

# Product data sheet

## Characteristics

### ABE7R16T212

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



#### 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 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) 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 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 BV UL DNV GL LROS (Lloyds register of shipping) 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 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 Weight	707 g
Package 1 Height	7.6 cm
Package 1 width	9.6 cm
Package 1 Length	22.1 cm
Unit Type of Package 2	S03
Number of Units in Package 2	12
Package 2 Weight	9.047 kg
Package 2 Height	30 cm
Package 2 width	30 cm
Package 2 Length	40 cm

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<input checked="" type="checkbox"/> REACH Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <input checked="" type="checkbox"/> EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	<input checked="" type="checkbox"/> Yes
China RoHS Regulation	<input checked="" type="checkbox"/> China RoHS Declaration
Environmental Disclosure	<input checked="" type="checkbox"/> Product Environmental Profile
Circularity Profile	<input checked="" type="checkbox"/> End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

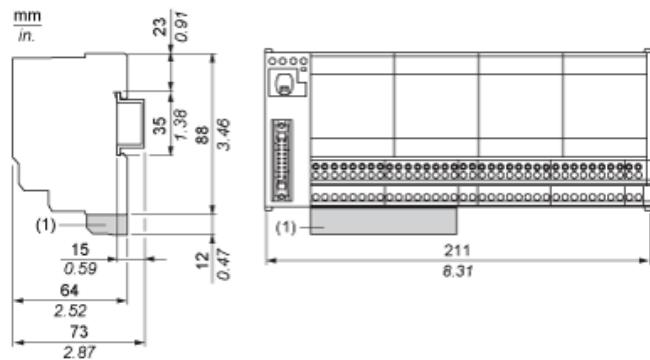
## Contractual warranty

Warranty	18 months
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Dimensions

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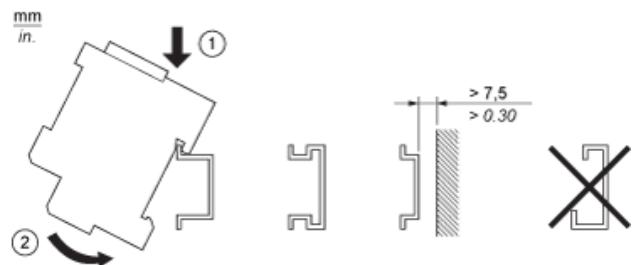


(1) ABE7BV10 / BV20, ABE7BV10E / BV20E

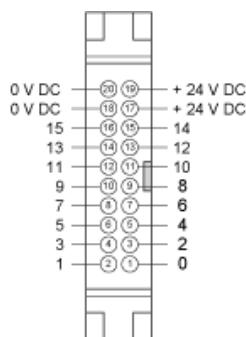
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Mounting

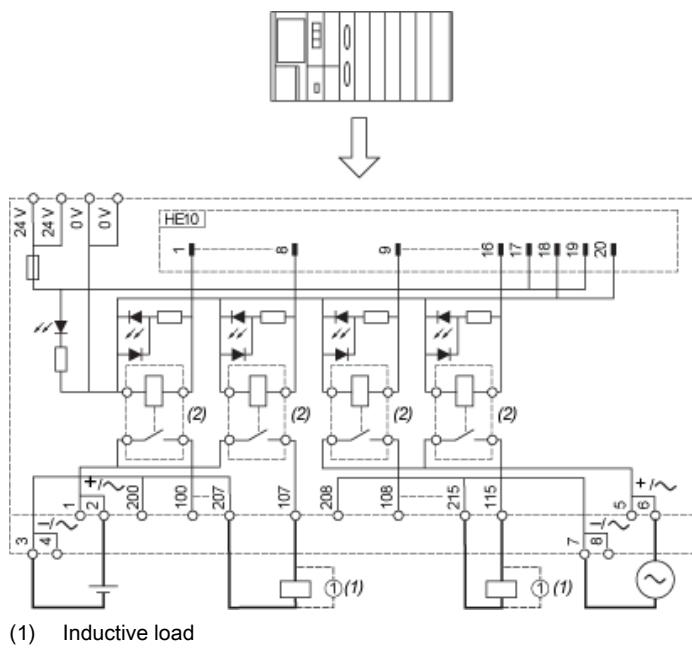
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HE10 16 Channels

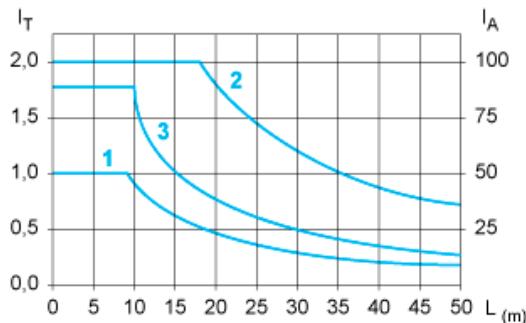


Wiring Diagram



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)

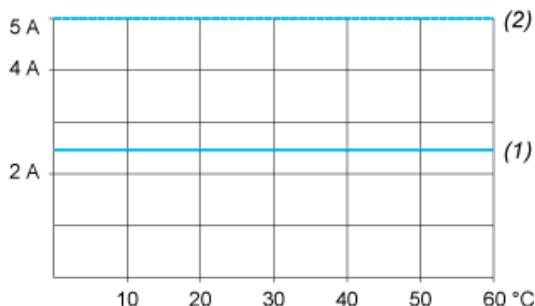
(1) TSXCDP•2 and ABFH20H•0 cables with c.s.a.  $0.08 \text{ mm}^2$  (AWG 28).

(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



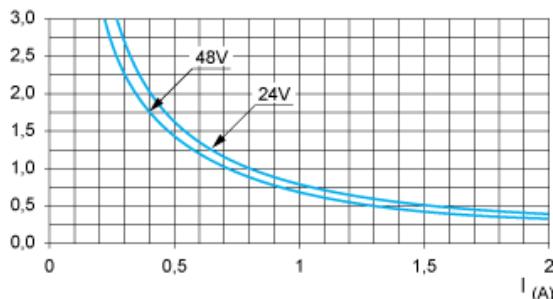
(1) 100 % of channels used

(2) 50 % of channels used

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

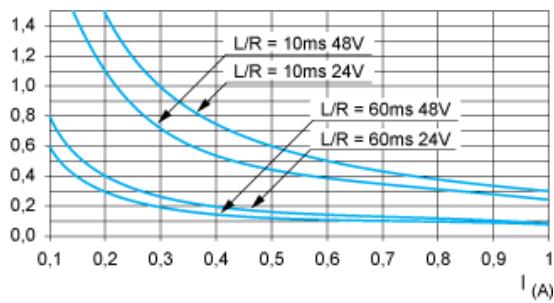
DC Loads

DC12 curves



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

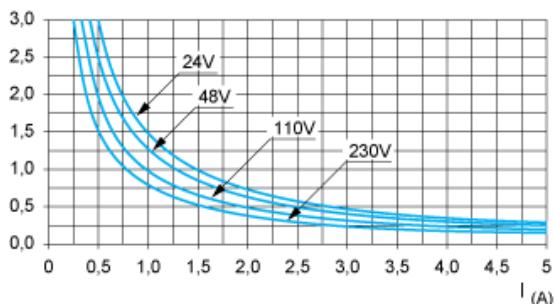
### DC13 curves



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)

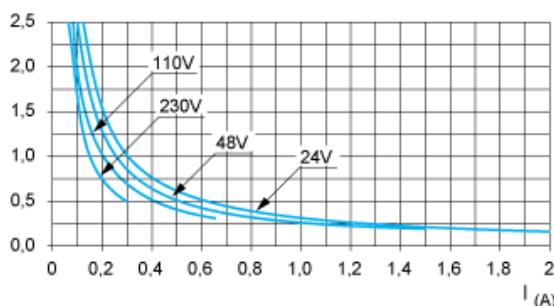
### AC Loads

#### AC12 curves



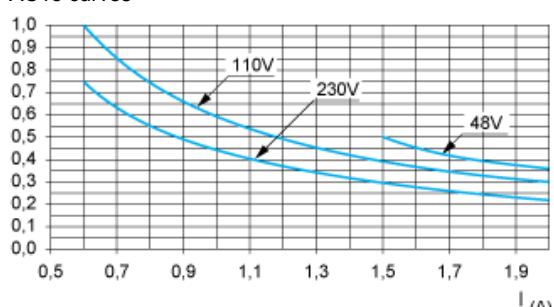
AC12 control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \geq 0.9$ .

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