

INTERNATIONAL STANDARD

IEC 60092-376

Second edition
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Electrical installations in ships –

Part 376: Cables for control and instrumentation circuits 150/250 V (300 V)

Installations électriques à bord des navires –

*Partie 376:
Câbles pour circuits de commande et d'instrumentation
150/250 V (300 V)*

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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRICAL INSTALLATIONS IN SHIPS –

Part 376: Cables for control and instrumentation circuits 150/250 V (300 V)

FOREWORD

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International Standard IEC 60092-376 has been prepared by subcommittee 18A: Cables and cable installations, of IEC technical committee 18: Electrical installations of ships and of mobile and fixed offshore units

This second edition of IEC 60092-376 cancels and replaces the first edition published in 1983, of which it constitutes a technical revision.

The text of this standard is based on the following documents:

FDIS	Report on voting
18A/242/FDIS	18A/244/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 2.

The committee has decided that the contents of this publication will remain unchanged until 2008. At this date, the publication will be

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- withdrawn;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

ELECTRICAL INSTALLATIONS IN SHIPS –

Part 376: Cables for control and instrumentation circuits 150/250 V (300 V)

1 Scope and object

This part of IEC 60092 is applicable to screened and unscreened cables for control and instrumentation circuits on ships and offshore units. The cables have extruded solid insulation with a voltage rating of 150/250V (300V) (see Clause 4) and are intended for fixed installations.

The various types of cables are given in Clause 8. The construction requirements and test methods are expected to comply with those indicated in IEC 60092-350, unless otherwise specified in this standard.

NOTE Provision is made for fire resistant (limited circuit integrity) cables to be specified if required.

The object of this part of IEC 60092 is

- to standardise cables whose safety and reliability are ensured when they are installed in accordance with the requirements of IEC 60092-352;
- to lay down standard manufacturing requirements and characteristics of such cables directly or indirectly bearing on safety;
- to specify test methods for checking conformity with those requirements.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60228, *Conductors of insulated cables*

IEC 60092-350:2001, *Electrical installations in ships – Part 350: Shipboard power cables – General construction and test requirements*

IEC 60092-351, *Electrical installations in ships – Part 351: Insulating materials for shipboard and mobile and fixed offshore units power, telecommunication, and control data cables*

IEC 60092-352, *Electrical installation in ships – Part 352: Choice and installation of cables for low-voltage power systems*

IEC 60092-359, *Electrical installations in ships – Part 359: Sheathing materials for shipboard power and telecommunication cables*

IEC 60331-21, *Tests for electric cables under fire conditions – Circuit integrity – Part 21: Procedures and requirements – cables of rated voltage up to and including 0,6 / 1 kV*

IEC 60332-1, *Tests on electric cables under fire conditions – Part 1: Test on a single vertical insulated wire or cable*

IEC 60332-3-22, *Tests on electric cables under fire conditions – Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category A*

IEC 60811 (all parts), *Common test methods for insulating and sheathing materials of electric cables*

IEC 61034-1, *Measurement of smoke density of cables burning under defined conditions – Part 1: Test apparatus*

IEC 61034-2, *Measurement of smoke density of cables burning under defined conditions – Part 2: Test procedure and requirements*

IEC 60092-353, *Electrical installations in ships – Part 353: Single and multicore non-radial field power cables with extruded solid insulation for rated voltages 1 kV and 3 kV*

3 Definitions

For the purposes of this standard, the definitions given in IEC 60092-350 and the following apply.

3.1

pair unit

a unit which consists of two cores laid up with or without interstitial fillers or binder tape(s)

3.2

triple unit

a unit which consists of three cores laid up with or without interstitial fillers or binder tape(s)

3.3

quad unit

a unit which consists of four cores laid up with or without interstitial fillers or binder tape(s)

3.4

electrostatic screen

surrounding earthed metallic layer to confine the electrical field within the cable cores, pair(s), triple(s) or quad(s) and/or to protect the cable core(s), pair(s), triple(s) or quad(s) from external electrical influence

3.5

drain wire

an uninsulated conductor which has the specific function of earthing an electrostatic tape screen by ensuring a low resistive path throughout the length of the cable

3.6

single unit cable

a cable consisting of either one pair, triple or quad unit, either unscreened or with an individual electrostatic screen

3.7

multi-unit cable

a cable consisting of more than one pair, triple or quad units either unscreened or with an individual electrostatic screen around each unit or having an electrostatic screen applied around the assembly of units (a collective screen)