

SYSTEM SOLUTIONS EXPERIENCE SAVES TIME AND MONEY

As a design engineer, how much attention do you pay to protecting the electrical circuits of the product you're designing? Effective circuit protection is essential because of the demand for complex products to last longer and perform better.

Circuit breakers may be small components, but they play a critical role in protecting circuits in everything from medical equipment to jet aircraft. Superior circuit protection is no longer a luxury, whether it is a single circuit



breaker or part of a complete power distribution system.

In fact, as the trend to outsource sub-assemblies and systems continues to grow, E-T-A is well positioned to provide complete power distribution system solutions. Our 50 years of experience in designing and building world-class circuit protection can help turn your design concepts into complete, precision-manufactured power distribution solutions. Working closely with your engineering team, we can advise you on cost-saving design enhancements and handle total design, manufacture, assembly and testing.

DESIGN
E-T-A design competence extends further than many manufacturers into areas such as prototype, layout and documentation services.

What really sets E-T-A apart is that we are the **ONLY** supplier in the world that can provide **ALL** circuit protection technologies. And because E-T-A does not limit your circuit protection choices, you are assured a precise fit to your specific application, providing more effective circuit protection.

MANUFACTURE
Designs are fabricated in ISO accredited E-T-A manufacturing facilities in the U.S. and around the world, using highly trained personnel and advanced production methods.

ASSEMBLY
Quality control processes and attention to detail are evident in every aspect of E-T-A's electro-mechanical assembly areas. Individual quality plans, paperless build instructions, computerized

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Solutions

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order tracking, full manufacturing documentation and electronic document storage streamline factory processes and maximize efficiency.

TEST

A vital part of producing precision-manufactured solutions is meticulous quality testing. Our automatic test equipment ensures product quality by verifying the operation of individual

components and complete assemblies against predefined parameters from the original design.

E-T-A's expertise is applicable to a wide range of applications including systems for custom housings, multi-phase distribution assemblies, high-speed switching assemblies and rack systems available with a full range of specific instrumentation.

Our innovative circuit protection experience allows us to turn a concept or a simple sketch into a finished product, at an attractive price, while you focus on your core business. E-T-A is the best resource to provide total package system solutions that fit your specific power distribution requirements.

BREAKER POWERS LONG-LIFE VACUUM CLEANER

Royal Appliance Mfg. Co. recently chose E-T-A's 1410-F circuit breaker for its new Dirt Devil® Platinum Force upright vacuum cleaner, a high-power unit carrying the longest warranty in the industry – four years on the motor and six years on all other parts.

The Dirt Devil product line was introduced in 1984 and has achieved an outstanding 98% brand awareness level and high brand loyalty derived from strong customer satisfaction. The Platinum Force vacuum continues Dirt Devil's strategy to bring innovative products to market. It implements a dramatically different bagless design with a shorter, wider center airpath that delivers more suction power than other 12A upright units and decreases the chance of clogs.

E-T-A's 1410-F miniature single-pole rocker switch/thermal circuit breaker is used in the vacuum's handle to provide ON/OFF switching, extremely fast overload protection, and convenient circuit breaker function. The innovative design of the 1410-F dramatically increases the speed of the thermal mechanism.

E-T-A was chosen because, as Mark Pigza, Senior Engineer, Electrical Components and Agency Compliance, says, "E-T-A had the best offering of products with the features we needed and wanted. We were looking for a breaker as small as possible to fit the small

mounting space available at the top of our handle. We also wanted a snap fit for ease of assembly and aesthetic considerations. It was also a great benefit to have a single component that could function both as a rocker switch and circuit breaker, in essence, combining two components into one."

E-T-A also assisted by helping develop custom printing for the actuator and a modified actuator tool to help the product pass the UL switch impact test.

Mark was very pleased with the personalized service Royal received, saying, "E-T-A's sales rep was very helpful, responsive, professional, and a pleasure to work with — very refreshing compared to many sales reps I have seen in my career."



NEW CIRCUIT BREAKER DESIGNED SPECIFICALLY FOR SIMULATORS

CAE, the global leader in the provision of simulation and control technologies and training solutions for aerospace, defense and marine markets, recently turned to E-T-A to develop a specially designed switch for their next generation full flight simulator, Sim XXI™. CAE asked E-T-A to produce a more efficient replacement for the conventional circuit breaker they had been using in their flight simulators for many years. CAE produced a wish list of features, every one of which was subsequently incorporated into E-T-A's 9510-G simulator circuit breaker.

The 9510-G is a single-pole switch with aircraft-style threadneck mounting and a standard push/pull actuator that matches all of E-T-A's aircraft-style circuit breakers in front-of-panel appearance and operating forces but avoids the need for large activation currents within the simulator. It operates on 28 or 48V DC with less than 200mA trip current and 25ms at 28Vdc tripping time, resists 3g vibra-

tion with 5g shock, exceeds 10,000 operations and has an operating temperature range of -30 to +60°C.

Versions are available as modular devices with removable, multi-configurable terminal options. Existing installations can be retrofitted with options and accessories that include five identification collar colors, two push button colors, gold contacts, splash covers, lock out rings and actuator extensions.

Headquartered in Canada, CAE employs more than 7,000 people around the world and generates annual revenues in excess of C\$1 billion. CAE is the world's leading supplier of civil full flight simulators and visual systems. The company is the world's second largest independent aviation training provider with a network of aviation training centres located around the world. CAE is also a global leader in the design of sophisticated military training sys-



tems, a leading provider of military training services, as well as marine automation systems.

CAE's selection of E-T-A's 9510-G as the switch of choice for present and future simulators is a testament to our dedication to innovation and product quality.

E-T-A 9510-G SIMULATOR CIRCUIT BREAKER

- single-pole with threadneck mounting
- push/pull actuator
- removable multi-configurable terminal options
- wire-wrap pins, screw and blade terminals available
- trip time 25 msec
- recessed amperage marking
- low trip current
- 2 diodes: logic diode and diode for polarity of coil
- cycle up to 10,000 operations



CAE Sim XXI™



The E-T-A 9510-G offers flexibility for different applications with removable and interchangeable plug-in/pull-out wire-wrap pins and blade or screw terminals.

NEW E-T-A CATALOG AVAILABLE SOON



E-T-A's new catalog will be available in March 2002 in hard copy and on-line. Considered the industry standard, the world's largest circuit protection catalog features many new products including power distribution, power distribution solutions and electronic circuit breakers, as well as E-T-A's control products.

Preorder your copy now at www.etacbe.com/catalog or call:

USA 847-827-7600
Canada 905-764-9510

E-T-A'S 2002 TRADE SHOW SCHEDULE

National Design Engineering
March 18-21, Chicago, IL

EDS
May 14-16, Las Vegas, NV

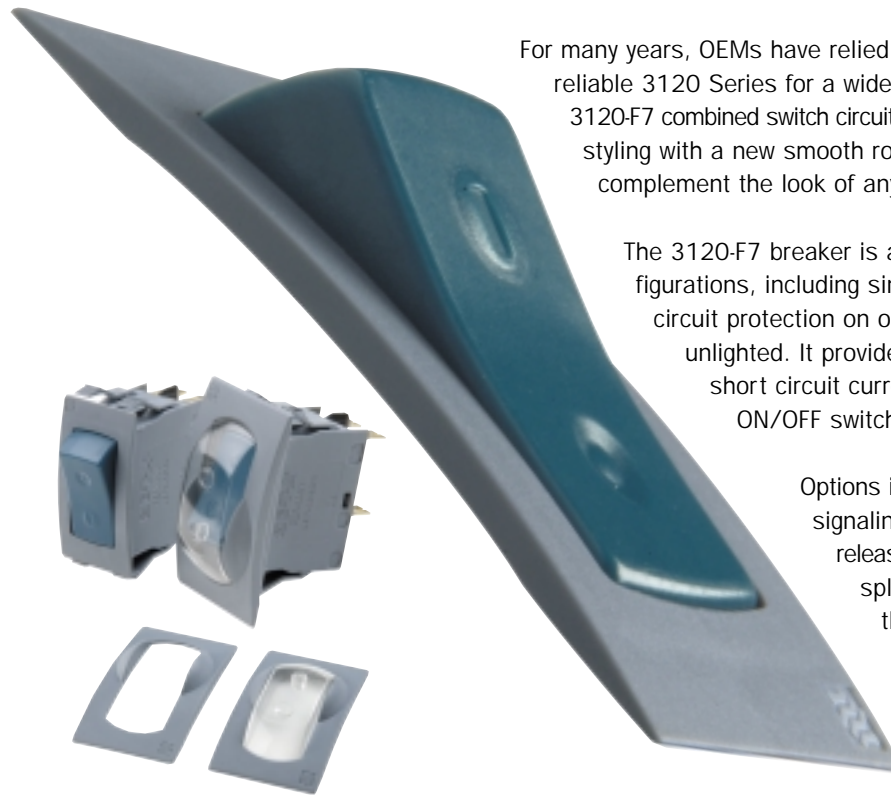
Supercomm
June 2-6, Atlanta, GA

NEW CANADIAN OFFICE

E-T-A is expanding in Canada with a new office and warehouse located at:

100 Leek Cr., Unit 11
Richmond Hill, ON L4B 3E6
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NEW COMBINED SWITCH CIRCUIT BREAKER DELIVERS STYLISH PERFORMANCE

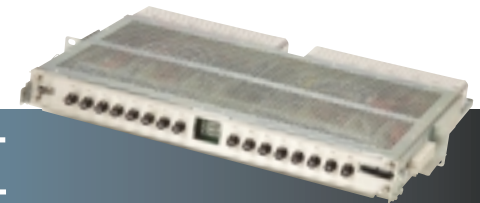


For many years, OEMs have relied on E-T-A's extremely versatile and reliable 3120 Series for a wide range of applications. E-T-A's new 3120-F7 combined switch circuit breaker offers attractive, ergonomic styling with a new smooth rocker and frame shape that will complement the look of any panel design.

The 3120-F7 breaker is available in a broad range of configurations, including single or double pole with thermal circuit protection on one or both poles, and lighted or unlighted. It provides protection against overload and short circuit currents and can be used as an ON/OFF switch.

Options include auxiliary contacts for status signaling, magnetic trip coil, under-voltage release module, remote trip module, water splash cover and an actuator guard that protects against inadvertent reset. These features make it ideal for marine, medical, electrical machine and power tool manufacturers.

The 3120 series includes models rated from 0.1 to 20A with voltage ratings of 240V AC and 50V DC. Single-pole versions for up to 30A are also available by special order. Operating temperature range is -22 to +144°F (-30 to +60°C). All models are fully approved by UL, CSA and VDE.



IN THE NEXT ISSUE

Look for innovative new E-T-A telecom power distribution solution in the next issue of *Current*. The world's smallest distribution panel packed with up to 20 breakers in a 19" or 23" 1U chassis.



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