E-T-A Smart Power Relay now available in 30 A Version for the Transportation Industry

An electronic alternative to standard automotive relays

Richmond Hill ON – January 2010 – E-T-A Circuit Breakers introduces a 30A version of the E-1048-8 Dice Smart Power Relay, a remotely controllable electronic load disconnecting relay, matching standard four pin automotive relay sockets. The E-1048-8 Dice is a replacement of standard protection schemes. Rather than using an electromechanical relay in combination with a blade fuse to switch and protect loads, it provides truly electronic relay/overcurrent protection in a single compact unit.

Solid state relays have been growing in importance for the power distribution systems in the transportation industry due to a number of advantages:

- they continue to operate while subjected to severe vibration and shock
- no moving parts means no wear and increased lifetime
- no arcing due to solid state elements with no contacts
- silent operation with decreased electrical noise when switching
- faster than electromechanical relays with switching time in the microseconds to milliseconds

The new 30A version was tested by a large truck manufacturer, comparing it to a traditional electromechanical relay. They were delighted with the results including 20% less power consumption which translates into longer battery life and less fuel consumption. The E-1048-8 meets EC/MC requirements and carries the E1 marks on the product.

To meet the needs of rugged applications, the E-1048 is designed to operate at extreme ambient temperatures of -40ºC to +85ºC (-40ºF to 185ºF) without the need for derating. Additionally, it requires only a fraction of the control power needed by electromechanical relays (approximately 5 mA) and has extremely low current consumption (less than 1mA). Both fractional control power and low current consumption make the E-1048-8D ideally suited for battery-buffered on-board electrical systems.

Applications

The E-1048-8 Dice, containing integral power electronics, is best utilized in shock and vibration applications within the transportation industry because of its wear resistant switching function. It is also suitable in applications where contact deterioration can occur due to frequent switching of inductive loads in road, rail and marine vehicles. It is also suitable for industrial use (process control, machine-building) as an electronic coupling relay between PLC and DC 12V or DC 24V load.

Specifications

E-T-A's new 30x30x30mm, dice-shaped E-1048-8D relay is available in DC 12/24 V and in nine current ratings in two basic versions. The "entry"

version offers standard electronic relay functionality and an additional short circuit proof switching output. The “entry protect” version adds additional overload protection to the standard electronic relay - providing prompt disconnection in the event of an overload or short circuit.

The E-1048 Dice is based on a power MOSFET transistor with high side power switching that meets EN 61000-6-2 requirements for noise immunity and is available from 1A through 30A.

About E-T-A

E-T-A Circuit Breakers is a world leading manufacturer of circuit breakers and is a single-source supplier for most circuit protection technologies: thermal, thermal-magnetic, magnetic, electronic, high performance and electronic. E-T-A circuit breakers are available in more than 150 models and 350,000 different configurations. E-T-A is also a leading manufacturer of control and monitoring products, and solid state remote power controllers (SSRPCs). All E-T-A products are RoHS compliant. With Canadian headquarters in Richmond Hill ON, the company serves industrial OEMs and end-users.

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