

# Product data sheet

## Characteristics

# ABR7S23

plug-in electromechanical relay - 10 mm - 24 V DC - 1 CO

### Main

|                           |                                 |
|---------------------------|---------------------------------|
| Range of product          | Advantys Telefast ABE7          |
| Product or component type | Plug-in electromechanical relay |
| Control circuit type      | DC                              |
| Quantity per set          | Set of 4                        |

### Complementary

|   |  |
|---|--|
| Width pitch dimension                       | 10 mm  |
| Product compatibility                       | ABE7P16T210<br>ABE7P16T212<br>ABE7P16T214<br>ABE7P16T215<br>ABE7P16T230<br>ABE7P16T230E<br>ABE7R16T230<br>ABE7R16T231  |
| [Uc] control circuit voltage                | 24 V   |
| [Ith] conventional free air thermal current | 5 A  |
| Contacts type and composition               | 1 C/O  |
| Threshold tripping voltage                  | 19.7 V at 40 °C  |
| Drop-out voltage                            | 2.4 V at 20 °C   |
| Drop-out current                            | 1 mA at 20 °C  |
| Power dissipation per pole                  | <= 0.36 W  |
| Associated fuse rating                      | 1 A fast blow  |
| Maximum switching voltage                   | 250 V AC 50/60 Hz conforming to IEC 60947-5-1<br>130 V DC conforming to IEC 60947-5-1  |
| Electrical durability                       | 500000 cycles, maximum switching current: 700 mA at 230 V AC-15<br>500000 cycles, maximum switching current: 450 mA at 24 V DC-13 10 ms<br>500000 cycles, maximum switching current: 1200 mA at 24 V DC-12<br>500000 cycles, maximum switching current: 1200 mA at 230 V AC-12 |
| Minimum switching current                   | 10 mA at >= 5 V  |
| Electrical reliability                      | 1e-008   |
| Operating rate in Hz                        | 0.5 Hz at Ie<br>10 Hz no load  |
| Mechanical durability                       | 20000000 cycles  |
| [Uiimp] rated impulse withstand voltage     | 2.5 kV conforming to IEC 60947-1   |
| Product weight                              | 0.008 kg<br>0.01 kg  |

### Environment

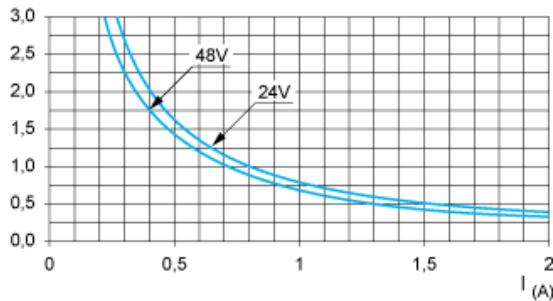
|                             |                                  |
|-----------------------------|----------------------------------|
| Max immunity to microbreaks | <= 5 ms                          |
| Dielectric strength         | 2000 V conforming to IEC 60947-1 |

Electrical Durability (in Millions of Operating Cycles) Conforming to IEC 60947-5-1

Multiply all durability values by 0.75 for ABR7S23.

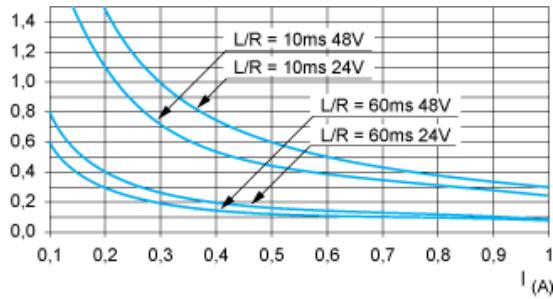
**DC Loads**

DC12 curves



DC12 control of resistive loads and of solid state loads isolated by optocoupler,  $I/R \leq 1$  ms.

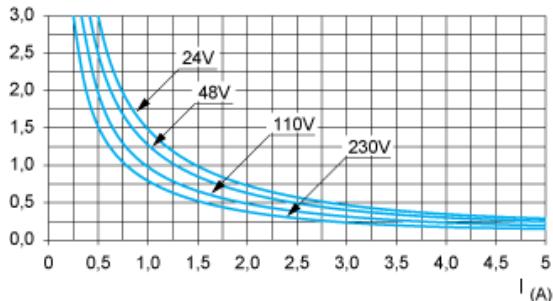
DC13 curves



DC13 switching electromagnets,  $L/R \leq 2 \times (U_e \times I_e)$  in ms,  $U_e$ : rated operational voltage,  $I_e$ : rated operational current (with a protective diode on the load, DC12 curves must be used with a coefficient of 0.9 applied to the number in millions of operating cycles)

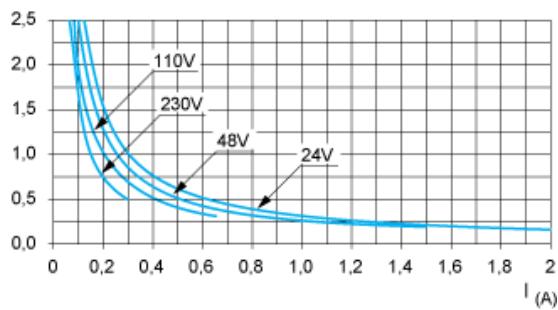
**AC Loads**

AC12 curves



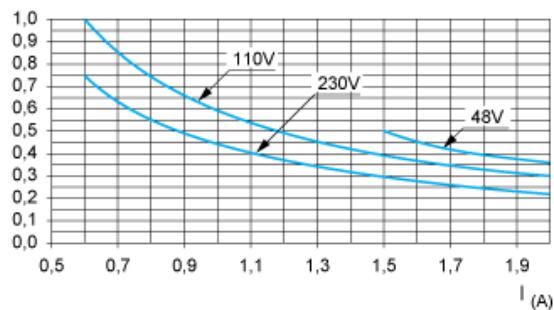
AC12 control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \geq 0.9$ .

AC14 curves



AC14 control of small electromagnetic loads  $\leq 72$  VA, make:  $\cos \phi = 0.3$ , break:  $\cos \phi = 0.3$ .

AC15 curves



AC15 control of electromagnetic loads  $> 72$  VA, make:  $\cos \phi = 0.7$ , break:  $\cos \phi = 0.4$ .