



APPLIANCE ADVISOR™

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2 Energy Efficiency Update

3 A New Way to Protect Customers

4 Strategies to Streamline Your Submittal Process



Hospitality Quality Coffee Makers

New standards for safety

By Tom Blewitt / Primary Designated Engineer, Director

UL published a Supplement to its Standard for Safety Household Electric Coffee Makers and Brewing-Type Appliances (ANSI/UL 1082). The Supplement describes the requirements for electric hospitality-use drip-type coffee makers and similar drip-type brewing appliances. These are appliances specifically designed for use in office buildings, hotels and similar locations. Though they typically look similar to household coffee makers, they differ from the household types as well as the commercial types.

UL investigates electric coffee makers using two standards, UL 1082 (*Household*

Electric Coffee Makers and Brewing-Type Appliances) for those marked *household use* and UL 197 (*Commercial Electric Cooking Appliances*) for those marked *commercial use*. The standards are not identical, each based on assumed conditions of use in the respective environments. In particular, the commercial-type coffee maker requirements take into account trained and experienced workers.

In the commercial environment, an appliance with problems will probably be quickly taken out of service. In neither environment (office or hotel room) is one likely to find the user

instructions packaged with these appliances. These and other considerations were taken into account by a task group formed to advise UL's Standards Technical Panel responsible for UL 1082 (STP1082). Requirements for hospitality-use drip-type coffee makers were developed and ultimately balloted by STP1082. There is a balance of interests on the STP's that enables UL to designate its standards as American National Standards. The adopted requirements for hospitality-use drip-type coffee makers are the same requirements as for household drip-type coffee makers, except that the appliances are:

continued on page 4

A Letter From Alberto



Welcome to our Spring/Summer issue — as we address the importance of having commercial quality standards

around everyday appliances like coffee makers that we often take for granted as safe around the home. For many hospitality organizations, there is a growing awareness around customer's concern for safety around their facilities, and understand that safety certified appliances is one area to review, as they seek new and better ways to ensure client satisfaction and loyalty. We want to introduce a new company, UL-STR, who will address the need for new testing and more importantly verification especially relating to retailers where many of us send our products.

And as always we are looking to you, our valued customers for suggestions and ideas on how we can improve our service, our dedication and commitment to you.

Kind Regards,

Alberto Uggetti Global Vice
President and General Manager,
Appliances Industry



Energy Efficiency Update

Draft 3 ENERGY STAR® Version 2.0 Water Heaters specification

The ENERGY STAR® specification for Water Heaters is currently under revision. On March 19, EPA released Draft 3 ENERGY STAR® Version 2.0 Water Heaters specification.

Final Draft Version 6.0 ENERGY STAR® Clothes Washer specification

On March 29, US EPA released the Final Draft Version 6.0 ENERGY STAR® Clothes Washer specification, proposing changes to address Combination (All-in-One) Washer-Dryers.

ENERGY STAR® specification for commercial ice makers is under revision

The ENERGY STAR® specification for commercial ice makers is currently under revision. Final Draft ENERGY STAR® Automatic Commercial Ice Makers Test Method was released on March 29, 2012. Stakeholders are encouraged to submit comments on this proposal.

ENERGY STAR® Version 4.0 Set-top Boxes specification

On March 20, the EPA announced their efforts to review the ENERGY STAR® Version 4.0 Set-top Boxes specification. EPA also hosted a webinar on April 5, 2012 to discuss the issues for consideration and next steps for the Version 4.1 specification.

Final Draft Version 1.0 ENERGY STAR® UPS specification

EPA is currently developing a new product specification for Uninterruptible Power Supplies. On April 6, the U.S. Environmental Protection Agency (EPA) just released the Final Draft Version 1.0 ENERGY STAR® Uninterruptible Power Supply (UPS) specification and test method. Stakeholders are encouraged to review the Draft Final and provide written comments to EPA.

A New way to Protect Consumers

Company highlight on UL-STR

By Zoe Susice / Marketing Manager

UL-STR is a leading global provider of quality assurance solutions designed to help companies determine if the products they are manufacturing, selling, and/or distributing comply with quality, safety and performance standards, adhere to domestic and international regulations, and meet the expectations of consumers before they reach the marketplace.

With over 65 years of experience and 12 laboratories around the globe, UL-STR's expertise spans a wide range of consumer product categories, including electronic and electrical products, household chemicals, and general consumer merchandise. Their quality assurance programs provide reliable and qualified information to help retailers, manufacturers, and suppliers understand and mitigate the sources of product risk throughout the supply chain.

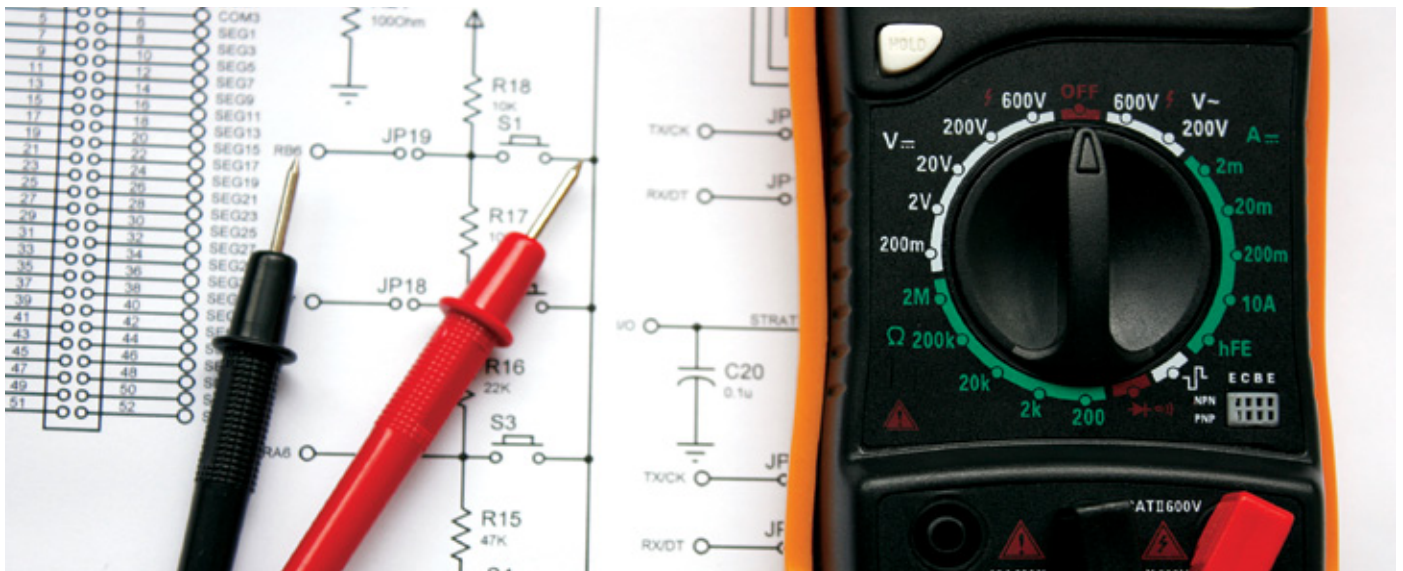
UL-STR's QA testing services help companies achieve the highest level of confidence in the quality and safety of their products and systems. Global clients rely on UL-STR's expertise to help them protect their brands. Testing services includes technical support for product development, evaluation of product design and construction, raw materials evaluation, testing to proprietary

client specifications, and product risk assessments. UL-STR's laboratory testing services also provide comparative product testing and real-world claim substantiation of product performance. Analytical, microbiological, and physical testing is designed to ensure product compliance with legally mandated protocols, regulations, and standards. Before a product goes to market, UL-STR can also conduct durability and shelf life tests, and a review of product packaging and labeling.

More than just a testing company, UL-STR partners with clients throughout all phases of the supply chain to assess risk and develop solutions to prevent potential problems before they occur. In-depth inspection programs help clients keep a finger on the pulse of global production. Experienced technical staffs provide a vital

check on product quality at every stage of production, from top of production to in-process quality checks to pre-shipment and loading inspections. Whether at the factory, warehouse or port, we help ensure that products meet or exceed quality and safety standards.

Whether a client is seeking to enhance product performance or launch a new product, UL-STR's sensory and consumer studies can provide valuable input to help ensure marketplace success. Highly trained experts conduct a wide range of tests, from descriptive panels to shelf-life and stability studies to degree of difference testing. Customizable consumer research programs provide relevant consumer feedback to assist in critical product development, marketing, and launch decisions.



Strategies to Streamline Your Submittal Process

By Robert Pence / Director, Operations

Making it easier to do business with UL is the end goal as we have remodeled the submission process to help our customers get the certifications they want faster, easier and better than ever. A quick overview will show the three service levels available to help users get certified within the new procedures.

TYPICAL CERTIFICATION	DATA ACCEPTANCE PROGRAM	NO TEST AND ADMINISTRATIVE
Early Engagement: Idea Stage — ensures smooth project flow and reduces risk of non-compliance	Faster Service — for complete DAP Client Test Data Program submittals	Early identification of administrative type jobs — low need for Engineer level staff
Technical Assistance for scoping — get the scope and quote right the first time	DAP Witness Testing Program — Schedule Engineer visit at your convenience	“High Speed team” — delivery in 48 hours
Streamlined intake procedures — No more queues	Recognizing your investment in lab and staff	High visibility, high satisfaction
Simultaneous Testing and Construction Review — start testing upon sample receipt.	Educational Services geared for DAP customers	UL Advantage Services in Development
Detailed Review in Early stages — significantly reduces late problem discovery	Get certified faster	

Hospitality Quality Coffee Makers (continued from cover)

- Required to be grounded to afford additional protection against electric shock in the event the appliance is not satisfactorily maintained.
- Provided with an automatic shutoff manual reset operating control or an electronic on / off push-button switch with a maximum one-hour auto shutoff and “lock out” feature.
- Provided with a cord tag containing *Important Safeguards* information. In addition, a printed label on the appliance will provide general operating instructions for those unfamiliar with the particular model.
- Provided with user maintenance instructions for office building or hotel maintenance and management staff.
- Not permitted to have a thermal carafe with a glass interior.

Industry will now be able to offer coffee makers listed specifically for hospitality use. Coffee makers that comply with the new hospitality-use requirements are eligible to bear the UL Listing Mark for these products which includes the UL symbol together with the word “LISTED,” a control number assigned by UL, and the product name “Hospitality-use Drip-type Coffee Maker” or “Hospitality-use Coffee Maker.” As this new class of product becomes available in the marketplace, you should soon be able to enjoy that morning cup of coffee more carefree.



Share Your Thoughts: Appliance.advisor@ul.com
 Sign up at: www.eepurl.com/f68y5



Electronically Protected Motors

Now, there's a choice

By **Frank Ladonne** / Primary Designated Engineer

UL has been in the business of testing, evaluating and certifying the safety of electric motors for well over 100 years (just slightly after Tesla received his first patent for the AC induction motor). For most of those 100 years, most small single phase motors were thermally protected by means of an electromechanical device called a thermal motor protector (TMP). Thermal motor protectors, responding to both winding temperature and winding current, have done a great job of limiting motor winding temperatures to levels consistent with the ability of the insulation system materials to do their job in avoiding the risk of fire and/or electric shock.

About 10 years ago, the market began to reflect the influx of electronically commutated (ECM) or brushless DC (BLDC) motors. This concurrently signaled the genesis of the large scale implementation in the commercial market of electronic circuits providing overtemperature protection in place of the venerable TMP. As motor manufacturers were learning the nuances of designing motor protection circuits, the safety test/evaluation and certification industry was busy evaluating a set of failure modes and challenges unique to this new and emerging technology. The first Standard applied to this technology was IEC 60730, "Automatic electrical controls for household and similar use". These original requirements formed the basis for the safety evaluation that is used today for these protection circuits when used in residential and commercial products.

The basis of this philosophy can be summed up by the phrase "functional safety". Now, functional safety is not a

new concept. Though the vast majority of the products evaluated for safety by UL do not involve the "functionality" of the product in any way, some do. For example, when UL evaluates a toaster, we don't care much about the quality of the toast that the appliance produces but rather we care that the toaster not present a risk of fire or electric shock under all normal and reasonably anticipated abnormal conditions of use (yes, even trying to fish a wayward piece of toast out of an energized toaster with a fork). In contrast, with respect to fuses and circuit breakers, we care not only about the risk of fire and electric shock but we've also always cared about the "functional safety" of these type of devices. That is, not only do we care that the fuse or circuit breaker doesn't catch fire or present a risk of electric shock but we very much care that the fuse or circuit breaker performs its specified function; that the overcurrent device will in fact open within defined time-current parameters.

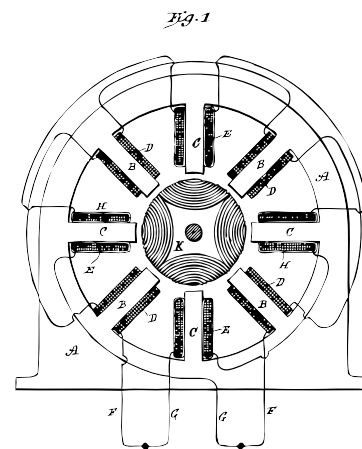
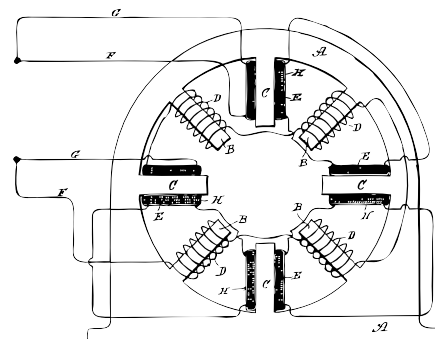


Fig. 2



Alternating current electro magnetic motor, patented August 5, 1890

It is a very similar philosophy that has been applied to electronic thermal protection circuits for motors. In addition, the functional safety philosophy insists on "no single point of failure". That is, the failure (shorting or opening) of a single electronic component shall not prevent the electronic protection circuit from performing its safety function.

This philosophy has worked very well and indeed there are literally millions of residential and commercial products in use today in homes and businesses that have been evaluated in this way.

Recently, electronic protection circuits have been finding their way into the protection of large motors intended for industrial use. Historically, the safety industry has looked at products intended for industrial use in a slightly different light. After all, residential and commercial products are generally used by the public at large, no technical background is assumed and often these products are used in areas with the likelihood of flammable or combustible materials in close proximity, for example bedding, furnishings and the like.

Conversely, products that are intended for industrial use are generally located in machine rooms or transformer vaults or other industrial areas that are generally devoid of combustibles. These areas are generally regularly inspected and serviced by trained maintenance staff or technicians and the equipment is generally

closely monitored for failures. As a result, industrial duty motors were typically not protected by TMPs but rather by magnetic motor starters that monitored motor current. When the motor current reached abnormally high levels, the motor starter tripped off and intervention by a trained mechanic or technician was required.

Thus, it makes sense that this same difference in philosophy be extended in a consistent way to electronic motor protection circuits. Motor protection devices intended for industrial use have long been evaluated to UL 508, Standard for Industrial Control Equipment, and UL 508C, Standard for Power Conversion Equipment and this has served the purpose very well with no predominant history of field failures. Consequently, it only makes sense that electronically protected motors intended for industrial use be evaluated in the same way.

So, while electronically protected motors intended for residential or commercial use have been evaluated to UL 1004-7, Standard for Electronically Protected Motors in conjunction with UL 60730-1, Standard for Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements, UL has recently created a new category to accommodate electronically protected motors intended for industrial use. This category, XDNZ, accommodates the test and evaluation of Electronically Protected Motors for Industrial Use to the requirements of UL 1004-3, Standard for Thermally Protected Motors, and UL 508, Standard for Industrial Control Equipment, or UL 508C, Standard for Power Conversion Equipment.

Now there's a choice!

