

Explosives for civil uses — Detonators and relays —

Part 4: Determination of resistance to abrasion of leading wires and shock tubes

The European Standard EN 13763-4:2003 has the status of a
British Standard

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National foreword

This British Standard is the official English language version of EN 13763-4:2003.

The UK participation in its preparation was entrusted to Technical Committee CII/61, Explosives for civil uses, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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English version

**Explosives for civil uses - Detonators and relays - Part 4:
Determination of resistance to abrasion of leading wires and
shock tubes**

Explosifs à usage civil - Détonateurs et relais - Partie 4:
Détermination de la résistance à l'abrasion des fils
d'amorce et des tubes à transmission d'ondes de choc

Explosivstoffe für zivile Zwecke - Zünder und
Verzögerungselemente - Teil 4: Bestimmung der
Widerstandsfähigkeit von Zünderdrähten und
Zündschläuchen gegenüber Abrieb

This European Standard was approved by CEN on 1 September 2003.

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Foreword

This document (EN 13763-4:2003) has been prepared by Technical Committee CEN/TC 321 "Explosives for civil uses", the Secretariat of which is held by AENOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2004, and conflicting national standards shall be withdrawn at the latest by May 2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s), see informative annex ZA, which is an integral part of this document.

This European Standard is one of a series of standards with the generic title *Explosives for civil uses – Detonators and relays*. The other parts of this series are listed below:

prEN 13763-1	Part 1: <i>Requirements</i> .
EN 13763-2	Part 2: <i>Determination of thermal stability</i> .
EN 13763-3	Part 3: <i>Determination of sensitiveness to impact</i> .
EN 13763-5	Part 5: <i>Determination of resistance to cutting damage of leading wires and shock tubes</i> .
EN 13763-6	Part 6: <i>Determination of resistance to cracking at low temperatures of leading wires</i> .
EN 13763-7	Part 7: <i>Determination of the mechanical strength of leading wires, shock tubes, connections, crimps and closures</i> .
EN 13763-8	Part 8: <i>Determination of resistance to vibration of plain detonators</i> .
EN 13763-9	Part 9: <i>Determination of resistance to bending of detonators</i> .
EN 13763-11	Part 11: <i>Determination of resistance to damage by dropping of detonators and relays</i> .
EN 13763-12	Part 12: <i>Determination of resistance to hydrostatic pressure</i> .
prEN 13763-13	Part 13: <i>Determination of resistance of electric detonators against electrostatic discharge</i> .
prEN 13763-15	Part 15: <i>Determination of equivalent initiating capability</i> .
prEN 13763-16	Part 16: <i>Determination of delay accuracy</i> .
prEN 13763-17	Part 17: <i>Determination of no-fire current of electric detonators</i> .
prEN 13763-18	Part 18: <i>Determination of series firing current of electric detonators</i> .
prEN 13763-19	Part 19: <i>Determination of firing impulse of electric detonators</i> .
EN 13763-20	Part 20: <i>Determination of total electrical resistance of electric detonators</i> .
prEN 13763-21	Part 21: <i>Determination of flash-over voltage of electric detonators</i> .

- prEN 13763-22 *Part 22: Determination of capacitance, insulation resistance and insulation breakdown of leading wires.*
- EN 13763-23 *Part 23: Determination of the shock-wave velocity of shock tube.*
- EN 13763-24 *Part 24: Determination of the electrical non-conductivity of shock tubes.*
- prEN 13763-25 *Part 25: Determination of transfer capability of surface connectors and coupling accessories.*
- prEN 13763-26 *Part 26: Definitions, methods and requirements for devices and accessories for reliable and safe function of detonators and relays.*
- CEN/TS 13763-27 *Part 27: Definitions, methods and requirements for electronic initiation system.*

The annexes A and C are informative, annex B is normative.

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