



### 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 IEC 61131-2                         |
| Number of Channels        | 16  |

### Complementary

|  |  |
|--|--|
| Supply voltage type                    | DC   |
| Product Compatibility                  | ABR7S23  |
| Contacts type and composition          | 1 C/O  |
| Status LED                             | Channel status 1 LED per channel Green)<br>Power ON 1 LED Green)                   |
| Polarity distribution                  | Volt-free  |
| 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 IEC 60947-1 |
| [Uimp] rated impulse withstand voltage | 2.5 kV   |
| Installation category                  | II IEC 60664-1   |
| Tightening torque                      | 5.31 lbf.in (0.6 N.m) flat Ø 3.5 mm  |
| Net Weight                             | 1.71 lb(US) (0.775 kg)   |

### Environment

|                                       |   |
|---------------------------------------|---|
| Product Certifications                | UL<br>BV<br>GL<br>DNV<br>LROS (Lloyds register of shipping)<br>CSA<br>EAC |
| IP degree of protection               | IP2x conforming to IEC 60529  |
| Resistance to incandescent wire       | 1382 °F (750 °C) IEC 60695-2-11   |
| Shock resistance                      | 15 gn 11 ms IEC 60068-2-27  |
| Vibration resistance                  | 2 gn 10...150 Hz)IEC 60068-2-6  |
| Resistance to electrostatic discharge | 4 kV contact) level 3 IEC 61000-4-2<br>8 kV air) level 3 IEC 61000-4-2    |
| Resistance to radiated fields         | 9.14 V/m (10 V/m) 26000000...100000000 Hz)IEC 61000-4-3 level 3           |
| Resistance to fast transients         | 2 kV level 3 IEC 61000-4-4  |
| Ambient air temperature for operation | 23...140 °F (-5...60 °C) IEC 61131-2                                      |
| Ambient air temperature for storage   | -40...176 °F (-40...80 °C) IEC 61131-2                                    |
| Pollution degree                      | 2 IEC 60664-1   |

## Ordering and shipping details

|                       |                                   |
|-----------------------|-----------------------------------|
| Category              | 22375 - INTERFACE MODULE(ABA,R,S) |
| Discount Schedule     | CP2                               |
| GTIN                  | 3389110644678                     |
| Nbr. of units in pkg. | 1                                 |
| Package weight(Lbs)   | 26.56 oz (753 g)                  |
| Returnability         | No                                |
| Country of origin     | LV                                |

## Packing Units

|                              |                        |
|------------------------------|------------------------|
| Unit Type of Package 1       | PCE                    |
| Package 1 Height             | 3.03 in (7.7 cm)       |
| Package 1 width              | 3.74 in (9.5 cm)       |
| Package 1 Length             | 8.66 in (22 cm)        |
| Unit Type of Package 2       | S03                    |
| Number of Units in Package 2 | 12                     |
| Package 2 Weight             | 21.10 lb(US) (9.57 kg) |
| Package 2 Height             | 11.81 in (30 cm)       |
| Package 2 width              | 11.81 in (30 cm)       |
| Package 2 Length             | 15.75 in (40 cm)       |

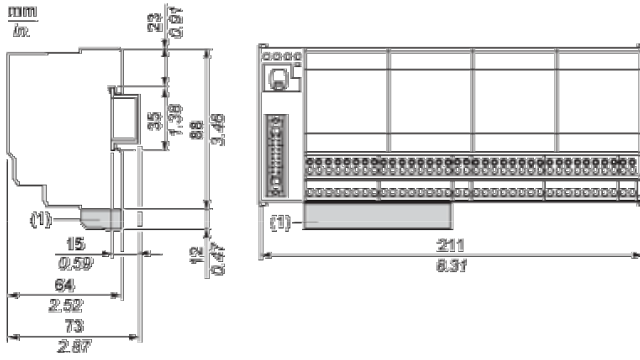
## Offer Sustainability

|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| California proposition 65  | WARNING: 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="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| REACH free of SVHC         | Yes   |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>  |
| Mercury free               | Yes   |
| RoHS exemption information | <a href="#">Yes</a>   |
| China RoHS Regulation      | <a href="#">China RoHS Declaration</a>  |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| Circularity Profile        | <a href="#">End Of Life Information</a>   |
| WEEE                       | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.  |

## Contractual warranty

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

## Dimensions

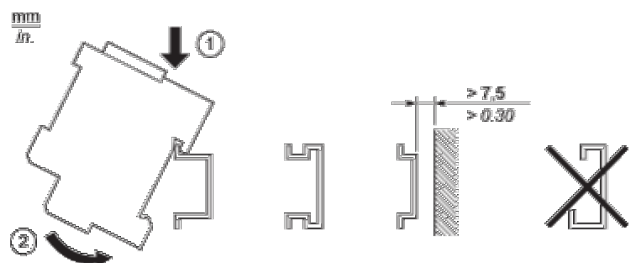


(1) ABE7BV10 / BV20, ABE7BV10E / BV20E

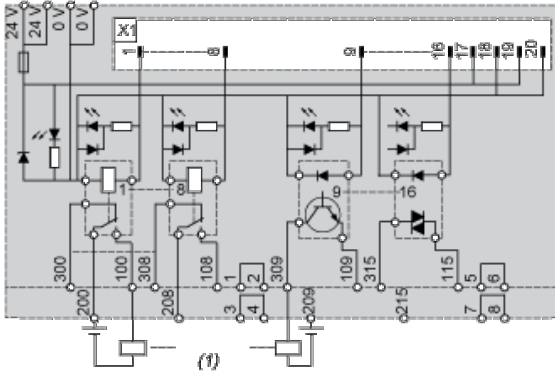
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Mounting

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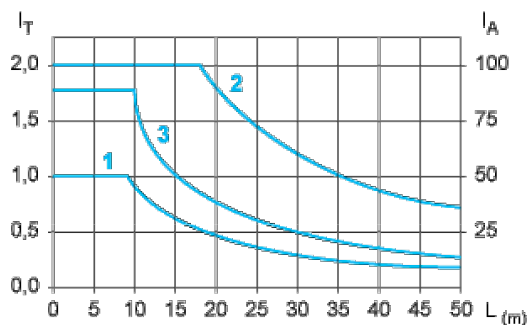
## Wiring Diagram



(1) 16 channels

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)

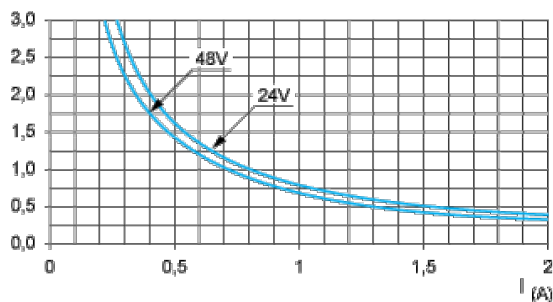
- (1) TSXCDP••2 and ABFH20H••0 cables with c.s.a.  $0.08 \text{ mm}^2$  (AWG 28).
- (2) TSXCDP••3 cables with c.s.a.  $0.34 \text{ mm}^2$  (AWG 22).
- (3) Cables with c.s.a.  $0.13 \text{ mm}^2$  (AWG 26).

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.

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

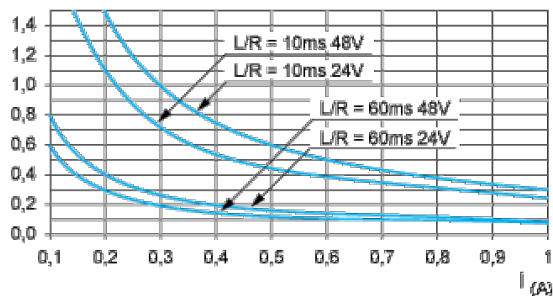
DC Loads

DC12 curves



DC12control of resistive loads and of solid state loads isolated by optocoupler,  $I/R \leq 1 \text{ ms}$ .

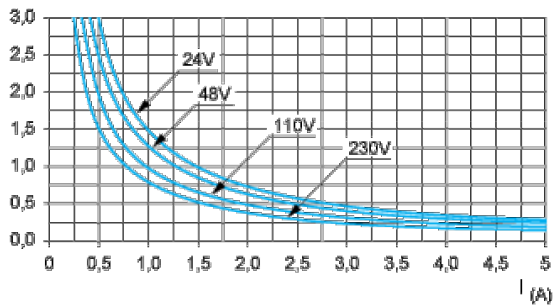
DC13 curves



DC13switching 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)

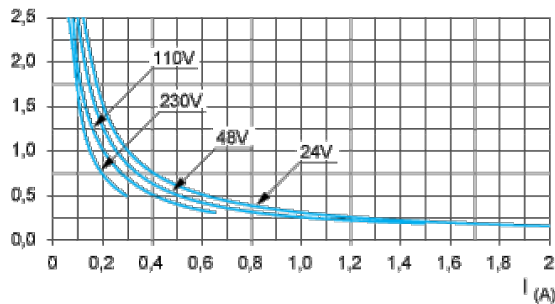
## AC Loads

### AC12 curves



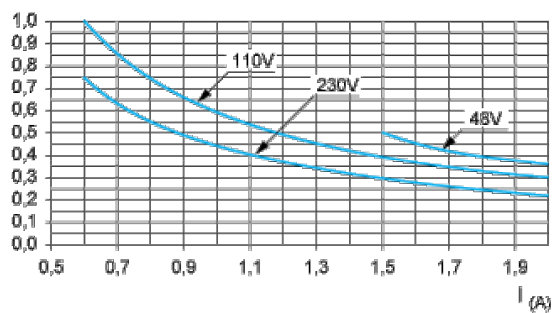
AC12control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \geq 0.9$ .

### AC14 curves



AC14control of small electromagnetic loads  $\leq 72$  VA, make:  $\cos \phi = 0.3$ , break:  $\cos \phi = 0.3$ .

### AC15 curves



AC15control of electromagnetic loads  $> 72$  VA, make:  $\cos \phi = 0.7$ , break:  $\cos \phi = 0.4$ .