



## Main

Range of product	Modicon ABE7
Product or component type	Sub-base for plug-in relay
Sub-base type	Output sub-base
[Us] rated supply voltage	19...30 V IEC 61131-2
Number of channels	16
Connections - terminals	Screw type terminals, 1 x 0.09...1 x 1.5 mm <sup>2</sup> AWG 28...AWG 16) flexible with cable end Screw type terminals, 1 x 0.14...1 x 2.5 mm <sup>2</sup> AWG 26...AWG 12) solid Screw type terminals, 1 x 0.14...1 x 2.5 mm <sup>2</sup> AWG 26...AWG 14) flexible without cable end Screw type terminals, 2 x 0.09...2 x 0.75 mm <sup>2</sup> AWG 28...AWG 20) flexible with cable end Screw type terminals, 2 x 0.2...2 x 2.5 mm <sup>2</sup> AWG 24...AWG 14) solid

## Complementary

Supply voltage type	DC
Product compatibility	ABE7ACC21 ABR7S33 ABS7SC3.. ABS7A3.
Status LED	Channel status 1 LED per channel Green) 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) By screws solid plate with fixing kit)
Maximum supply current	1 A
Voltage drop on power supply fuse	0.3 V
Maximum current per output common	16 A
[Ui] rated insulation voltage	300 V coil circuit/contact circuits IEC 60947-1 2000 V terminals/mounting rails
[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	1.98 lb(US) (0.9 kg)

## Environment

Product certifications	DNV BV CSA GL LROS (Lloyds register of shipping) UL
IP degree of protection	IP2x IEC 60529
Resistance to incandescent wire	1382 °F (750 °C) 30 s 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 8 kV air) level 3 IEC 61000-4-2

Resistance to radiated fields	9.14 V/m (10 V/m) 26000000...1000000000 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	00785901773344
Nbr. of units in pkg.	1
Package weight(Lbs)	1.74 lb(US) (0.79 kg)
Returnability	No
Country of origin	LV

## Packing Units

Unit Type of Package 1	PCE
Package 1 Height	3.35 in (8.5 cm)
Package 1 width	3.94 in (10 cm)
Package 1 Length	11.50 in (29.2 cm)
Unit Type of Package 2	S03
Number of Units in Package 2	6
Package 2 Weight	11.41 lb(US) (5.176 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)

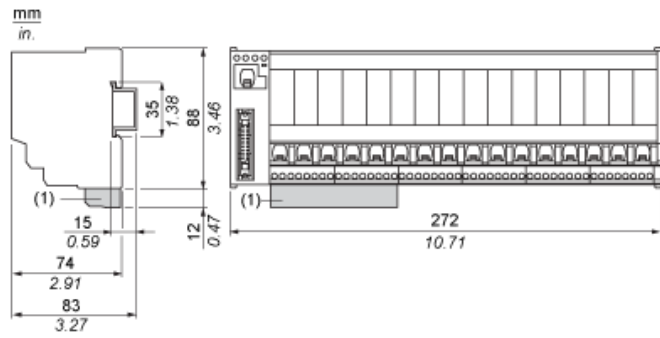
## Offer Sustainability

Sustainable offer status	Green Premium product
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
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## Dimensions

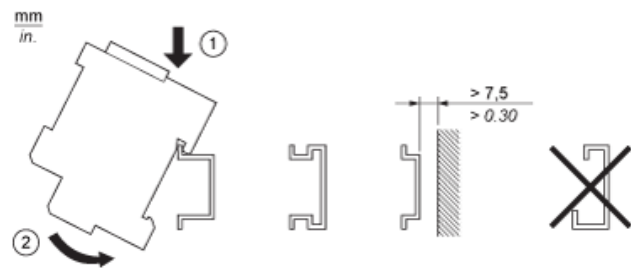


(1) ABE7BV10 / BV20, ABE7BV10E / BV20E

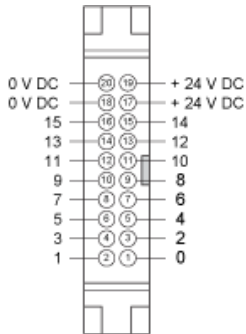
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Mounting

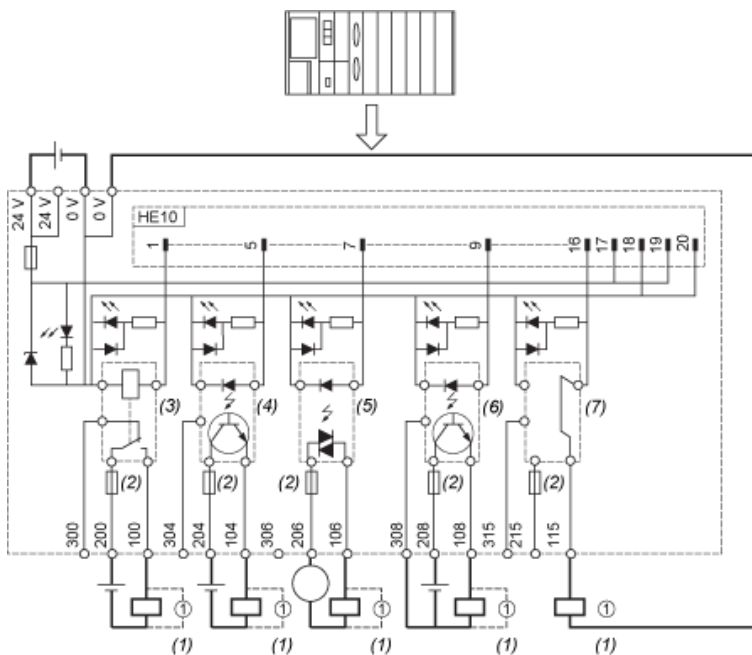
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HE10 16 Channels



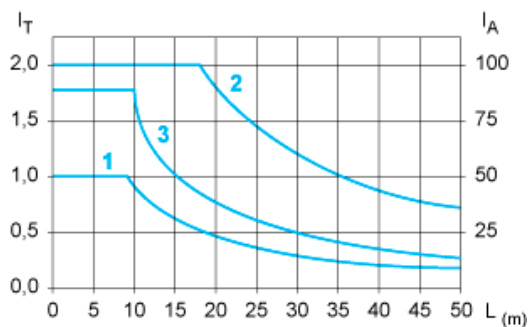
Wiring Diagram



- (1) Inductive load
- (2) Fuse only for ABE7P16T334
- (3) ABR7S33 (1 "OF" "DPDT") Ith = 10 A (supplied)
- (4) ABS7SC3E (5...48 VDC) I<sub>max.</sub> = 1.5 A (not supplied)
- (5) ABS7SA3M (24...240 VAC) I<sub>max.</sub> = 1.5 A (not supplied)
- (6) ABS7SC3BA (24 VDC) I<sub>max.</sub> = 2 A (not supplied)
- (7) ABE7ACC21 (24 VDC) I<sub>max.</sub> = 0.5 A (not supplied)

Curves for Determining Cable Type and Length According to the Current

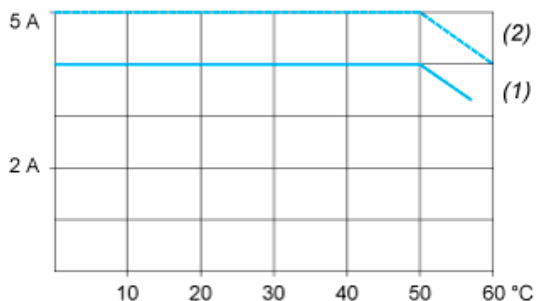
16-channel Sub-base



- 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

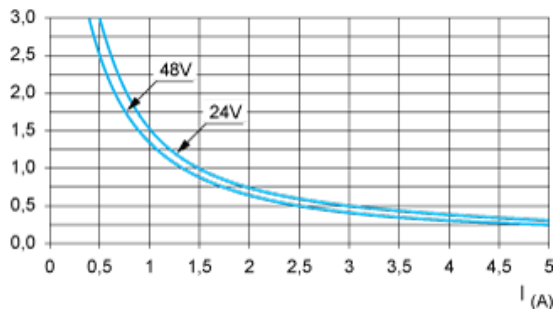


- (1) 100 % of channels used
- (2) 50 % of channels used

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

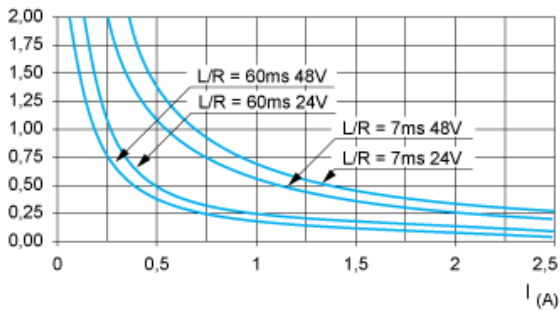
DC Loads

DC12 curves



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

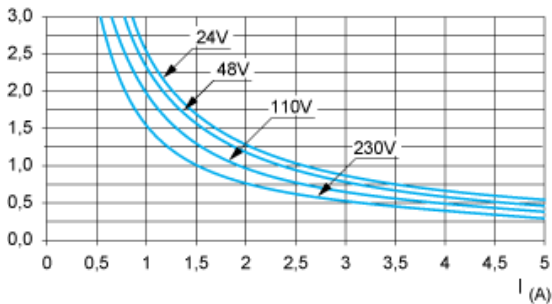
### DC13 curves



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)

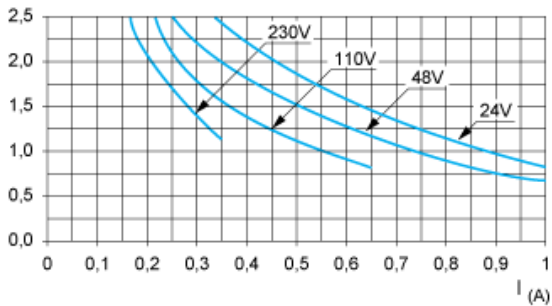
### AC Loads

#### AC12 curves



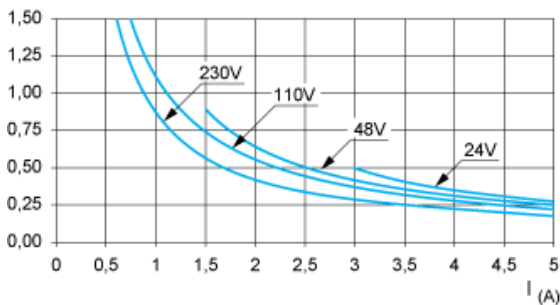
AC12 control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \geq 0.9$ .

#### AC14 curves



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

#### AC15 curves



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