

Subject 778

September 14, 2018

SUMMARY OF TOPICS

The following changes in requirements to the Standard for Motor-Operated Water Pumps, UL 778, are being proposed.

- 1. Add new reference standard UL 62368-1 for secondary circuits***
- 2. Remove the UL 244A and UL 873 reference***
- 3. Add DC Test Potential of Dielectric Voltage Withstand Test.***

STP BALLOTS AND ALL COMMENTS DUE: October 15, 2018

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

- 1. Add new reference standard UL 62368-1 for secondary circuits**

RATIONALE

Proposal submitted by: Nick Lee and Steve Kuscsik, UL LLC

CAN/UL 62368-1, 2nd edition (based on IEC 62368-1) has been published as an alternative and eventual replacement for UL 60950-1. Both standards have essentially equivalent requirements for the investigation of secondary circuits.

To provide manufacturers of appliances and other products with additional and current options, UL is proceeding with the industry transition from UL 60950-1 to UL 62368-1.

This proposal is intended to add the option of using the Standard for Audio/Video, Information and Communication Technology Equipment - Part 1: Safety Requirements, UL 62368-1, as an evaluation option for secondary circuits (Sec. SC) of pump products, in addition to the existing option of UL 60950-1.

PROPOSAL

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Table SC1.2
Comparison of secondary circuits

Electrical Characteristics and Risk Assessment of Secondary Circuits									
Circuit Name	Class 2, LPS			Limited voltage	Limited energy	LVLE (Limited Voltage Limited Energy)	Protective impedance		SELV (Safety extra-low voltage)
Section within document	SC1.3.1			SC1.3.2	SC1.3.3	SC1.3.4	SC1.3.5.1	SC1.3.5.1 and SC1.3.5.3	SC1.3.6
Parameters									
Derived directly from component evaluated to standard	UL 5085-3 or UL 1310: Class 2, or UL 60950-1 <u>or UL 62368-1</u> : LPS			UL 5085-1, UL 5085-2, UL 5085-3, UL 1310, UL 1411, or UL 60950-1, <u>or UL 62368-1</u>	UL 5085-1, UL 5085-2, UL 5085-3, UL 1310, UL 1411, or UL 60950-1, <u>or UL 62368-1</u>	UL 5085-1, UL 5085-2, UL 5085-3, UL 1310, UL 1411, or UL 60950-1, <u>or UL 62368-1</u>	N/A	N/A	UL 60950-1, <u>UL 62368-1</u> , <u>or</u> 60730-1
Requires isolating transformer or equivalent	Yes			Yes	Yes	Yes	No	No	Yes
Maximum available voltage, Vac/dc (Vpeak)	0 – 20	over 20 to 30	over 30 to 60, dc only	30 ac (42.4)/60 dc	Over 30 to 100 ac	30 ac (42.4)/60 dc	N/A	See 8.1.1	30 ac (42.4)/60 dc
Maximum available current, A	8	8	150/Vmax	N/A	N/A	N/A	N/A	See 8.1.2	N/A
Maximum rated current, A	5	100/Vmax	100/Vmax	N/A	N/A	N/A	N/A	N/A	N/A
Maximum rated power, VA	5 x Vmax	5 x Vmax	100	100	N/A	N/A	N/A	N/A	N/A
Maximum available power, VA	250 ^a	250 ^a	N/A	N/A	200	200	15 watts	15 watts	N/A
Risk of electric shock exists?	No			No	Yes	No	Yes	No	No
Risk of fire exists?	Yes			Yes	Yes	Yes	No	No	Yes
^a Non-inherently limited.									

SC1.3.1.2 A Limited Power Source (LPS) circuit shall be supplied by an isolating source that complies with the requirements in the Standard for Information Technology Equipment – Safety – Part 1: General Requirements, UL 60950-1, or the Standard for Audio/Video, Information and Communication Technology Equipment – Part 1: Safety Requirements, UL 62368-1.