

SLOVENSKI STANDARD
SIST HD 369.18 S1:1999**01-julij-1999**

Audiovisual, video and television equipment and systems - Part 18: Connectors for automatic slide projectors with built-in-triacs for audiovisual application (IEC 60574-18:1987)

Audiovisual, video and television equipment and systems -- Part 18: Connectors for automatic slide projectors with built-in-triacs for audiovisual application

Audiovisuelle, Video- und Fernsehgeräte und -anlagen -- Teil 18: Steckverbinder für mit Triacs ausgerüstete, automatische Dia-Projektoren für audio-visuelle Anwendungen

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Equipements et systèmes audiovisuels, vidéo et de télévision -- Partie 18: Connecteurs pour les projecteurs de diapositives équipés de triacs pour application audiovisuelle

Ta slovenski standard je istoveten z: HD 369.18 S1:1989**ICS:**31.220.10 Xcã ã Ácã } ã^Ä [] ^ ç !ã Plug-and-socket devices.
Connectors**SIST HD 369.18 S1:1999****en**

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PART 18: CONNECTORS FOR AUTOMATIC SLIDE PROJECTORS
WITH BUILT-IN TRIACS FOR AUDIOVISUAL APPLICATION**Equipements et systèmes audiovisuels,
vidéo et de télévision
Dix-huitième partie: Connecteurs
pour les projecteurs de
diapositives équipés de triacs
pour application audiovisuelleAudiovisuelle, Video- und
Fernsehgeräte und -anlagen
Teil 18: Steckverbinder für
mit Triacs ausgerüstete,
automatische Dia-Projektoren
für audiovisuelle Anwendungen

BODY OF THE HD

The Harmonization Document consists of:

- IEC 574-18 (1987) ed 1; IEC/TC 84, not appended

This Harmonization Document was approved by CENELEC on 1989-12-05.

The English and French versions of this Harmonization Document are provided
by the text of the IEC publication and the German version is the official
translation of the IEC text.According to the CENELEC Internal Regulations the CENELEC member National
Committees are bound:to announce the existence of this Harmonization Document at national level
by or before 1990-03-01to publish their new harmonized national standard
by or before 1990-09-01to withdraw all conflicting national standards
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4

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Equipements et systèmes audiovisuels, vidéo et de télévision

Dix-huitième partie: Connecteurs pour les projecteurs de diapositives équipés
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Audiovisual, video and television equipment and systems

Part 18: Connectors for automatic slide projectors with built-in triacs
for audiovisual application

INTERNATIONAL ELECTROTECHNICAL COMMISSION

AUDIOVISUAL, VIDEO AND TELEVISION EQUIPMENT
AND SYSTEMS

Part 18: Connectors for automatic slide projectors
with built-in triacs for audiovisual application

 FOREWORD

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PREFACE

This standard has been prepared by IEC Technical Committee No. 84: Equipment and Systems in the Field of Audio, Video and Audiovisual Engineering.

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

Six Months' Rule	Report on Voting
84(C0)31	84(C0)37

Full information on the voting for the approval of this standard can be found in the Voting Report indicated in the above table.

The following IEC publications are quoted in this standard:

- Publications Nos. 65 (1985): Safety Requirements for Mains Operated Electronic and Related Apparatus for Household and Similar General Use.
- 574-3 (1983): Audiovisual, Video and Television Equipment and Systems, Part 3: Connectors for the Interconnection of Equipment in Audiovisual systems.
- 574-4 (1982): Part 4: Preferred Matching Values for the Interconnection of Equipment in a System.

AUDIOVISUAL, VIDEO AND TELEVISION EQUIPMENT
AND SYSTEMS

Part 18: Connectors for automatic slide projectors
with built-in triacs for audiovisual application

1. Scope

This standard applies to the interconnection and system requirements for the control of automatic slide projectors with built-in triacs and low-voltage projector lamps supplied via isolating transformers.

The basic remote control of focus and forward/reverse slide change is covered by the use of the connector 130-9 IEC 17 (6-pole 240°) as specified in Table V of IEC Publication 574-3 and Clause 15 of IEC Publication 574-4.

The remote control functions covered in this standard are: forward and reverse, slide change, verification of slide change, snap shutter operation, lamp dimming, the detection of lamp failure and the return of the slide magazine to the "zero" position.

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2. Object

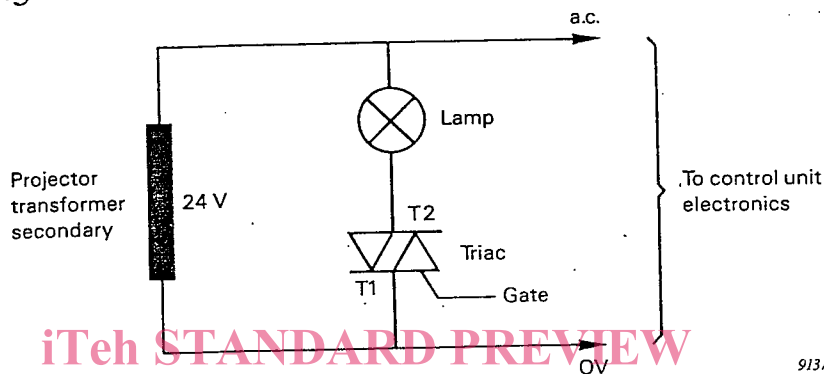
In audiovisual systems it is often necessary to connect together pieces of equipment from different manufacturers in order to achieve desired objectives. In particular, in systems employing two or more projectors, the connection of projectors to the dissolve control units needs agreed standards of interconnection to ensure that the system functions correctly.

3. General

When considering the projector and its dissolve control unit together, the obvious engineering solution is to place the triac in the projector rather than in the control unit. The inclusion of the triac in the projector eliminates the inconvenience and voltage-drop of external cables of high current rating (a 24 V, 250 W lamp draws 10.4 A), and takes advantage of the cooling fan, already in the projector, to cool the triac in addition. For this reason this standard is restricted to projectors with built-in triacs.

There is a considerable advantage to be gained by the use of two connectors on each projector. One of these connectors is for basic manual remote control of slide change and focus; this is the subject of Table V of IEC Publication 574-3 and Clause 15 of IEC Publication 574-4. The use of a separate connector for full automatic control leaves the first connector free for manual control (e.g. for focusing). The details of the automatic control connector are given in Clauses 4 and 5.

The reason for choosing to regard that side of the lamp circuit of the projector which is connected to main terminal 1 of the triac as the "common" for the dissolve-control unit circuit is illustrated in the following figure:



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913/87

The direct connection to the triac gate eliminates an expensive firing transformer and also permits remote verification that the lamp filament in the projector is intact (even when faded down) by measuring the voltage between the gate and T1 caused by residual current flowing through the lamp and triac (see note): with the lamp faded down the triac continues to conduct, although conduction begins very late in each half-cycle.

Note. - For this voltage to be detectable, a suitable trigger circuit is required in the dissolve-control unit.

This standard also allows for verification that a slide advance (or reverse) has taken place. This is very important to ensure correct interworking between a dissolve-control unit and a variety of projectors which have slide advance cycle times ranging from 100 ms to 600 ms. It is necessary to allow sufficient time for slow projectors to operate, without delaying fast projectors unduly. Modern programming equipment permits rapid forward and reverse stepping through the programme, for rehearsal, the slide advance being allowed to slip out of synchronism and to be controlled only by the slide advance cycle-time until slide change verification has proved that the projector has caught up with its proper position.

In order to aid understanding, a specimen circuit diagram of a projector is given in Appendix A.

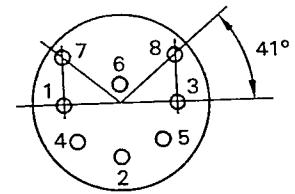
4. Mechanical requirements

The connector reference 130-9 IEC (see note) shall be an IEC 8-pole 262° type.

The connector on the projector shall be a socket connector.

The preferred location of the socket is on the rear of the projector to permit the cable to leave at the rear.

Note. - In the diagram the socket connector is viewed from the wiring side. The addition of this connector to IEC 130-9 is under consideration.



8 pin 262° connector

914/87

5. Electrical requirements (see also the circuit diagram in Appendix A)

5.1 *Connector*

Contact Electrical requirements

- 1) Magazine zero position switch
The switch is open with the magazine at position zero, also when there is no magazine. The return is via contact 6.
- 2) Common return
For forward/reverse slide change and snap shutter.
- 3) 24 V a.c. supply source
The rated current of the supply source shall be at least 3 A, so that the dissolve-control unit needs no other power supply.
- 4) Forward slide change
Slide change shall result from a momentary connection of this contact to contact 2 (see Sub-clause 5.2.2). The current drawn by the control circuit through the connector shall not exceed 1 A. The rated voltage shall be 24 V d.c. (34 V max.), negative with respect to contact 2.
- 5) Triac gate
A direct connection to the triac gate, also permitting detection through the triac and hence proof that the lamp is intact (provided that a suitable trigger-circuit is used).
- 6) 24 V a.c. common
Regarded as "common" for the circuit of the dissolve-control unit, main terminal 1 (T1) of the triac, and return for the zero position switch.