



### 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	ABR7S21
Contacts type and composition	1 NO
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
[Ui] rated insulation voltage	2000 V terminals/mounting rails 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	1.62 lb(US) (0.735 kg)

### Environment

Product Certifications	BV GL CSA UL DNV LROS (Lloyds register of shipping) 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 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	3389110644630
Nbr. of units in pkg.	1
Package weight(Lbs)	24.83 oz (704 g)
Returnability	Yes
Country of origin	LV

## Packing Units

Unit Type of Package 1	PCE
Package 1 Height	3.11 in (7.9 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	19.68 lb(US) (8.926 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)

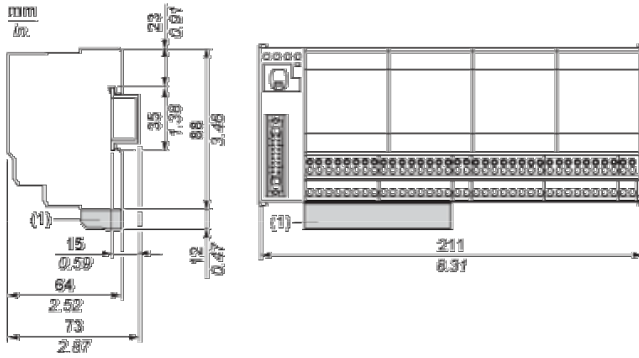
## Offer Sustainability

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
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## Dimensions

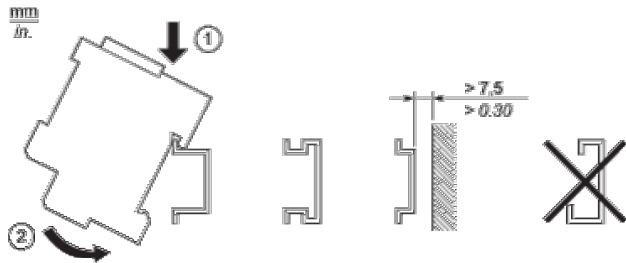


(1) ABE7BV10 / BV20, ABE7BV10E / BV20E

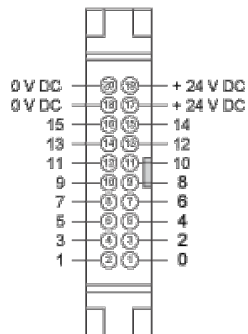
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Mounting

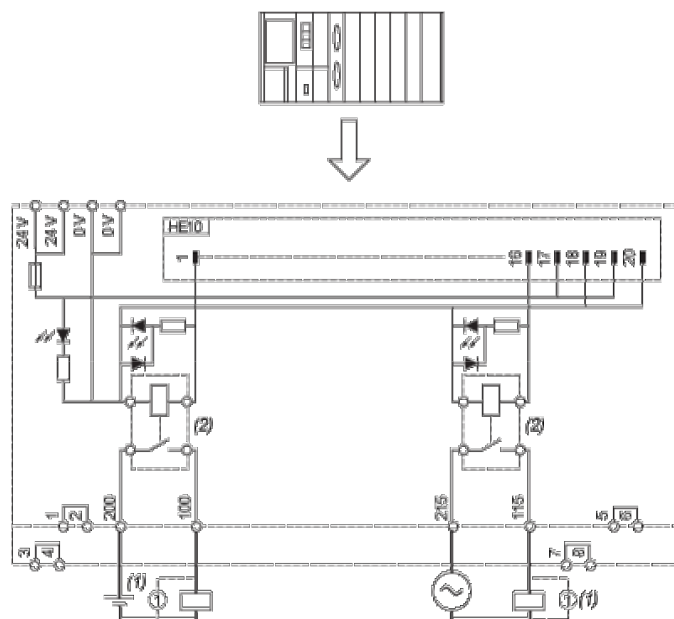
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HE10 16 Channels



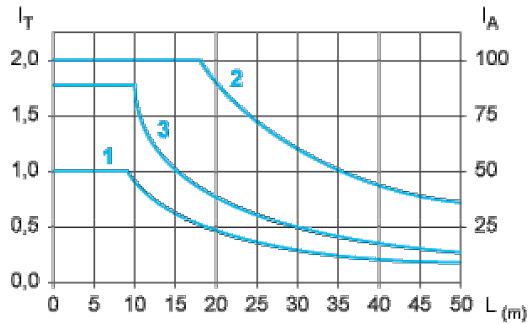
Wiring Diagram



- (1) Inductive load
- (2) ABR7S21 (1 "F" "SPST") Ith = 5 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)

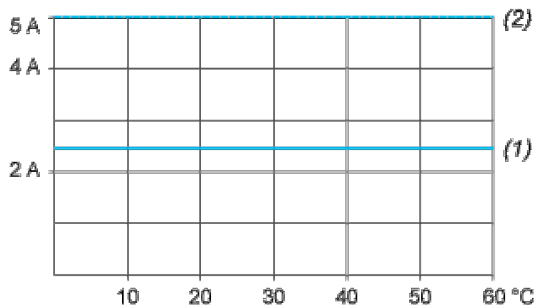
(1) TSXCDP••2 and ABFH20H••0 cables with c.s.a.  $0.08 \text{ mm}^2$  (AWG 28).

(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



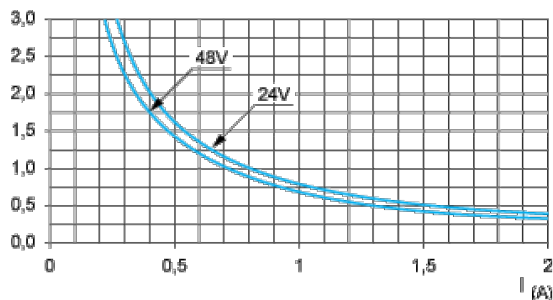
(1) 100 % of channels used

(2) 50 % of channels used

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

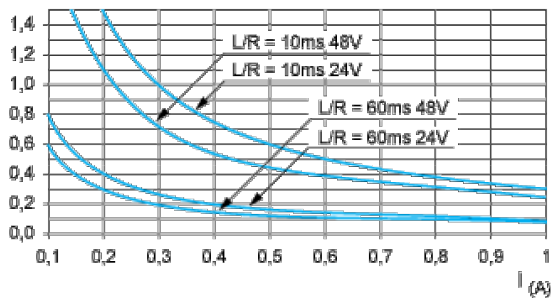
DC Loads

DC12 curves



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

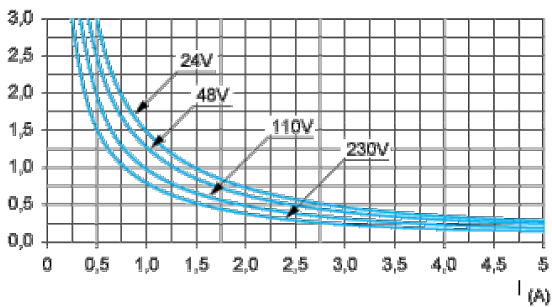
### DC13 curves



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)

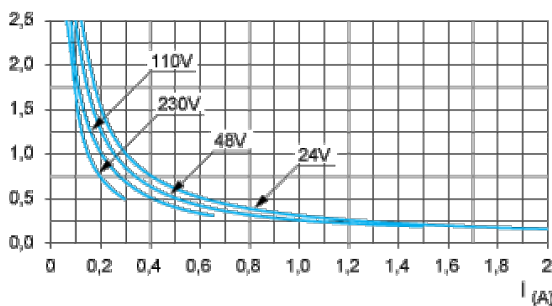
### AC Loads

#### AC12 curves



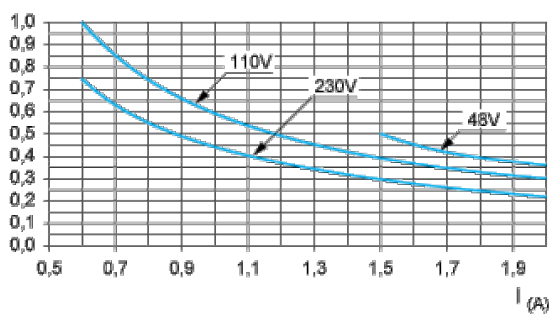
AC12control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \geq 0.9$ .

#### 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:  $\cos \phi = 0.4$ .