

## Standard Information

**Standard Number:** UL 1081

**Standard Name:** Swimming Pool Pumps, Filters, and Chlorinators

**Standard Edition and Issue Date:** 6<sup>th</sup> Edition Dated January 29, 2008

**Date of Revision:** August 9, 2016

**Date of Previous Revision to Standard:** 6<sup>th</sup> Edition Dated March 18, 2014

## Effective Date of New/Revised Requirements

**Effective Date (see Schedule below):** September 29, 2017

## Impact, Overview, Fees and Action Required

**Impact Statement:** A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

**Overview of Changes** (Specific details of new/revised requirements are found in table below):

- Added definition of Safety Critical Functions
- Added Requirements for evaluation of Electronic Circuits used for Safety Critical functions
- Update Requirements for Switches

**If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).**

**Schedule:** So that shipping of products with Listing Marks will not be interrupted, an **approximate** schedule has been established to ensure Listing Reports are found compliant by Effective Date:

- January 27, 2017 = 8 Month Report Review – Intertek will review all Reports. Update if compliance is verified or issue Findings Letter/Quote for any re-evaluations needed
- March 29, 2017 = 6 Month Quote Cut-off – Quotes returned for necessary re-evaluations
- **September 29, 2017** = Effective Date – ATM Suspended for all non-compliant Reports

**Fees:** An initial review of Listing Report (s) will be covered by a direct billing project and will be invoiced at not more than \$1000 per report.

### Client Action Required:

**Information** – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

***Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.***

## Description of New/Revised Technical Requirements

Clause	Verdict	Comment												
4.11	Info	SAFETY CRITICAL FUNCTION – Control, protection and monitoring functions which are being relied upon to reduce the risk of fire, electric shock or casualty hazards.												
5		<i>New section added;</i> <b>Safety Critical Functions</b>												
5.1		Any function involved in the control, protection, and monitoring of safety-related attributes of a pump whereby a loss/malfunction of its functionality would represent an unacceptable risk of fire, electric shock, or casualty hazards would be considered a Safety Critical Function.												
5.2		Electronic circuits that manage a Safety Critical Function shall be:  a) Reliable as defined as being able to maintain the Safety Critical Function in the event of single defined component faults and  b) Not susceptible to electromagnetic environmental stresses encountered in the anticipated environments of the appliance.												
5.3		Electronic circuits managing Safety Critical Functions shall comply with:  a) Supplement SA; or  b) The Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1 and its Part 2s as specified in this standard. The function shall be considered Class B. When utilizing UL 60730-1, surge protective devices are defeated for the EMC immunity testing unless they are provided with spark gaps (gas tube surge suppressors).												
5.4		Functions specified in Table 5.1 represent the common safety critical circuit functions of pumps. It is not intended to represent all possible Safety Critical Functions.												
Table 5.1		<p style="text-align: center;"><b>Safety Critical Functions</b></p> <table border="1"> <thead> <tr> <th>Function (see 5.1)</th><th>Hazard</th><th>Location of parameters and tests</th></tr> </thead> <tbody> <tr> <td>Motor running overload protection</td><td>Risk of fire or electric shock</td><td>27.2</td></tr> <tr> <td>Motor locked rotor protection</td><td>Risk of fire or electric shock</td><td>27.2</td></tr> <tr> <td>Motor short circuit protection</td><td>Risk of fire or electric shock</td><td>27.2</td></tr> </tbody> </table>	Function (see 5.1)	Hazard	Location of parameters and tests	Motor running overload protection	Risk of fire or electric shock	27.2	Motor locked rotor protection	Risk of fire or electric shock	27.2	Motor short circuit protection	Risk of fire or electric shock	27.2
Function (see 5.1)	Hazard	Location of parameters and tests												
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Motor locked rotor protection	Risk of fire or electric shock	27.2												
Motor short circuit protection	Risk of fire or electric shock	27.2												
27.2.2.2 & 29.11	Info	Reference to UL 60730-1 and Supplement SA were added as alternate methods to comply with the overload protection requirements.												
29	Info	<b>Switches and Controls</b>												
29.6		<i>Deletions are shown <del>lined out</del> below.</i>  Switches shall comply with the Standard for General-Use Snap Switches, UL 20, <del>the Standard for Special-Use Switches, UL 1054,</del> or the Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1.												
29.7		<i>New clause added;</i>  Switches that comply with the Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1, shall be rated as specified in 29.8 – 29.10.												

# Standards Update Notice (SUN)

Issued: August 18, 2016

Clause	Verdict	Comment
29.8		<p><i>New clause added;</i></p> <p>Power switches shall be rated as follows:</p> <ul style="list-style-type: none"> <li>a) For a voltage not less than the rated voltage of the appliance;</li> <li>b) For a current not less than the rated current of the appliance;</li> <li>c) For Continuous Duty;</li> <li>d) With respect to load: <ul style="list-style-type: none"> <li>1) Switches for motor-operated appliances: for resistance and motor load in accordance with 7.1.2.2 of Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1, or Outline of Investigation for Particular Requirements for Switches for Tools, UL 6059, if the switch would encounter this load in normal use; or</li> <li>2) Switches may be regarded as switches for a declared specific load in accordance with 7.1.2.5 of UL 61058-1, or UL 6059, and may be classified based upon the load conditions encountered in the appliance under normal load.</li> </ul> </li> <li>e) For ac if the appliance is rated for ac;</li> <li>f) For dc if the appliance is rated for dc.</li> </ul>
29.9		<p><i>New clause added;</i></p> <p>Ratings and load classifications for switches other than power switches shall be based on the conditions encountered in the appliance under normal load.</p>
29.10		<p><i>New clause added;</i></p> <p>Switches shall also be rated with respect to endurance as follows:</p> <ul style="list-style-type: none"> <li>a) Power switches: 6000 cycles;</li> <li>b) Power switches provided with series electronics shall be subject to an additional 1000 cycles of operation with the electronics bypassed;</li> <li>c) Switches other than power switches, such as speed selector switches, that may be switched under electrical load: 1000 cycles;</li> <li>d) The following non-power switches are not required to be rated for endurance: <ul style="list-style-type: none"> <li>1) Switches not intended for operation without electrical load, and which can be operated only with the aid of a tool or are interlocked so that they cannot be operated under electrical load; or</li> <li>2) Switches for 20 mA load as classified in Clause 7.1.2.6 of Standard for Switches for Appliances – Part 1: General Requirements, UL 61058-1.</li> </ul> </li> </ul>



## Standards Update Notice (SUN)

Issued: August 18, 2016

Clause	Verdict	Comment
29.12		<i>New clause added;</i>  Electronic motor drives that additionally provide motor overload protection shall comply with 27.2.2.2.
29.14		<i>New clause added;</i>  Controls shall comply with either the Standard for Automatic Electrical Controls for Household and Similar Use; Part 1: General Requirements, UL 60730-1, or the requirements in Supplement SA. Any control or circuit function whereby a loss/malfunction of its functionality would represent an unacceptable risk of fire, electric shock, or casualty hazards would be considered a Safety Critical Function. See Section5 for the most common Safety Critical Functions anticipated by this standard.
SUPPLEMENT SA	Info	<i>New section added;</i>  <b>REQUIREMENTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS</b>  These requirements provide alternate requirements for the investigation of electronic controls and other circuits used in appliances covered by this standard (see standard for section details).
		<b>CUSTOMERS PLEASE NOTE:</b> This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.