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INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 2
AMENDEMENT 2

Lampholders for tubular fluorescent lamps and starterholders

Douilles pour lampes tubulaires à fluorescence et douilles pour starters

IEC 60400:2017-06/AMD2:2022-02(en-fr)

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LAMPHOLDERS FOR TUBULAR FLUORESCENT LAMPS AND STARTERHOLDERS

AMENDMENT 2

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Amendment 2 to IEC 60400:2017 has been prepared by subcommittee 34B: Lamp caps and holders, of IEC technical committee 34: Lighting.

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

Draft	Report on voting
34B/2110/CDV	34B/2121/RVC

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications/.

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

INTRODUCTION to Amendment 2

Lampholders specified in this standard are used not only for fluorescent lamps but also now for retrofit LED lamps. LED lamp designers, as well as lampholder designers, refer to this standard. However, it may lead to a misread of the original intention of the relaxation in Clause 17, which indicates that creepage distances or clearances between lamp contacts can be reduced.

The purpose of this amendment is to make the relaxation provision clear and to avoid misreading, i.e.

- the relaxation provision has been moved from the end of Clause 17 to the footnotes in Table 3,

and

- an explanatory note for this relaxation has been added to Table 3.

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17 Creepage distances and clearances

Table 3

In Table 3, modified by Amendment 1, add, in the first row, list item 1, a new footnote "d". Renumber the existing NOTE as NOTE 1 and add a new NOTE 2 , as follows:

Table 3 – Minimum distances for AC sinusoidal voltages up to 30 kHz – Impulse withstand category II

Distances mm		Rated voltage V			
		50	150	250	500
Basic insulation					
1 Distances between live parts of different polarity [d], and					
2 Between live parts and external metal parts, mounting surfaces, loose metal cover, if any, the outer surface of parts of insulating material which are permanently fixed to the holder [a], including screws or devices for fixing covers or fixing the holder to its support:					
– Creepage distances					
insulation	PTI ≥ 600 [b]	0,6	0,8	1,5	3
	PTI < 600 [b]	1,2	1,6	2,5	5
– Clearances [c]		0,2	0,5	1,5	3
Reinforced Insulation					
Between live parts and external metal parts, mounting surfaces, loose metal cover, if any, the outer surface of parts of insulating material which are permanently fixed to the holder [a], including screws or devices for fixing covers or fixing the holder to its support:					
– Creepage distances					
insulation	PTI ≥ 600 [b]	–	1,6	3	5,5
	PTI < 600 [b]	–	3,2	5	10
– Clearances [c]		0,4	1,6	3	5,5

Values for creepage distances can be found for intermediate values of rated voltages by linear interpolation between tabulated values. No values are specified for rated voltages below 25 V AC and 60 V DC ripple free as the voltage test of 13.3 is considered sufficient. Creepage distances shall not be less than the required minimum clearance.

For glass, ceramics or other inorganic insulating materials which do not track, creepage distances need not be greater than their associated clearance for the purpose of insulation coordination. The dimensions of this table are appropriate.

In Japan, the values given in this table are not applicable. Japan requires larger values than the values given in this table.

NOTE 1 Information on standard ratings for specific holder types is given in Clause 6.

NOTE 2 For lampholders which are not suitable to be connected directly across the mains, it is expected that the working voltage between contacts of a lampholder which are connected to the single fluorescent lamp filament, is much lower than the rated voltage. Consequently, the creepage distance or clearance between the lamp contacts can be reduced.

[a] The distances between live contacts and the lampholder face (reference plane) shall, however, be in accordance with the relevant standard sheets of IEC 60061-2.

The distances for starter holders shall be in accordance with Figures 10a and 10b.

[b] PTI (proof tracking index) in accordance with IEC 60112:2003 and IEC 60112:2003/AMD1:2009.

- In the case of creepage distances to parts not energized or not intended to be earthed, where no tracking can occur, the values specified for material with PTI ≥ 600 apply for all materials (in spite of the real PTI).
- For creepage distances subjected to working voltages of less than 60 s duration, the values specified for material with PTI ≥ 600 apply for all materials.
- For creepage distances not liable to contamination by dust or moisture, the values specified for material with PTI ≥ 600 apply for all materials (independently of the real PTI).
- For creepage distances, the equivalent DC voltage is equal to the r.m.s. value of the sinusoidal AC voltage.

[c] For clearances, the equivalent DC voltage is equal to the peak of the AC voltage.

[d] For lampholders which are not suitable to be connected directly across the mains the creepage distance or clearance between the lamp contacts can be reduced to:

- for lampholder G10q: 1,5 mm;
- for other lampholders: 2 mm.

If the creepage distance specified in this table is lower than the value above, the lower value is applied. See also NOTE 2 of this table.

In NOTE 2, after Table 3, first sentence, correct the spelling error and replace "...($\hat{U}_{\text{out}}$ and ist corresponding frequency $f_{U\text{out}}$),..." *with* "...($\hat{U}_{\text{out}}$ and its corresponding frequency $f_{U\text{out}}$),...".

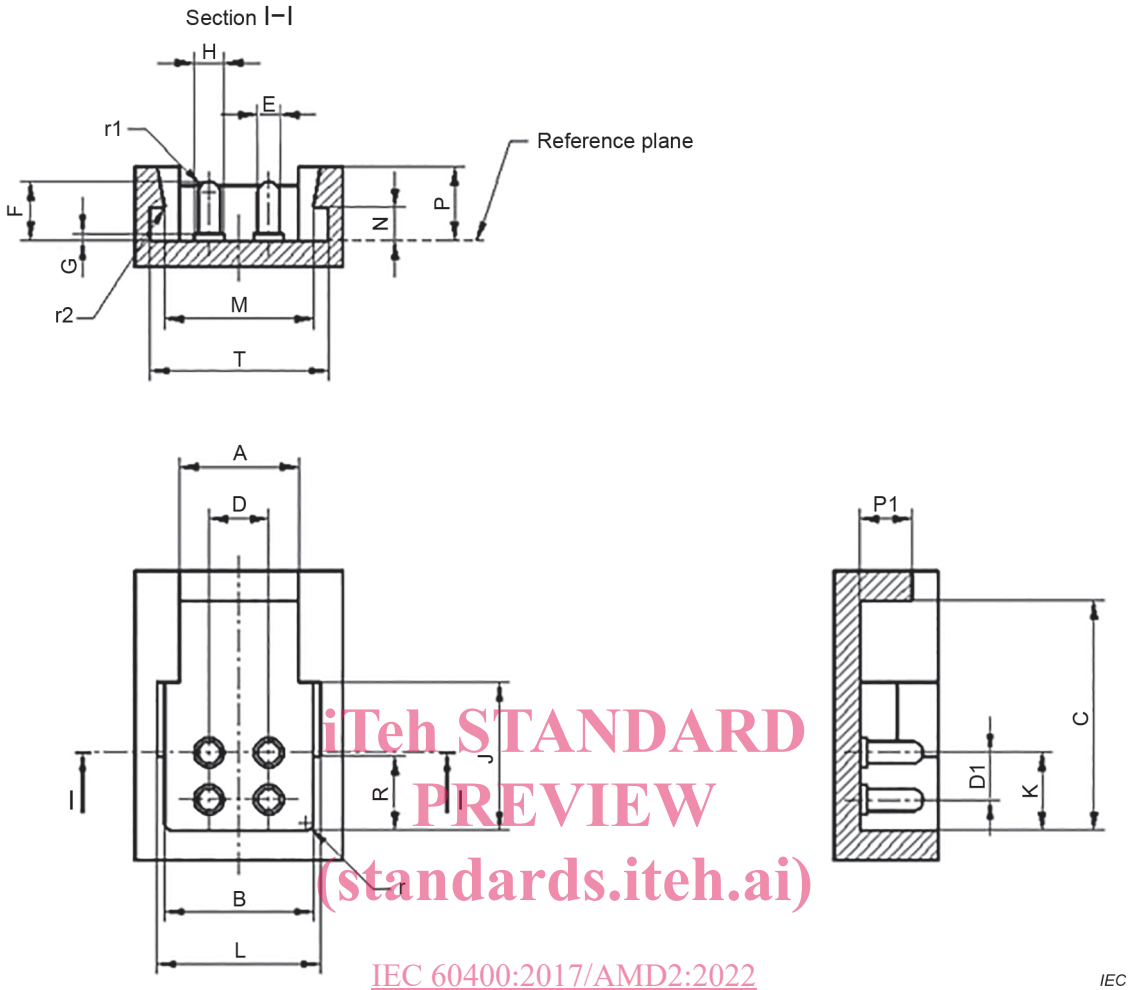
After Table 4, renumber the second existing NOTE 3, wrongly numbered, as NOTE 4, as follows:

NOTE 4 Ignition pulse voltages having total pulse duration of > 750 µs or having a higher frequency than f_{crit} can require higher clearances although its peak value is lower than the rated ignition voltage of the lampholder. Therefore, the respective controlgear is marked with an equivalent peak voltage (U_{P}) which is directly comparable to the rated ignition voltage of the lampholder.

*Delete, after the renumbered NOTE 4, the second paragraph beginning with "*For lamp holders which are not declared to be suitable...*", including the two dashed list items.*

Figure 32

Replace the existing drawings with the following new drawings and, in the left table of dimensions, under Reference K, the existing value "16,2" *with the new value* "10,00", *as follows:*



Reference	Dimension mm	Tolerance mm
A	15,5	± 0,02
B	20,4	± 0,02
C	31,0	± 0,2
D	8,0	± 0,01
D1	6,35	± 0,01
E	2,54	± 0,02
F	7,77	± 0,01
G	1,27	± 0,02
H	3,3	± 0,02
J	19,3	± 0,02
K	10,0	± 0,01

Reference	Dimension mm	Tolerance mm
L	22,0	± 0,02
M	20,3	± 0,02
N	3,5	± 0,02
P	9,9	± 0,02
P1	7,0	± 0,02
R	9,0	± 0,02
T	22,0	± 0,1
r	0,8	± 0,05
r1	E/2	–
r2	0,3	± 0,2

Figure 32 – Test cap for the test of 18.1 for lampholders GR10q

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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DOUILLES POUR LAMPES TUBULAIRES À FLUORESCENCE ET DOUILLES POUR STARTERS

AMENDEMENT 2

AVANT-PROPOS

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L’amendement 2 à l’IEC 60400:2017 a été établi par le sous-comité 34A: Culots et douilles, du comité d'étude 34 de l'IEC: Éclairage.

Le texte de cet Amendement est issu des documents suivants:

Projet	Rapport de vote
34B/2110/CDV	34B/2121/RVC

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cet Amendement est l'anglais.