Crona safe-zone

Crona feel safe

Combatting interference

Why should a press strip profile use a 1.2kΩ resistor rather than a 10kΩ?

From our technical expert, Ken

Although terminating the profile with 1.2kΩ increases the current and power drawn from the supply, there is an advantage gained if the system is used in the real world where interference is present. If the connecting cable between the profile and the sensing electronics is in ducting where other electrical cables are present then the proximity of these can generate interference signals. Cables carrying high frequencies can be troublesome as can cables carrying power at mains frequency when switching transients occur. Radio interference is also another source of interference.

In all cases, magnetic and electric screening will reduce the interference but, unfortunately, it may not be possible and certainly will be prohibitively expensive. So what can be done about it?

The effect of interference can be represented in simple terms by a voltage source and an impedance representing the coupling between source and profile. This impedance will usually be quite high compared with the value of the terminating resistor of the profile e.g. stray capacitance between cable and profile. The interference appearing across the profile is thus determined by the ratio of the terminating resistor to this impedance. Thus the worst case would be with the profile open circuited. But using a 1.2kΩ resistor rather than a 10kΩ resistor will thus give a 1.2/10 reduction in interference and hence a significant benefit. It should be remembered that it will not eliminate it and additional protection may be needed in adverse environments. Hardware and software filtering can be effective in screening out false triggering from interference signals.

Cronapress Limited
Parkside Works Otley Road
Guiseley West Yorkshire LS20 8BH

t:+44 (0) 1943 876600 f:+ 44 (0) 1943 870088
e:sales@cronapress.co.uk www.cronapress.co.uk

Cronapress

pressure sensitive technology