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Edition 3.0 2008-03

INTERNATIONAL STANDARD

**Fibre optic interconnecting devices and passive components – Fibre optic
connector interfaces –
Part 7: Type MPO connector family**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

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ICS 33.180.20

ISBN 2-8318-9667-3

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING
DEVICES AND PASSIVE COMPONENTS –
FIBRE OPTIC CONNECTOR INTERFACES –**

Part 7: Type MPO connector family

FOREWORD

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The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning MPO connectors.

The IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he/she is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with the IEC. Information may be obtained from:

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International Standard IEC 61754-7 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

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This third edition cancels and replaces the second edition published in 2004. This third edition constitutes a technical revision.

Specific technical changes involve the addition of an aligned key adaptor interface definition to address all existing MPO applications.

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

CDV	Report on voting
86/2581/CDV	86/2672/RVC

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.

A list of all the parts in the IEC 61754 series, under the general title *Fibre optic interconnecting devices and passive components – fibre optic connector interfaces*, can be found on the IEC website.¹

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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- withdrawn,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

A bilingual version of this publication may be issued at a later date.

¹ This new extended title will be applied to other parts of IEC 61754 as and when they are re-issued.

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – FIBRE OPTIC CONNECTOR INTERFACES –

Part 7: Type MPO connector family

1 Scope

This part of IEC 61754 defines the standard interface dimensions for type MPO family of connectors.

2 Description

The parent connector for type MPO connector family is a multiway plug connector characterized by a rectangular ferrule normally 6,4 mm × 2,5 mm which utilizes two pins of 0,7 mm diameter as its alignment. It is applicable to a joint of multiple fibres up to 12 fibres by arraying them between two pin-positioning holes in the ferrule. Furthermore, it is capable of joining up to 24 fibres by arraying them with a two layer arrangement. The connector includes a push-pull coupling mechanism and a ferrule spring loaded in the direction of the optical axis. The connector has a single male key which may be used to orient and limit the relative position between the connector and the component to which it is mated.

Connector interfaces are configured using a female plug without pins, a male plug with pins fixed and an adaptor as shown in Figure 1. The female plug is intermateable with the male plug.

Moreover, connector interfaces between the female plug and the male plug are configured by applying a backplane housing and a printed board housing instead of the adaptor.

3 Interfaces

This standard contains the following standard interfaces:

Interface 7-1: MPO female plug connector angled interface – Push/pull consisting of:

Interface 7-1-1 for 2 to 12 fibres

Interface 7-1-2 for 16 to 24 fibres

Interface 7-2: MPO male plug connector angled interface – Push/pull consisting of:

Interface 7-2-1 for 2 to 12 fibres

Interface 7-2-2 for 16 to 24 fibres

Interface 7-3: MPO adaptor interface – Push/pull

Interface 7-4: MPO female plug connector flat interface – Push/pull consisting of:

Interface 7-4-1 for 2 to 12 fibres

Interface 7-4-2 for 16 to 24 fibres

Interface 7-5: MPO male plug connector flat interface – Push/pull consisting of:

Interface 7-5-1 for 2 to 12 fibres

Interface 7-5-2 for 16 to 24 fibres

Interface 7-6: MPO backplane housing interface – Self-retaining

Interface 7-7: MPO printed board housing interface – Self-retaining