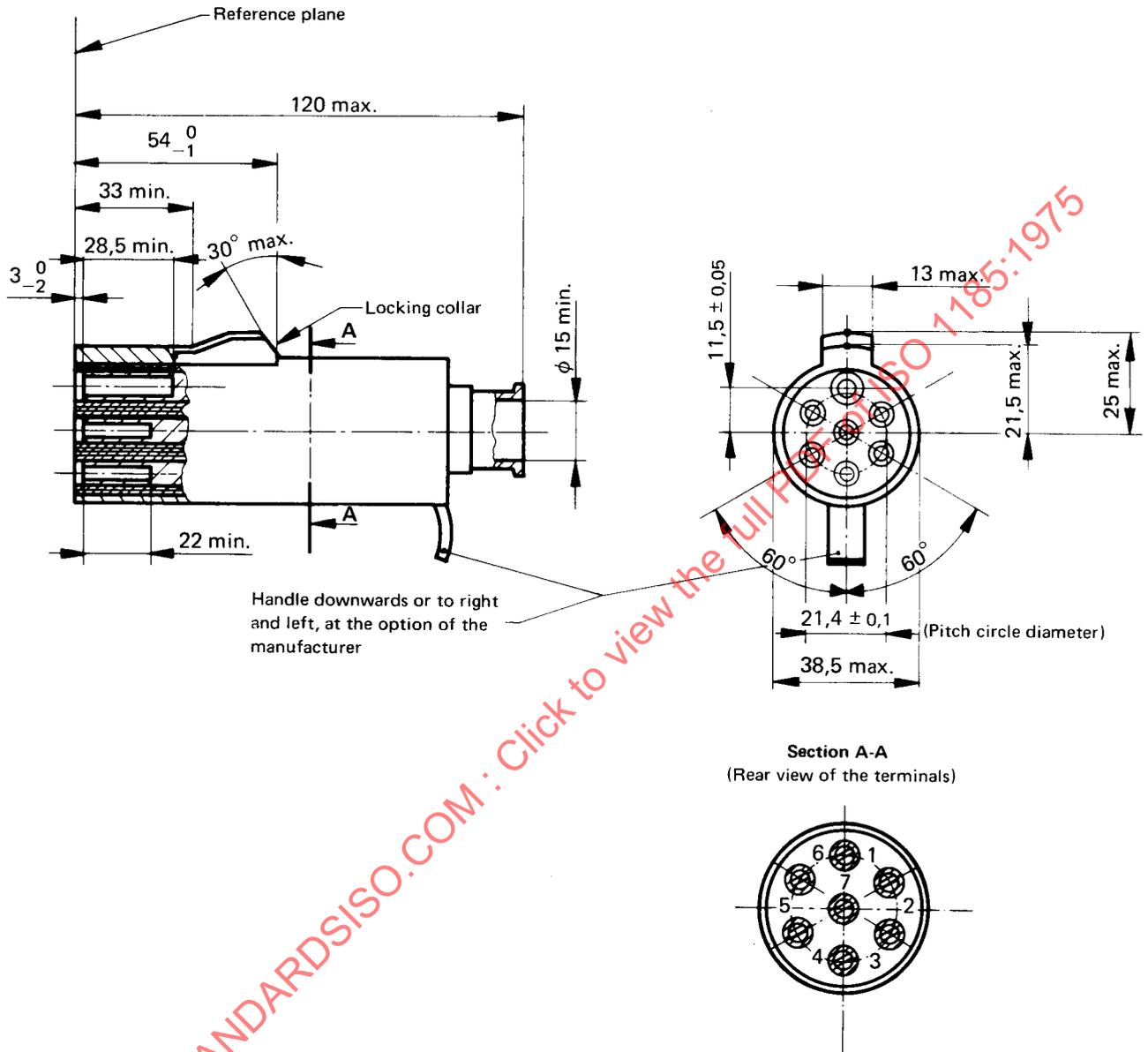


FIGURE 2 – Plug