INTERNATIONAL STANDARD

ISO 9534

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Road vehicles — Fuel pump electric connections

Véhicules routiers — Connexions électriques de pompes à carburant

Reference number
ISO 9534 : 1989 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 9534 was prepared by Technical Committee ISO/TC 22, *Road vehicles.*

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Road vehicles — Fuel pump electric connections

1 Scope

This International Standard specifies the requirements for electric connections for electric fuel pumps used in road vehicles.

It does not apply to electric fuel pumps with free couplers, i.e. cable to cable terminations.

2 Normative references

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

ISO 3768 : 1976, *Metallic coatings — Neutral salt spray test (NSS test).*

ISO 8092-1 : 1988, *Road vehicles — Flat, quick-connect terminations — Part 1 : Tabs for single pole connections.*

ISO 8092-2 : 1988, *Road vehicles — Flat, quick-connect terminations — Part 2 : Test and performance requirements for single pole connections.*

IEC 529 : 1976, *Classification of degrees of protection provided by enclosures.*

3 Requirements

NOTE — Details not specified are left to the manufacturer's discretion.

3.1 Type A — Flat male tab terminal

3.1.1 Dimensions

Dimensions of type A terminals shall be as indicated in figure 1.

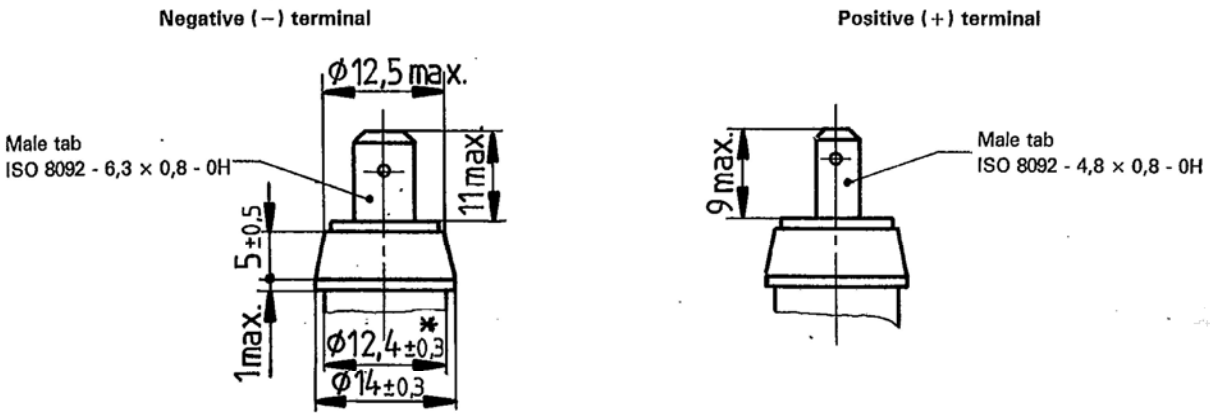
The male tabs 6,3 mm × 0,8 mm and 4,8 mm × 0,8 mm with hole, shown in figure 1, shall conform to ISO 8092-1; additionally the dimensions 11 mm max. and 9 mm max. shall be taken into account.

The dimensions indicated for the negative terminal also apply to the positive terminal with the exception of the male tab.

3.1.2 Performance characteristics

The complete flat quick-connect termination shall conform to the tests and performance requirements specified in ISO 8092-2.

Dimensions in millimetres



* Dimension required for sealing cap, if necessary.

Figure 1 — Male tab terminals

3.2 Type B — Male post terminal

3.2.1 Dimensions

Dimensions of type B terminals shall be as indicated in figure 2.

3.2.2 Sealing cap

The cylindrical insulating part of the diameter 5,7 mm ± 0,2 mm is provided to fit the sealing part of the cap.

Dimensions in millimetres

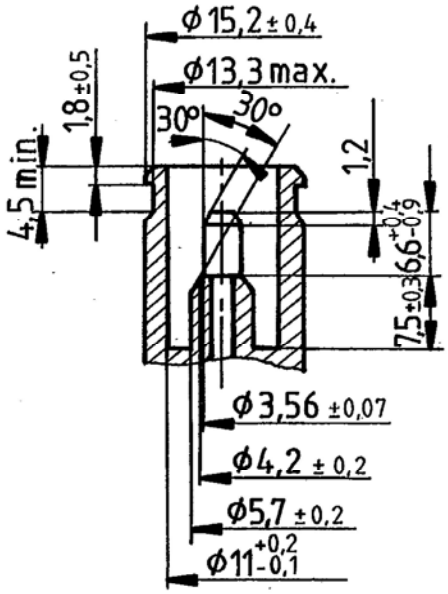


Figure 2 — Male post terminal

3.3 Type C — Screw bolt terminal

NOTE — This type is preferred for fuel pumps to be mounted inside the fuel tank.

3.3.1 Dimensions

Dimensions of type C terminals shall be as indicated in figure 3.

The dimensions indicated for the negative terminal also apply to the positive terminal with the exception of the screw bolt.

Dimensions in millimetres

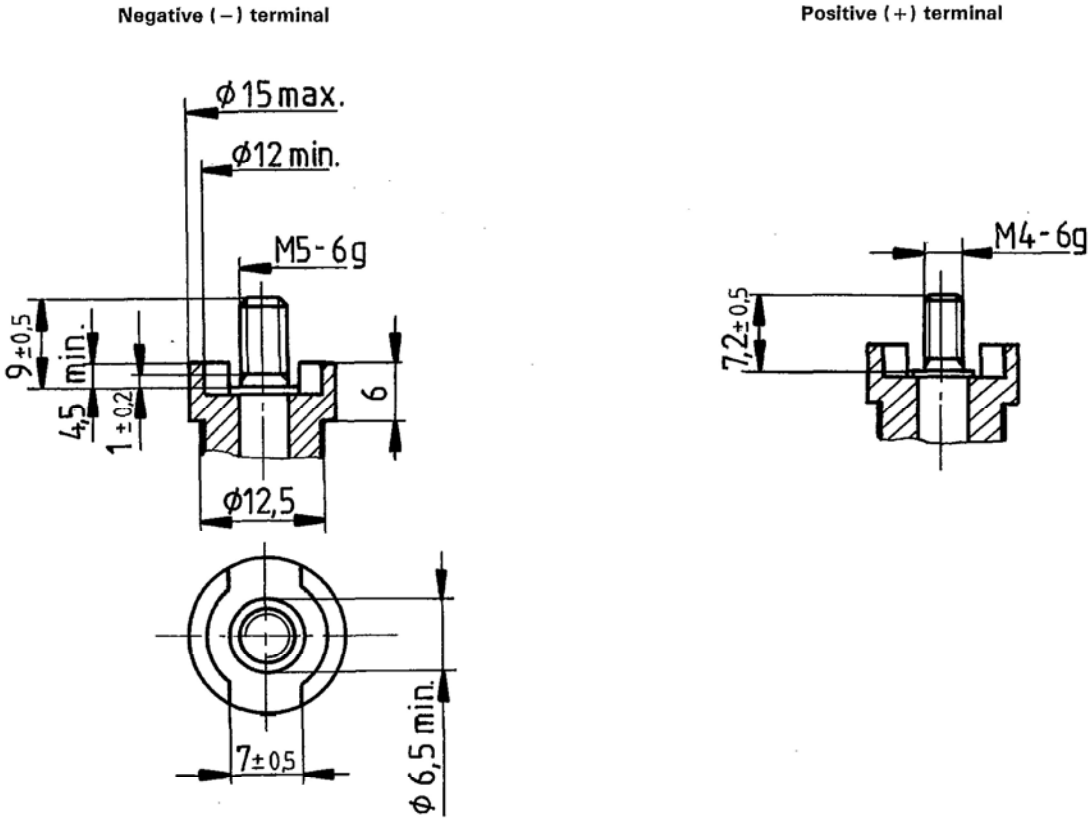


Figure 3 — Screw bolt terminals

3.3.2 Cable connection

The electric cable shall be connected to the screw bolt terminal by a cable lug, and fastened by a nut and a spring washer.

3.3.3 Tightening torque

The tightening torque of the nuts for the screw bolt terminals shall be as indicated in table 1.

Table 1 — Tightening torque

Terminal thread	Torque N·m	
	min.	max.
M4	0,8	1,2
M5	1,6	2

4 Corrosion resistance

No marks of corrosion shall be visible after having subjected the connection, assembled as specified by the manufacturer, to the salt spray test as specified in ISO 3768, for a period of 48 h.

Changes in the appearance of the surface of metallic parts such as coloration shall be ignored.

5 Protection against ingress of water

The connection, assembled as specified by the manufacturer, shall have the degree of protection against ingress of water corresponding to the second characteristic numeral 4 specified by IEC 529 : 1976.

6 Marking symbols and colours

The marking of the terminals shall be durable; the following symbols of a minimum size of 2 mm shall be used :

\+ for the positive terminals

– for the negative terminals

If coloured marking of the insulating parts is necessary, the following colours shall be used :

yellow for the positive terminal

brown for the negative terminal

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Descriptors : road vehicles, internal combustion engines, pumps, electric connection, specifications, dimensions, marking.

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