Product data sheet

Specifications



sub-base - soldered electromechanical relays ABE7 - 16 channels - relay 10 mm

ABE7R16S212

Product availability: Non-Stock - Not normally stocked in distribution facility

Main

Range of Product	Modicon ABE7
Product or Component Type	Electromechanical output relay sub-base
[Us] rated supply voltage	24 V DC PLC end
Number of channels	16
Number of terminal per channel	2

Complementary

Terminal block type	Removable
Polarity distribution	Common per group of 8 channels on both poles
Fixing mode	By clips (35 mm symmetrical DIN rail) By screws (solid plate with fixing kit)
Maximum current per output common	10 A
Current per channel	5 A preactuator end
Minimum switching current	10 mA >= 5 V
Drop-out voltage	2.4 V 68 °F (20 °C) PLC end)
Switching frequency	<= 0.5 Hz <= 10 Hz
Threshold tripping voltage	19.7 V 104 °F (40 °C)
Drop-out current	1 mA 68 °F (20 °C)
Maximum power dissipation per channel in W	0.36 W PLC end)
Contacts type and composition	1 NO preactuator end
Maximum switching voltage	250 V AC 50/60 Hz IEC 60947-5-1 30 V DC IEC 60947-5-1
Electrical durability	500000 cycles 600 mA 24 V DC-13 10 ms preactuator end) 500000 cycles 1500 mA 230 V AC-12 preactuator end) 500000 cycles 1500 mA 24 V DC-12 preactuator end) 500000 cycles 900 mA 230 V AC-15 preactuator end)
electrical reliability	1e-008
Operating time	<= 10 ms coil energisation and NO closing <= 5 ms coil de-energisation and NO opening
Contact bounce time	<= 5 ms 1 NO
Operating rate in Hz	10 Hz no load 0.5 Hz at Ie
Mechanical durability	20000000 cycles
[Uimp] rated impulse withstand voltage	2.5 kV IEC 60947-1

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

[Ui] rated insulation voltage	2000 V
Installation category	II IEC 60664-1
Tightening torque	5.3 lbf.in (0.6 N.m) flat Ø 3.5 mm
Width	8.1 in (206 mm)
Product Weight	0.9 lb(US) (0.4 kg)

Environment

Max immunity to microbreaks	5 ms
Dielectric strength	2000 V IEC 60947-1
Product Certifications	UL CSA GL DNV EAC
IP degree of protection	IP2X conforming to IEC 60529
Protective treatment	TC
Resistance to incandescent wire	1382 °F (750 °C) 30 s IEC 60695-2-11
Shock resistance	15 gn 11 ms IEC 60068-2-27
Resistance to radiated fields	9.1 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	US10CP222375
Discount Schedule	0CP2
GTIN	3389110545531
Returnability	No
Country of origin	LV

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	2.756 in (7.000 cm)
Package 1 Width	3.228 in (8.200 cm)
Package 1 Length	8.346 in (21.200 cm)
Package weight(Lbs)	20.529 oz (582.000 g)
Unit Type of Package 2	S03
Number of Units in Package 2	16
Package 2 Height	11.811 in (30.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)

Package 2 Weight	21.634 lb(US) (9.813 kg)

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	**990 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**16 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0.1 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0.2 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**972 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**1 kg CO2 eq.**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**Yes**
SCIP Number	**6f4fb8f5-e7e7-4654-9d64-069be054cb2f**
EU RoHS Directive	**Compliant By Exemption**
REACh Regulation	**Reference contains Substances of Very High Concern above the threshold**
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 www.P65Warnings.ca.gov**

Use Longer

Lifetime extension

Repair	**No**

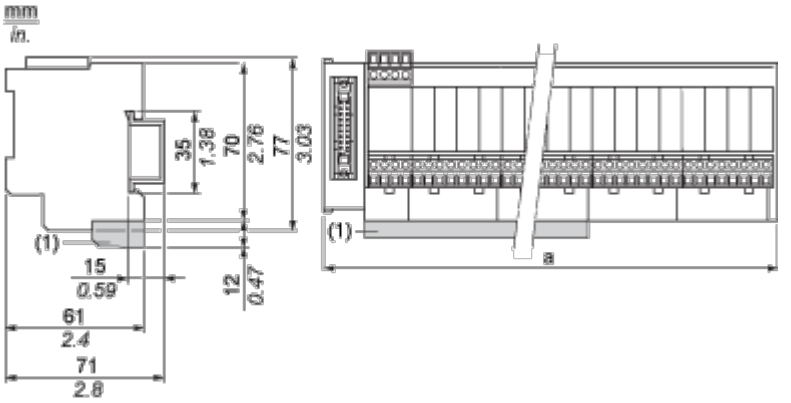
Use Again

Repack and remanufacture

Recyclability potential, in %	**6**
Circularity Profile	**End of Life Information**
Take-back	**No**
WEEE Label	**The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.**

Dimensions Drawings

Dimensions

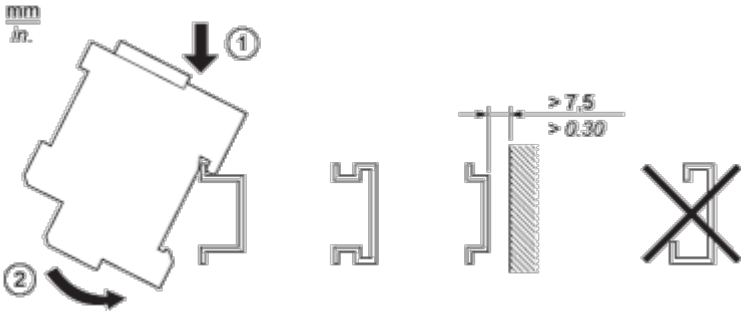


(1) ABE7BV20 / ABE7BV20E

ABE7	a in mm	a in in.
R16S111 / R16S111E	125	4.92
R16S21 / R16S21•E	206	8.11

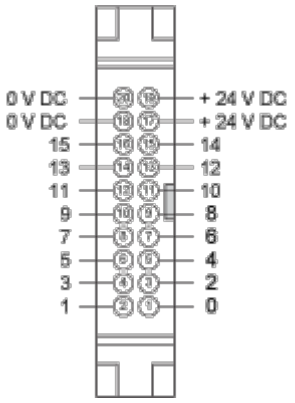
Mounting and Clearance

Mounting

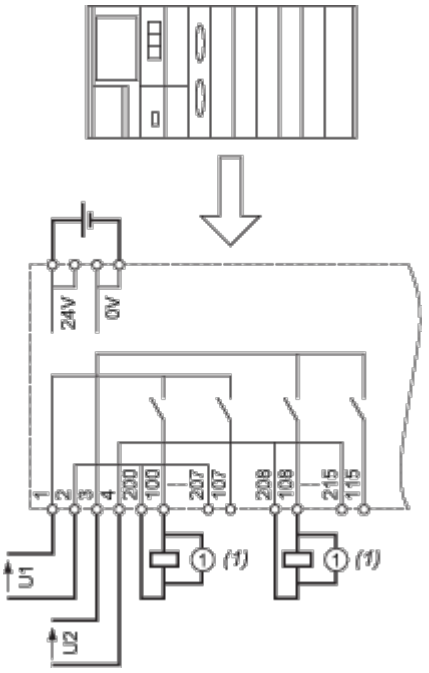


Connections and Schema

HE10 16 Channels



Wiring Diagram

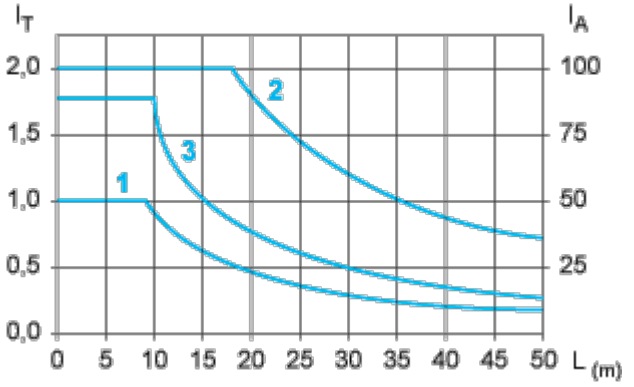


(1) Inductive load

Performance Curves

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)

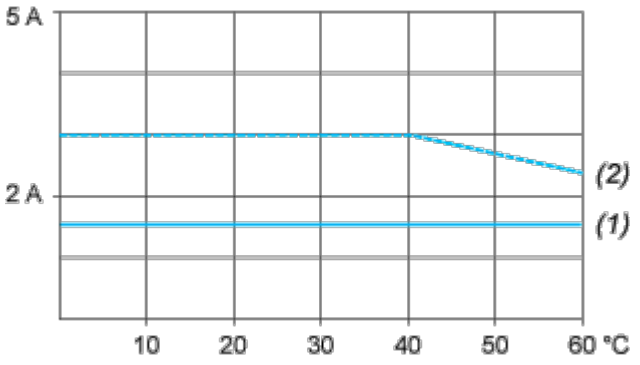
(1) TSXCDP••2 and ABFH20H••0 cables with c.s.a. 0.08 mm^2 (AWG 28).

(2) TSXCDP••3 cables with c.s.a. 0.34 mm^2 (AWG 22).

(3) Cables with c.s.a. 0.13 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



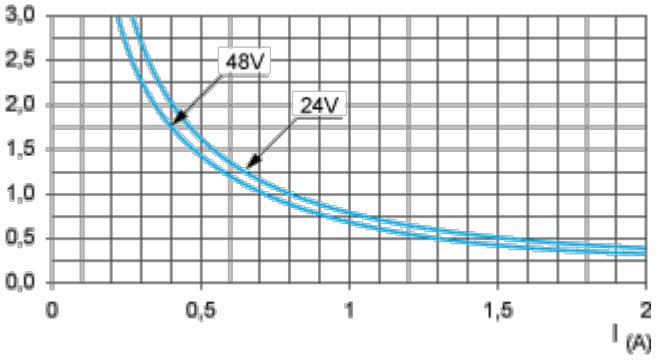
(1) 100 % of channels used

(2) 50 % of channels used

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

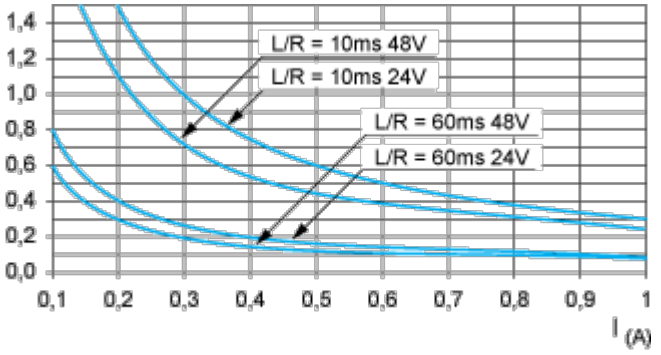
DC Loads

DC12 curves



DC12 control of resistive loads and of solid state loads isolated by optocoupler, l/R ≤ 1 ms.

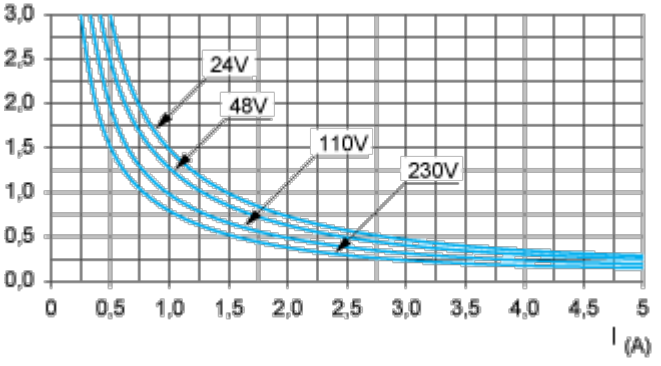
DC13 curves



DC13 switching electromagnets, L/R ≤ 2 x (Ue x Ie) in ms, Ue: rated operational voltage, Ie: 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)

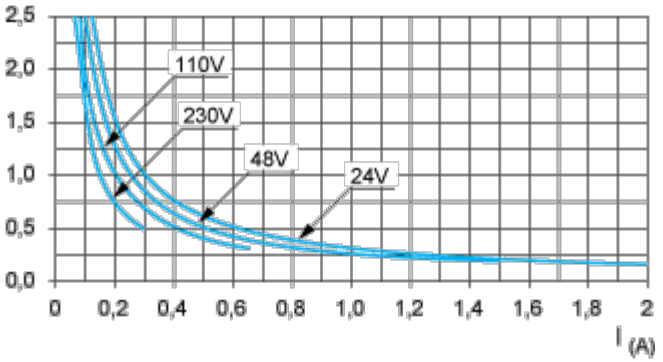
AC Loads

AC12 curves



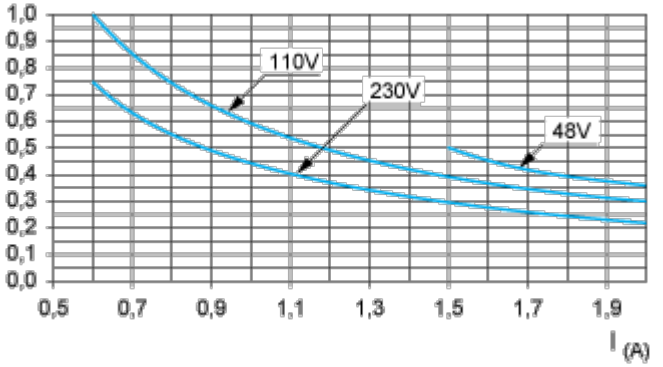
AC12 control of resistive loads and of solid state loads isolated by optocoupler, cos ϕ ≥ 0.9.

AC14 curves



AC14 control of small electromagnetic loads ≤ 72 VA, make: cos ϕ = 0.3, break: cos ϕ = 0.3.

AC15 curves



AC15 control of electromagnetic loads > 72 VA, make: cos ϕ = 0.7, break: cos ϕ = 0.4.

Image of product / Alternate images

Alternative

