# Product datasheet Characteristics

# ABE7R16S212

sub-base - soldered electromechanical relays ABE7 - 16 channels - relay 10 mm



Price\*: 104.00 GBP



#### Main

| Range of product               | Advantys Telefast ABE7                  |
|--------------------------------|---|
| Product or component type      | Electromechanical output relay sub-base |
| [Us] rated supply voltage      | 24 V DC (PLC end)                       |
| Number of channels             | 16                                      |
| Number of terminal per channel | 2                                       |

## Complementary

| Terminal block type                | Removable   |  |
|------------------------------------|---|--|
| Polarity distribution              | Common per group of 8 channels on both poles  | —————————————————————————————————————— |
| Fixing mode                        | By clips on 35 mm symmetrical DIN rail By screws on solid plate with fixing kit   |  |
| Width                              | 206 mm  | q                                      |
| Current per output common          | <= 10 A   |  |
| Current per channel                | 5 A (preactuator end)   | .0                                     |
| Minimum switching current          | 10 mA at >= 5 V   | <u> </u>                               |
| Drop-out voltage                   | 2.4 V at 20 °C (PLC end)  |  |
| Switching frequency                | <= 0.5 Hz<br><= 10 Hz   | enhetitute for                         |
| Threshold tripping voltage         | At 40 °C  | ď                                      |
| Drop-out current                   | 1 mA at 20 °C   | i                                      |
| Power dissipation per channel in W | <= 0.36 W (PLC end)   |  |
| Contacts type and composition      | 1 NO (preactuator end)  |  |
| Maximum switching voltage          | 250 V AC 50/60 Hz conforming to IEC 60947-5-1<br>30 V DC conforming to IEC 60947-5-1  | laimer: This documentation is          |
| Electrical durability              | 500000 cycles, maximum switching current: 1500 mA at 230 V AC-12 (preactuator end) 500000 cycles, maximum switching current: 1500 mA at 24 V DC-12 (preactuator end) 500000 cycles, maximum switching current: 600 mA at 24 V DC-13 10 ms (preactuator end) 500000 cycles, maximum switching current: 900 mA at 230 V AC-15 (preactuator end) |  |

| Electrical reliability                 | 1e-008  |
|--|---|
| Operating time                         | <= 10 ms between coil energisation and NO closing <= 5 ms between coil de-energisation and NO opening |
| Contact bounce time                    | <= 5 ms 1 NO  |
| Operating rate in Hz                   | 10 Hz no load<br>0.5 Hz at le   |
| Mechanical durability                  | 20000000 cycles   |
| [Uimp] rated impulse withstand voltage | 2.5 kV conforming to IEC 60947-1  |
| [Ui] rated insulation voltage          | 2000 V  |
| Installation category                  | Il conforming to IEC 60664-1  |
| Tightening torque                      | 0.6 N.m (withflat Ø 3.5 mm  |
| Product weight                         | 0.4 kg  |

### **Environment**

| Max immunity to microbreaks           | <= 5 ms  |
|---------------------------------------|--|
| Dielectric strength                   | 2000 V conforming to IEC 60947-1                                   |
| Product certifications                | BV   |
|                                       | CSA  |
|                                       | DNV  |
|                                       | GL   |
|                                       | LROS (Lloyds register of shipping)                                 |
|                                       | UL   |
| IP degree of protection               | IP2x conforming to IEC 60529                                       |
| Protective treatment                  | TC   |
| Resistance to incandescent wire       | 750 °C, extinction time: < 30 s conforming to IEC 60695-2-11       |
| Shock resistance                      | 15 gn for 11 ms conforming to IEC 60068-2-27                       |
| Resistance to radiated fields         | 10 V/m (260000001000000000 Hz) conforming to IEC 61000-4-3 level 3 |
| Resistance to fast transients         | 2 kV conforming to IEC 61000-4-4 level 3                           |
| Ambient air temperature for operation | -560 °C conforming to IEC 61131-2                                  |
| Ambient air temperature for storage   | -4080 °C conforming to IEC 61131-2                                 |
| Pollution degree                      | 2 conforming to IEC 60664-1  |

# Offer Sustainability

| Sustainable offer status         | Green Premium product   |  |
|----------------------------------|---|--|
| RoHS (date code: YYWW)           | Compliant - since 0841 - Schneider Electric declaration of conformity |  |
|                                  | Schneider Electric declaration of conformity                          |  |
| REACh                            | Reference not containing SVHC above the threshold                     |  |
|                                  | Reference not containing SVHC above the threshold                     |  |
| Product environmental profile    | Available   |  |
|                                  | ☑ End of life manual  |  |
| Product end of life instructions | Available   |  |
|                                  |   |  |

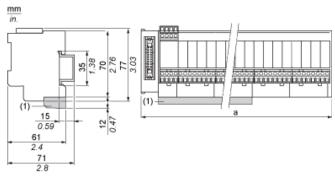
## Contractual warranty

| Warranty period | 18 months |
|-----------------|-----------|
|                 |           |

# Product datasheet Dimensions Drawings

# ABE7R16S212

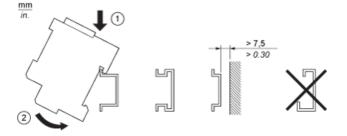
## **Dimensions**



### (1) ABE7BV20 / ABE7BV20E

| ABE7               | a in mm | a in in. |
|--------------------|---------|----------|
| R16S111 / R16S111E | 125     | 4.92     |
| R16S21 / R16S21•E  | 206     | 8.11     |

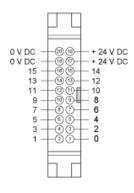
# Mounting



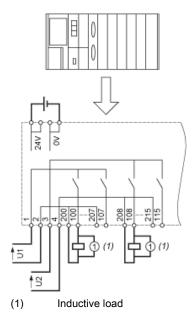
# Product datasheet Connections and Schema

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## HE10 16 Channels

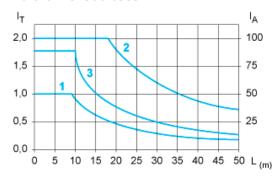


# Wiring Diagram



## Curves for Determining Cable Type and Length According to the Current

#### 16-channel Sub-base



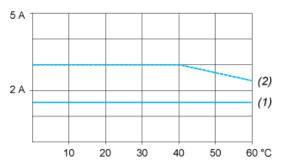
- L Cable length
- I<sub>T</sub> Total current per sub base (A)
- I<sub>A</sub> Average current per channel (mA)
- (1) TSXCDP••2 and ABFH20H••0 cables with c.s.a. 0.08 mm<sup>2</sup> (AWG 28).
- (2) TSXCDP••3 cables with c.s.a. 0.34 mm<sup>2</sup> (AWG 22).
- (3) Cables with c.s.a. 0.13 mm<sup>2</sup> (AWG 26).

The curves are given for a voltage drop of 1 V in the cable. For n volts tolerance, multiply the length determined from the graph by n.

# Product datasheet Performance Curves

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# **Temperature Derating Curves**



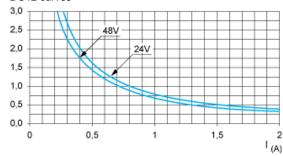
- 100 % of channels used
- (1) (2) 50 % of channels used

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

Multiply all durability values by 0.75 for ABR7S23.

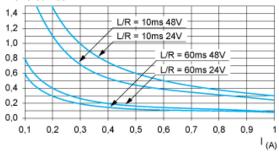
#### DC Loads

#### DC12 curves



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

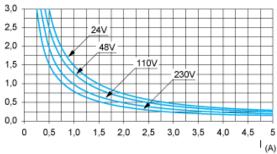
#### DC13 curves



DC13 switching electromagnets,  $L/R \le 2 \times (Ue \times Ie)$  in ms, Ue: rated operational voltage, Ie: rated operational current (with a protective diode on the load, Ie)

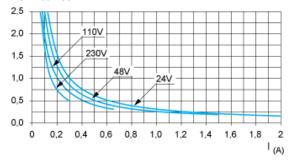
#### AC Loads

AC12 curves



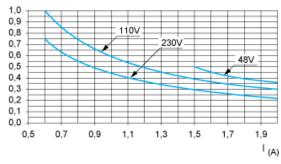
AC12 control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \ge 0.9$ .

#### AC14 curves



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

### AC15 curves



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