

# Product data sheet

Specifications



## Sub-base with plug-in electromechanical relay ABE7 - 16 channels - relay 10 mm

ABE7R16T212

### Main

|                           |   |
|---------------------------|---|
| Range of product          | Modicon ABE7                                  |
| Product or component type | Sub-base with plug-in electromechanical relay |
| Sub-base type             | Output sub-base                               |
| [Us] rated supply voltage | 19...30 V conforming to IEC 61131-2           |
| Number of channels        | 16  |

### Complementary

|   |  |
|---|--|
| Supply voltage type                     | DC   |
| Product compatibility                   | ABR7S21  |
| Contacts type and composition           | 1 NO   |
| Status LED                              | 1 LED per channel (green) channel status<br>1 LED (green) power ON                               |
| Polarity distribution                   | Polarity distribution contact common per 2 groups of 8 channels                                  |
| Short-circuit protection                | 1 A internal fuse, 5 x 20 mm, fast blow (PLC end)  |
| Fixing mode                             | By clips (35 mm symmetrical DIN rail)<br>By screws (solid plate with fixing kit)                 |
| Maximum supply current                  | 1 A  |
| Voltage drop on power supply fuse       | 0.3 V  |
| [Ui] rated insulation voltage           | 2000 V terminals/mounting rails<br>300 V coil circuit/contact circuits conforming to IEC 60947-1 |
| [Uiimp] rated impulse withstand voltage | 2.5 kV   |
| Installation category                   | II conforming to IEC 60664-1   |
| Tightening torque                       | 0.6 N.m with flat Ø 3.5 mm screwdriver   |
| Net weight                              | 0.73 kg  |

### Environment

|                                 |   |
|---------------------------------|---|
| Product certifications          | CSA<br>UL<br>DNV<br>GL<br>EAC                     |
| IP degree of protection         | IP2X conforming to IEC 60529                      |
| Resistance to incandescent wire | 750 °C conforming to IEC 60695-2-11               |
| Shock resistance                | 15 gn for 11 ms conforming to IEC 60068-2-27      |
| Vibration resistance            | 2 gn (f= 10...150 Hz) conforming to IEC 60068-2-6 |

|                                       |  |
|---------------------------------------|--|
| Resistance to electrostatic discharge | 4 kV (contact) level 3 conforming to IEC 61000-4-2<br>8 kV (air) level 3 conforming to IEC 61000-4-2 |
| Resistance to radiated fields         | 10 V/m (26000000...1000000000 Hz) conforming to IEC 61000-4-3 level 3                                |
| Resistance to fast transients         | 2 kV level 3 conforming to IEC 61000-4-4   |
| Ambient air temperature for operation | -5...60 °C conforming to IEC 61131-2   |
| Ambient air temperature for storage   | -40...80 °C conforming to IEC 61131-2  |
| Pollution degree                      | 2 conforming to IEC 60664-1  |

## Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Height             | 7.6 cm   |
| Package 1 Width              | 9.6 cm   |
| Package 1 Length             | 22.1 cm  |
| Package 1 Weight             | 707.0 g  |
| Unit Type of Package 2       | S03      |
| Number of Units in Package 2 | 12       |
| Package 2 Height             | 30.0 cm  |
| Package 2 Width              | 30.0 cm  |
| Package 2 Length             | 40.0 cm  |
| Package 2 Weight             | 9.047 kg |

## Contractual warranty

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



Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Environmental footprint

|                                  |   |
|----------------------------------|---|
| Total lifecycle Carbon footprint | 1041  |
| Environmental Disclosure         | <a href="#">Product Environmental Profile</a> |

## Use Better

### Materials and Substances

|  |  |
|--|--|
| Packaging made with recycled cardboard | No   |
| Packaging without single use plastic   | No   |
| <a href="#">EU RoHS Directive</a>      | Pro-active compliance (Product out of EU RoHS legal scope)   |
| SCIP Number                            | 1bbe7d20-74c0-4e7e-b98b-d2946f4ab8b4   |
| REACH Regulation                       | <a href="#">REACH Declaration</a>  |
| California proposition 65              | <b>WARNING:</b> This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="#">www.P65Warnings.ca.gov</a> |

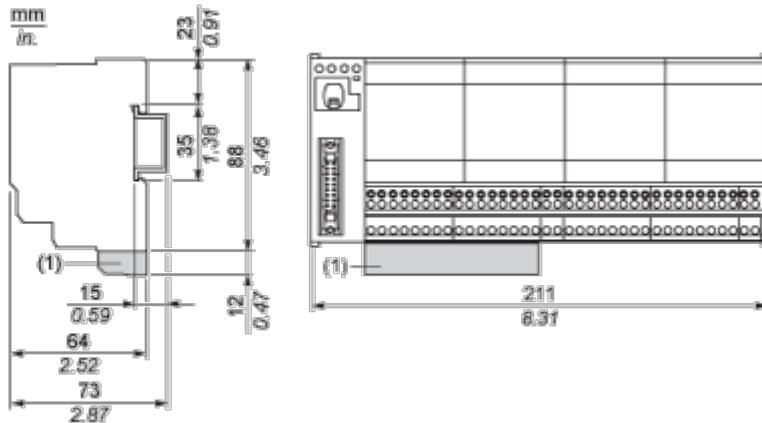
## Use Again

### Repack and remanufacture

|                                 |   |
|---------------------------------|---|
| End of life manual availability | <a href="#">End of Life Information</a>   |
| Take-back                       | No  |
| WEEE Label                      | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

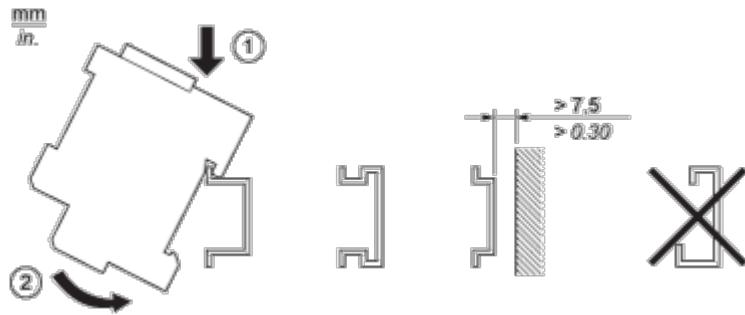
## Dimensions Drawings

## Dimensions

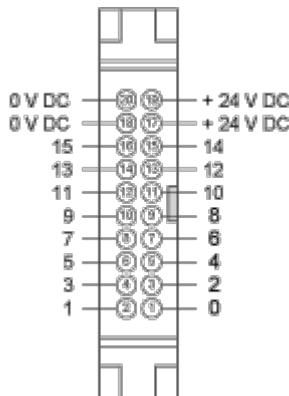


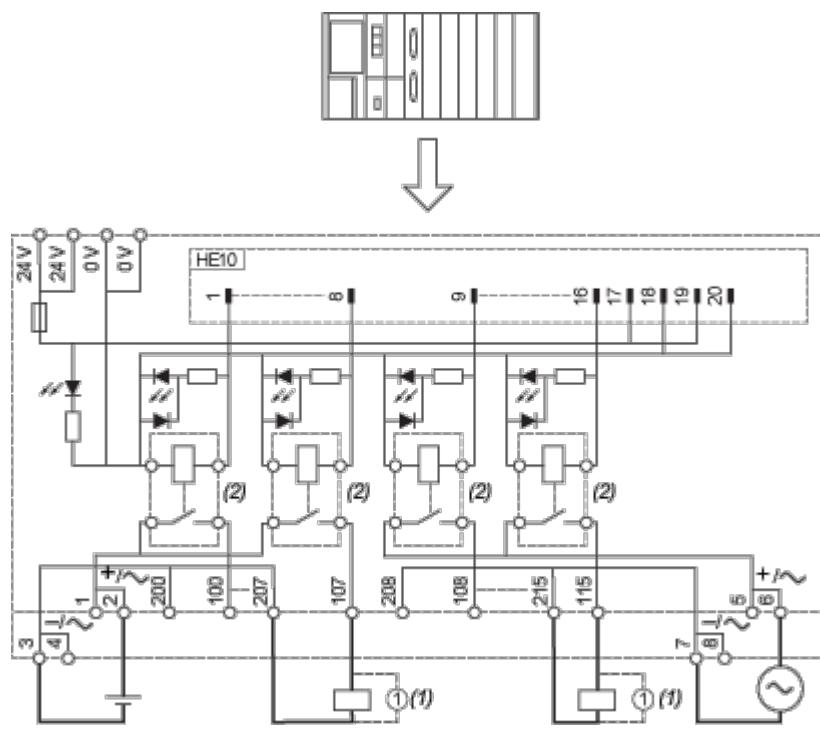
(1) ABE7BV10 / BV20, ABE7BV10E / BV20E

## Mounting and Clearance

Mounting

## Connections and Schema

HE10 16 Channels

Wiring Diagram

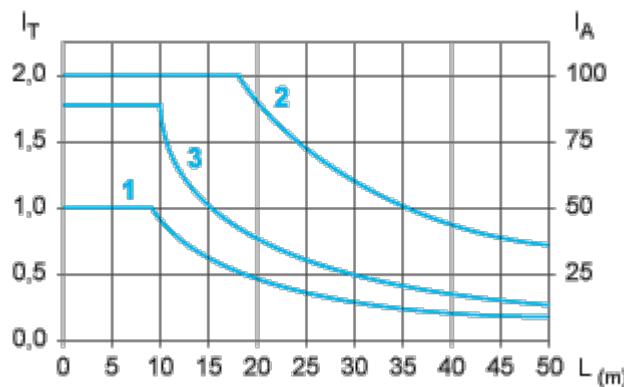
(1) Inductive load

(2) ABR7S21 (1 "F" "SPST") Ith = 5 A (supplied)

## Performance Curves

Curves for Determining Cable Type and Length According to the Current

## 16-channel Sub-base



L Cable length

$I_T$  Total current per sub base (A)

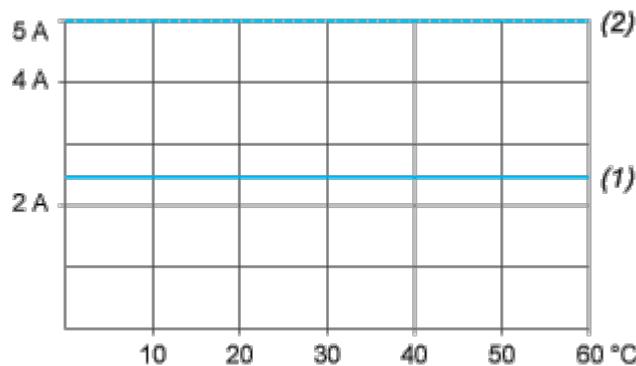
$I_A$  Average current per channel (mA)

(1) TSXCDP•2 and ABFH20H•0 cables with c.s.a.  $0.08 \text{ mm}^2$  (AWG 28).

(2) TSXCDP•3 cables with c.s.a.  $0.34 \text{ mm}^2$  (AWG 22).

(3) Cables with c.s.a.  $0.13 \text{ mm}^2$  (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.

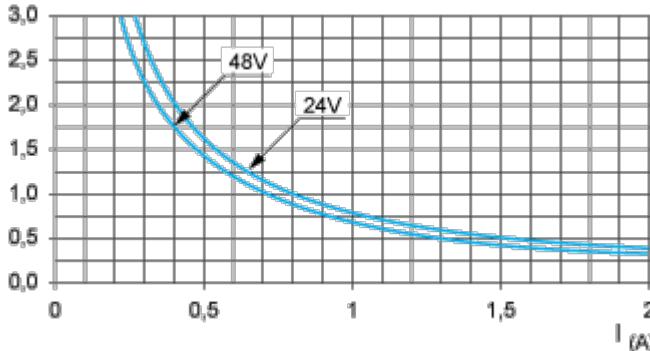
Temperature Derating Curves

(1) 100 % of channels used

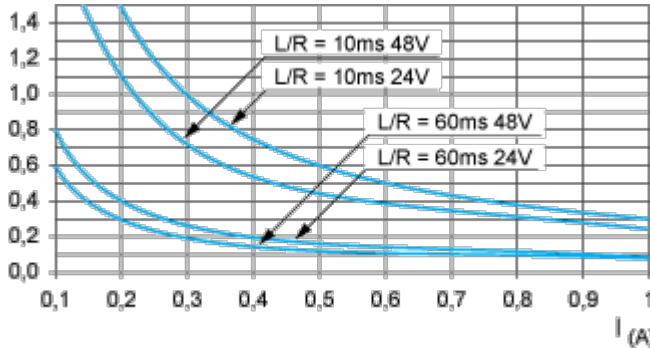
(2) 50 % of channels used

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

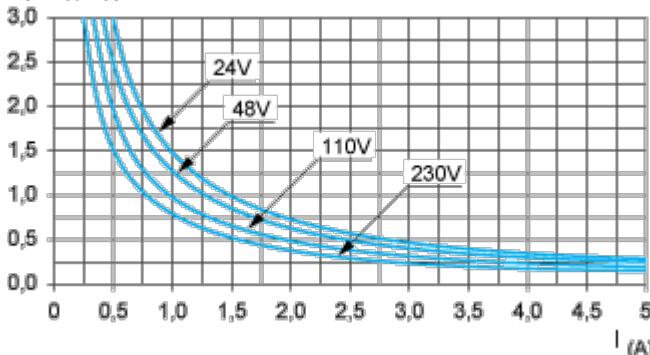
DC12 curves

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

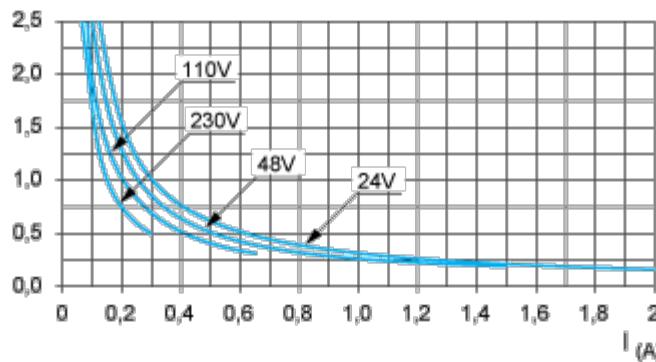
DC13 curves

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

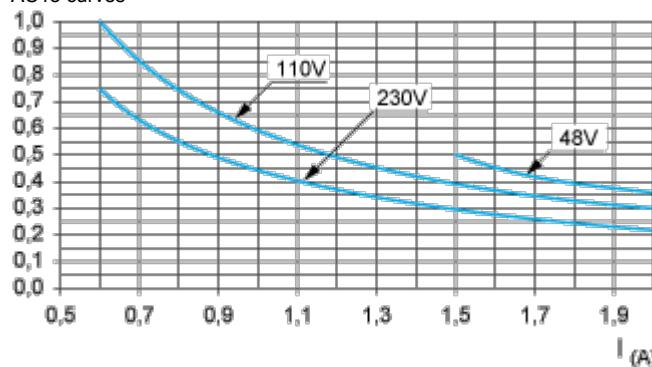
AC12 control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \geq 0.9$ .

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:  $\cos \phi = 0.4$ .

Image of product / Alternate images

Alternative

---

