



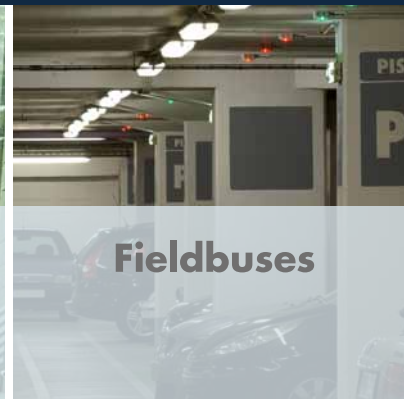
Sensors



Switches



Controls



Fieldbuses

Application notes



Application Note : October 2016

Market involved : Food & Beverage

Product : RKD2

Customer : OEMs

Subject : Switching of heaters in commercial electric ovens

CUSTOMER ISSUE :

Major OEMs recognise that solid state relays are the most reliable solution for the switching of heaters in electric ovens. But fitting them in the limited spaces available in such equipment is generally an issue that limits the use of solid state relays. To overcome this, compact solutions that occupy as little space as possible are required.

The power terminals of the solid state relays used in such equipment need to deal with ring terminals, which are typical in such applications.

Electrical cooking appliances have specific norm requirements and so SSRs to be fitted in such equipment need to conform to these requirements in order to facilitate the certification of the appliance.

OUR SOLUTION :

The RKD2 is a solid state relay with 2 independently controlled outputs housed in a platform with a width of 45 mm. This gives a maximum space saving of 50% when compared to 2x 1-phase hockey puck solutions.

The efficient thermal design used in the RG series is also used in the RK. This makes the RK the most thermally effective solid state relay on the market and ensures that, when the RK is mounted on a heatsink, the space occupied in the panel is as compact as possible.

The output terminals of the RK consist of screw terminals that can handle the appropriate cables up to 75 AAC, such as ring or fork terminals or ferrules.

BENEFITS :

- Space savings of up to 50% when compared to 2x 1-phase hockey puck solutions
- Cost savings through fast installation facilitated by the pre-attached thermal pad and pluggable spring control terminals
- Ease of certification of commercial cooking equipment when integrating the RK. The RK is certified for 100,000 cycles as required by UL197 for commercial cooking appliances and also conforms to EN 60335 requirements for appliances
- A reliable solution that reduces mechanical and thermal stress, hence a longer SSR lifetime, by adopting wire bonding technology and avoiding hard potting compound