

Subject 773

October 6, 2017

SUMMARY OF TOPICS

The following changes in requirements to the Standard for Plug-In Locking Type Photocontrols for Use with Area Lighting, UL 773, are being proposed:

1. Add additional 347 Volt Electronic Ballast ratings and updated test procedure information

STP BALLOTS AND ALL COMMENTS DUE: November 6, 2017

UL's goal is to have no interest category comprise more than one-third of the STP membership balance.

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~.

1. Add additional 347 Volt Electronic Ballast ratings and updated test procedure information

RATIONALE

Proposal submitted by: Don Berlin, Intermatic, Inc.

- General revision to Table 31.2, 277 VAC pulse width for electronic ballast, to align with correction made in NEMA 410 2015, for pulse width.
- Add a new table 31.3, to add updated 347 VAC ratings per revised NEMA 410 2015.
- Add additional test information consistent with NEMA 410 2015.

PROPOSAL

31.2.2 A control intended for use with electronic ballasts, self-ballasted LED and Compact Fluorescent Lamps, LED drivers LED fixtures, and similar loads with capacitive load characteristics, having a rated current (steady state current) and rated voltage in accordance with Table 31.2 or Table 31.3 shall be marked in accordance with 37.6.

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Table 31.2
Peak current requirements for endurance test
Controls rated 120 VAC and 277 VAC

Steady state current (A)	Peak current (A), 120 V AC	Pulse width 120 V AC (mS) ^b	I ² t (A ² sec) 120 V AC ^a	Peak current (A), 277 V AC	Pulse width 277 V AC (mS) ^b	I ² t (A ² sec) 277 V AC ^a
0.5	75	0.34	11	77	0.07-0.50	11
1	107	0.48	24	131	0.71	27
2	144	0.70	41	205	0.85	76
3	166	0.89	51	258	0.98	111
5	192	1.20	74	320	1.20	205
8	221	1.25	98	370	1.25	274
10	230	1.50	106	430	1.50	370
12	235	1.80	110	440	1.80	387
15	239	2.00	114	458	2.00	420
16	242	2.10	117	480	2.10	461

^aThe values used to calculate I²t are the peak current shown and pulse duration of 2 mS (t).

^bPulse widths shown will provide adequate performance with electronic ballasts having pulse widths up to 2 ms, in accordance with the Standard for Lamp Ballasts – High Frequency Fluorescent Lamp Ballasts, ANSI/ANSI C82.11, or the Standard for Lamp Ballasts Low-Frequency Square Wave Electronic Ballasts — for Metal Halide Lamps, ANSI/ANSI C82.14.

Table 31.3
Peak current requirements for endurance test
Controls rated 347 VAC

Steady State Current (A)	Peak Current (A) 347VAC	Pulse Width 347 VAC (ms)	I ² t (A ² sec) 347 VAC See note 1
<u>0.5</u>	<u>198</u>	<u>0.34</u>	<u>92</u>
<u>1</u>	<u>270</u>	<u>0.47</u>	<u>173</u>
<u>2</u>	<u>354</u>	<u>0.70</u>	<u>294</u>
<u>3</u>	<u>396</u>	<u>0.86</u>	<u>369</u>
<u>5</u>	<u>450</u>	<u>1.15</u>	<u>476</u>
<u>8</u>	<u>492</u>	<u>1.50</u>	<u>569</u>
<u>10</u>	<u>508</u>	<u>1.67</u>	<u>606</u>
<u>12</u>	<u>529</u>	<u>1.66</u>	<u>658</u>
<u>15</u>	<u>550</u>	<u>2.05</u>	<u>711</u>
<u>16</u>	<u>552</u>	<u>2.10</u>	<u>716</u>

Note 1 – The values used to calculate I²t are the peak current shown in the table above and pulse duration of 2.35ms (t).

31.2.4 The series coil values must be adjusted based on the input line characteristics to achieve the peak currents listed in Tables 31.2 or 31.3. The series coil shall be sized such that it does not saturate during testing and shall be able to handle the resulting power dissipation with less than 10°C temperature rise. Peak current and pulse width are illustrated in Figure 31.1.

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