bsia
british security industry association

identifying end of line resistor configurations in **magnetic contacts**

- a guide

January 2009

For other information please contact:

British Security Industry Association
t: 0845 389 3889
f: 0845 389 0761
e: info@bsia.co.uk
www.bsia.co.uk

Form No. 252. Issue 1

Contents

1. Scope

The following guidelines define a common framework to identify popular end of line (EOL) resistor configurations as used in magnetic contacts whose resistors are embedded in the product at the point of manufacture.

The aim of this common scheme is to minimise confusion and error during product specification and installation that might otherwise arise if similar types of identification techniques are implemented independently by different manufacturers.

2. Convention

Each EOL configuration is defined by a pair of resistor values. Figure 1.0 shows a typical series connected configuration. The first resistor value denotes the shunt resistor Ra that is wired across the switching element. The second resistor value denotes the end of line resistor value Rb that is wired in series with the switching element.

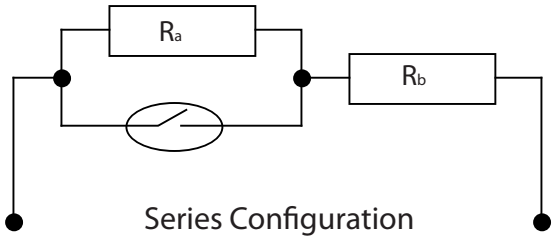

Figure 1.0 Series Configuration

An alternative parallel arrangement is shown in Figure 2.0 below:

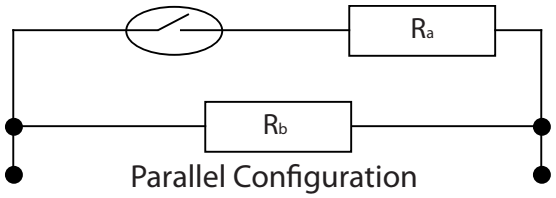

Figure 2.0 Parallel Configuration

This scheme considers the use of letters or colours to uniquely identify each resistor configuration. The specific use of a letter or colour is not mandated, but typically may be included as part of the product model number, or to identify a user selectable configuration at the point of installation.

Shunt/Switch Resistor Value (Ra)	EOL/Series Resistor Value (Rb)	Series (S) or Parallel (P) Configuration	Letter	Colour
1K0	1K0	S	A	Green
4K7	2K2	S	B	Red
8K2	8K2	P	C	Blue
5K6	5K6	S	D	Orange
6K8	4K7	S	E	Purple
6K2	3K3	S	F	White
13K0	1K0	S	G	Black
2K2	2K2	S	H	Yellow
4K7	4K7	S	I	Grey
22K	10K	S	J	Brown

Table 1.0 defines the common convention of letter and colour for each EOL configuration.

Additional configurations of shunt and EOL resistors are possible, but are not specifically included within the scope of these Guidelines.

Acknowledgement

The BSIA would like to thank members of the TC/1 committee for their contribution in the development of this document.