

# UIC Code

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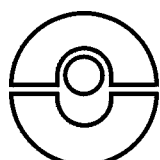
4th edition, September 2001

*Translation*

## **Connections for electric cables and air pipes on headstocks of locomotives and driving trailers**

*Accouplements pour les conduites électriques et pneumatiques sur les faces  
frontales des locomotives et des voitures pilotes*

*Kupplungseinrichtungen für die elektrischen und Druckluftleitungen an den  
Stirnseiten der Lokomotiven und Steuerwagen*



*Union Internationale des Chemins de fer  
Internationaler Eisenbahnverband  
International Union of Railways*

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# UIC



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## **Leaflet to be classified in Section :**

VI - Traction

## **Application :**

With effect from 1st July 1998

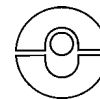
All members of the International Union of Railways

## **Record of updates**

**3rd edition, July 1998**

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*The person responsible for this leaflet is named in the UIC Code*



## Warning

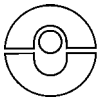
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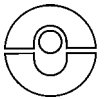
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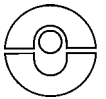
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## Summary

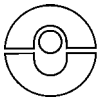
This leaflet describes the connections for electric cables and air pipes on the headstocks of locomotives and driving trailers operating in international traffic. The positioning of these connections is illustrated in appendix [A - page 5](#).



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## 1 - Scope

The regulations in this leaflet shall apply to the headstocks of electric or thermal locomotives as well as the driving cab ends of driving trailers.



## 2 - Electric cables

### o 2.1 - Electric power supply for trains

The junction box and cable outlet (or second junction box) shall be arranged in accordance with the regulations of *UIC Leaflet No. 552* (see - Bibliography - page 6). The fitting points and dimensions shown in the Appendix A - page 5 in the transverse direction shall take precedence over those referred to in *UIC Leaflet No. 552*.

If two junction boxes are used, a cable lead (male/male) of sufficient length and defined in *UIC Leaflet No. 552*, plate 4, should be carried on the locomotive or driving trailer.

### o 2.2 - Remote control and data cable

2.2.1. - Two junction boxes should be installed as shown in the Appendix A.

One cable lead (male/male) of sufficient length (at least 1,750 mm) should be carried on the locomotive or the driving trailer.

It is permissible to have one junction box plus a cable lead (minimum length 1,750 mm) on the left-hand side, in the train running direction.

The cable lead must comply with the conditions laid down in *UIC Leaflet No. 558* (see - Bibliography - page 6).

If a train bus is used, both connections should be possible (application of *UIC Leaflet No. 556* (see - Bibliography - page 6)).

2.2.2. - To take account of the front profile of driving trailers (or of certain locomotives), and if the cable lead is not long enough to satisfy all the provisions of *UIC Leaflet No. 558* and *No. 648*, extension leads should be available and carried on the driving trailers (or locomotives) in question.

### 2.3 - Electropneumatic brake cable (EP)

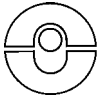
Two junction boxes should be installed as shown in the Appendix A.

A cable lead (male/male) of sufficient length (1 440 mm to 1 450 mm) shall be carried on the locomotive or the driving trailer.

It is permissible to have one junction box and a cable lead of 1 440 mm to 1 450 mm.

If a train bus is used, both connections should be possible (application of *UIC Leaflet No. 556*).

The arrangements shall be compliant with Appendix 7 to *UIC Leaflet No. 541-5* (see - Bibliography - page 6).



### 3 - Air pipes

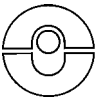
- **3.1.** - Air pipe connections shall be positioned as shown in Appendix 2a to *UIC Leaflet No. 541-1* (*see - Bibliography - page 6*).

However, the vertical distance between the horizontal plane of the buffer centre-line and the centre point of the stop cock outlet may be increased from 240 mm to 260 mm.

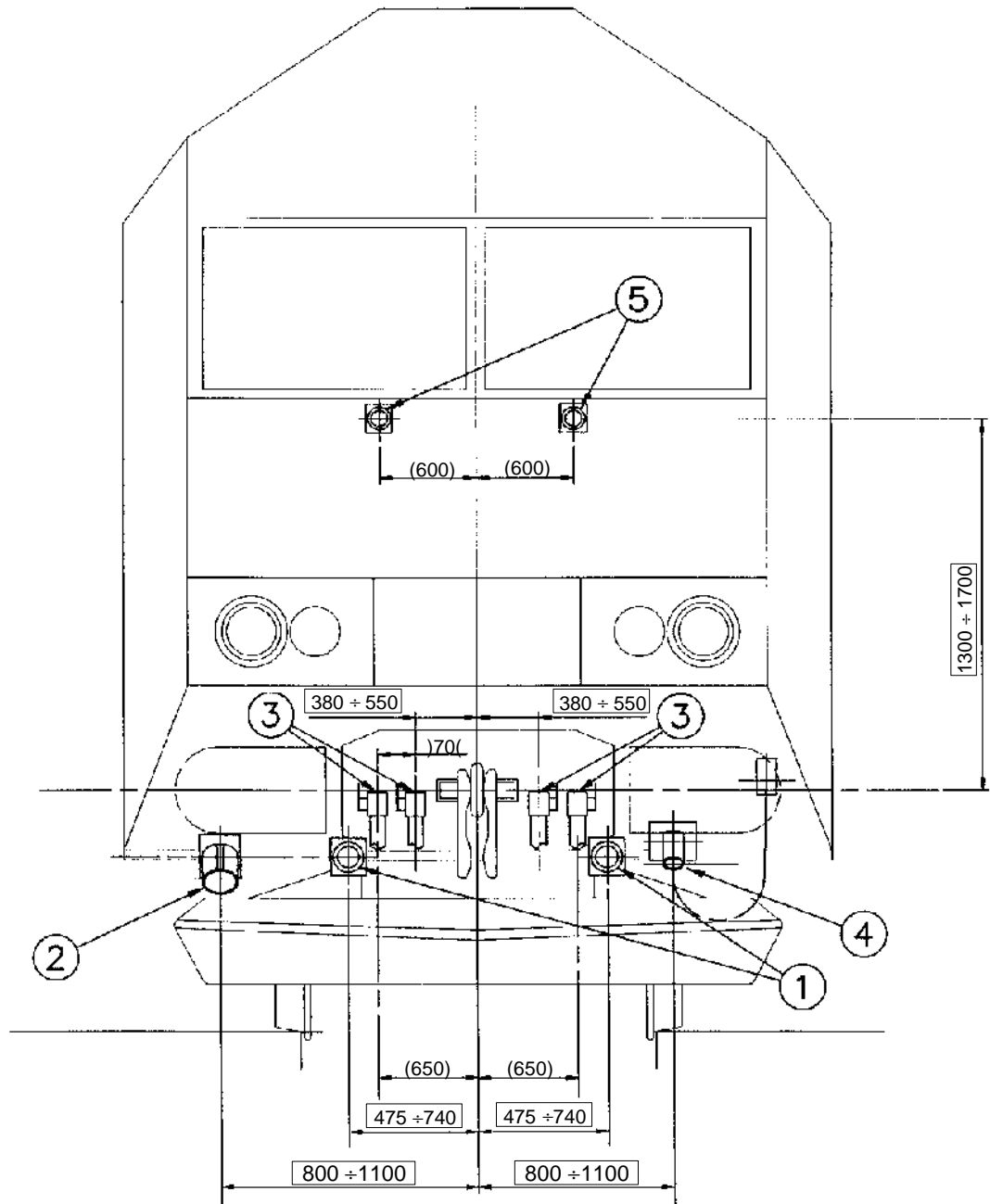
Air pipes must not be placed one directly above the other.

- 3.2.** - It is recommended that the arrangement shown in the Appendix A - *page 5* be adopted for these connections.



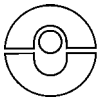


## Appendix A - Positioning of connections on the headstock



- compulsory dimensions
- ( ) maximum permissible dimensions
- ) ( minimum permissible dimensions
- x ± y dimension between x and y

- 1 - Junction boxes for the electropneumatic brake cable
- 2 - Junction box for supplying electric power to trains
- 3 - Air pipes
- 4 - Cables outlets for supplying electric power to trains
- 5 - Junction boxes for the remote control and data cable



# Bibliography

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*"Leaflet No. 541-5 - Brakes - Electropneumatic brake (Ep Brake) - Electropneumatic emergency brake override (EBO)", 2nd edition of 01-01-97*

*"Leaflet No. 552 - Electrical power supply for trains - Standard technical characteristics of the train cable", 9th edition of 01-01-97*

*"Leaflet No. 556 - Transmission of information via a central data cable (train bus)", 1st edition (to be published)*

*"Leaflet No. 558 - Remote control and data cable - Standard technical features for the equipping of RIC coaches", 1st edition of 01-01-96*

*"Leaflet No. 568 - Loudspeaker and telephone systems in RIC coaches - Standard technical features for equipping RIC coaches", 3rd edition of 01-01-96*

## 2. Minutes of meetings

### International Union of Railways

*"Sub-Committee 5A for Motive Power Units - Question 5AFIC - Approval of Leaflet 648 "Connections for electric cables and air pipes on headstocks of locomotives and driving trailers"", Paris, January 1998*

*"Rolling Stock Committee - Question 5AFIC - Approval of Leaflet 648 "Connections for electric cables and air pipes on headstocks of locomotives and driving trailers"", Paris, April 1998*