



## Main

|                           |                                               |
|---------------------------|-----------------------------------------------|
| Range of product          | Advantys Telefast 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 circuit type                    | DC                                                                                                                 |
| Product compatibility                  | ABR7S21                                                                                                            |
| Contacts type and composition          | 1 NO                                                                                                               |
| Status LED                             | 1 LED per channel, green for channel status<br>1 LED, green for 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)<br>0.5 A fuse per channel, 5 x 20 mm, fast blow (output circuit) |
| Fixing mode                            | By clips on 35 mm symmetrical DIN rail<br>By screws on solid plate with fixing kit                                 |
| Supply current                         | <= 1 A                                                                                                             |
| Voltage drop on power supply fuse      | 0.3 V                                                                                                              |
| [Ui] rated insulation voltage          | 2000 V between terminals/mounting rails<br>300 V between coil circuit/contact circuits conforming to IEC 60947-1   |
| [Uimp] 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)                                                                                       |
| Product weight                         | 0.73 kg                                                                                                            |

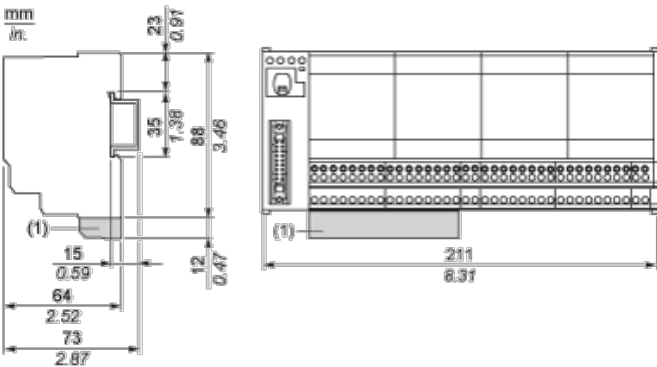
## Environment

|                                       |                                                                                                      |
|---------------------------------------|------------------------------------------------------------------------------------------------------|
| product certifications                | BV<br>CSA<br>DNV<br>GL<br>LROS (Lloyds register of shipping)<br>UL                                   |
| 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) conforming to IEC 61000-4-2 level 3<br>8 kV (air) conforming to IEC 61000-4-2 level 3 |
| resistance to radiated fields         | 10 V/m (26000000...1000000000 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 | -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                                                                          |

Offer Sustainability

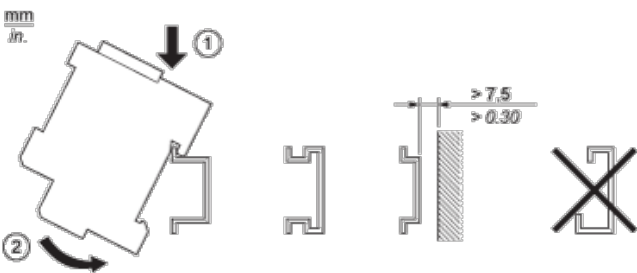
|                                  |                                                                       |
|----------------------------------|-----------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                        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

Dimensions

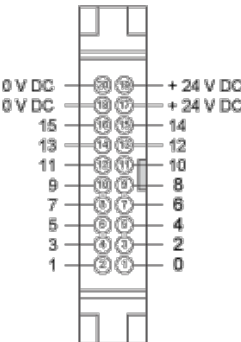


(1) ABE7BV10 / BV20, ABE7BV10E / BV20E

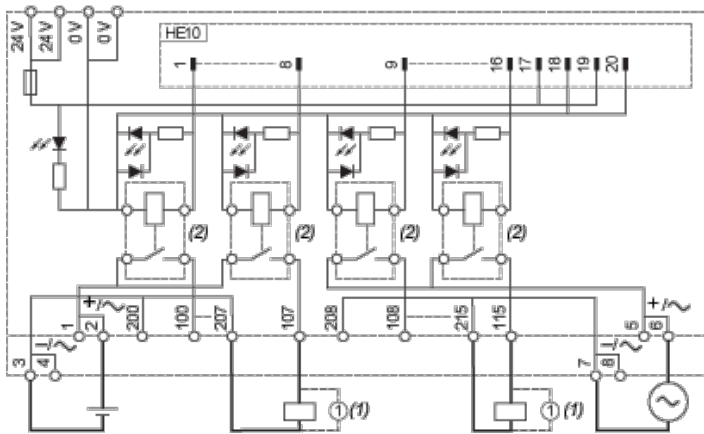
Mounting



HE10 16 Channels



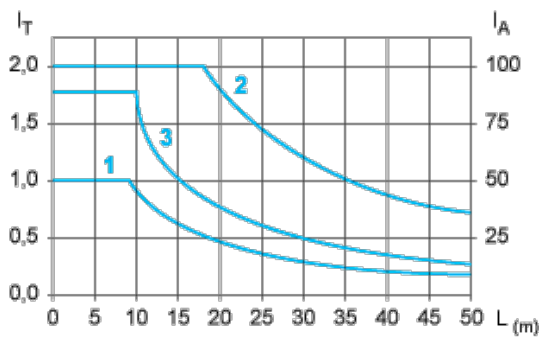
Wiring Diagram



- (1) Inductive load
- (2) ABR7S21 (1 "F" "SPST")  $I_{th} = 5\text{ A}$  (supplied)

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

### 16-channel Sub-base

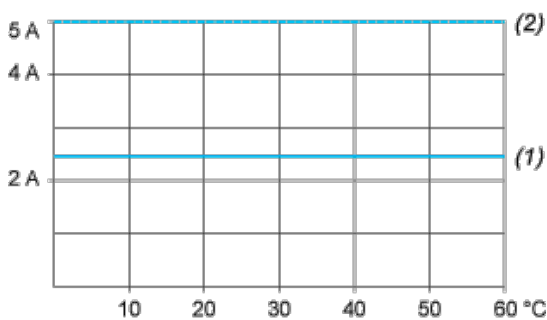


- L Cable length
- $I_T$  Total current per sub base (A)
- $I_A$  Average current per channel (mA)

- (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



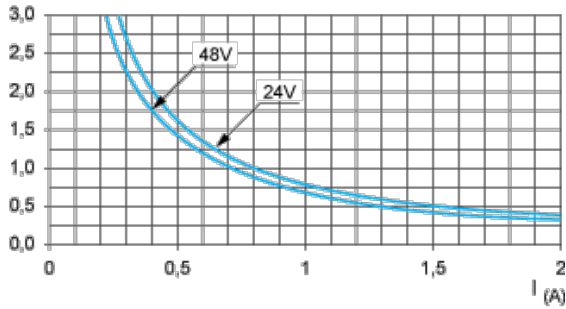
- (1) 100 % of channels used
- (2) 50 % of channels used

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

Multiply all durability values by 0.75 for ABR7S23.

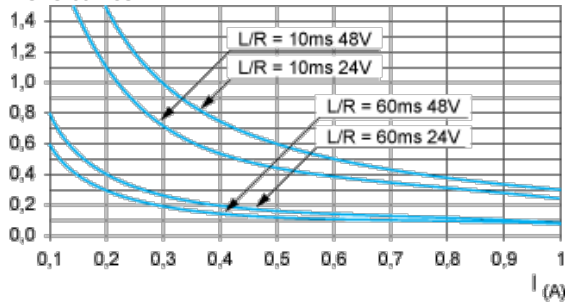
### DC Loads

DC12 curves



DC12control of resistive loads and of solid state loads isolated by optocoupler,  $L/R \leq 1$  ms.

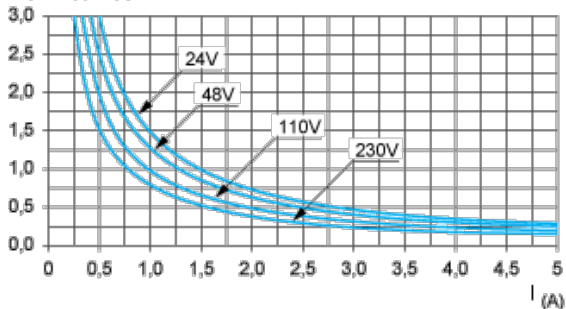
DC13 curves



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)

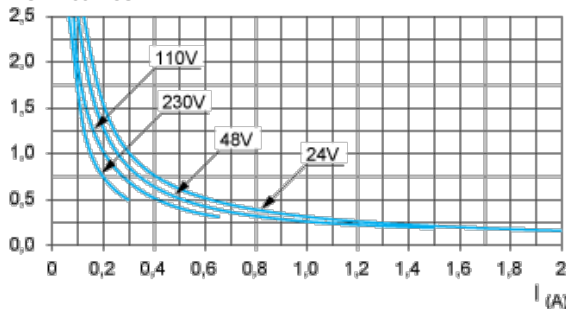
### AC Loads

AC12 curves



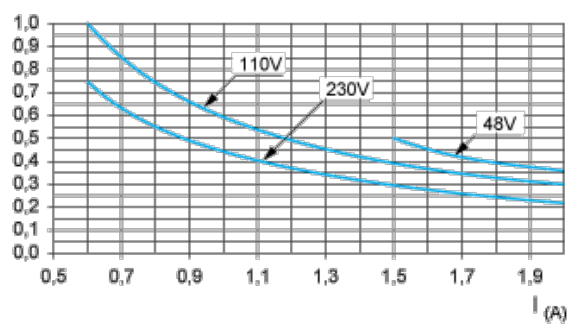
AC12control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \geq 0.9$ .

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:  $\cos \phi = 0.4$ .