Product data sheet
Characteristics

ABE7R16S212
sub-base - soldered electromechanical relays ABE7 - 16 channels - relay 10 mm

Main

Range of product	Advantys Telefast 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

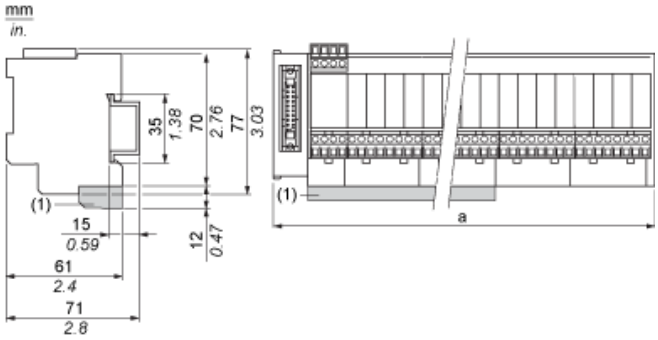
Terminal block type	Removable
Polarity distribution	Common per group of 8 channels on both poles
Fixing mode	By screws on solid plate with fixing kit By clips on 35 mm symmetrical DIN rail
Width	206 mm
Current per output common	<= 10 A
Current per channel	5 A (preactuator end)
Minimum switching current	10 mA at >= 5 V
Drop-out voltage	2.4 V at 20 °C (PLC end)
Switching frequency	<= 0.5 Hz <= 10 Hz
Threshold tripping voltage	19.7 V at 40 °C
Drop-out current	1 mA at 20 °C
Power dissipation per channel in W	<= 0.36 W (PLC end)
Contacts type and composition	1 NO(preactuator end)
Maximum switching voltage	30 V DC conforming to IEC 60947-5-1 250 V AC 50/60 Hz conforming to IEC 60947-5-1
Electrical durability	500000 cycles, maximum switching current: 900 mA at 230 V AC-15 (preactuator end) 500000 cycles, maximum switching current: 600 mA at 24 V DC-13 10 ms (preactuator end) 500000 cycles, maximum switching current: 1500 mA at 24 V DC-12 (preactuator end) 500000 cycles, maximum switching current: 1500 mA at 230 V AC-12 (preactuator end)
Electrical reliability	1e-008
Operating time	<= 5 ms between coil de-energisation and NO opening <= 10 ms between coil energisation and NO closing
Contact bounce time	<= 5 ms 1 NO
Operating rate in Hz	0.5 Hz at Ie 10 Hz no load
Mechanical durability	20000000 cycles
[Uimp] rated impulse withstand voltage	2.5 kV conforming to IEC 60947-1
[Ui] rated insulation voltage	2000 V
Installation category	II conforming to IEC 60664-1
Tightening torque	0.6 N.m (withflat Ø 3.5 mm
Product weight	0.4 kg

Environment

Max immunity to microbreaks	<= 5 ms
Dielectric strength	2000 V conforming to IEC 60947-1
Product certifications	BV CSA DNV GL LROS (Lloyds register of shipping) UL
IP degree of protection	IP2x conforming to IEC 60529
Protective treatment	TC
Resistance to incandescent wire	750 °C, extinction time: < 30 s conforming to IEC 60695-2-11
Shock resistance	15 gn for 11 ms conforming to IEC 60068-2-27
Resistance to electrostatic discharge	8 kV (air) conforming to IEC 61000-4-2 level 3 4 kV (contact) 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

ABE7R16S212

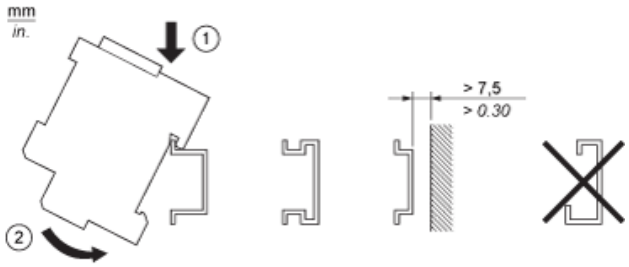
Dimensions



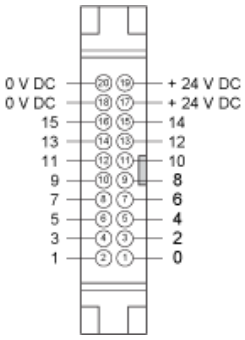
(1) ABE7BV20 / ABE7BV20E

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

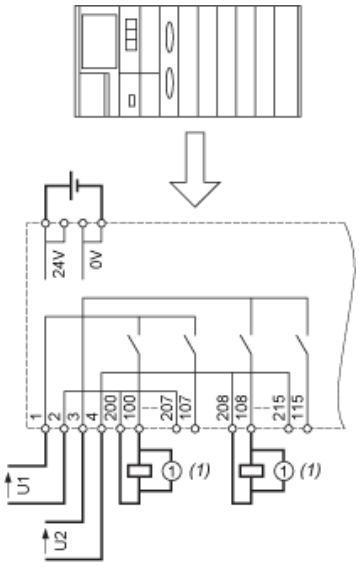
Mounting



HE10 16 Channels



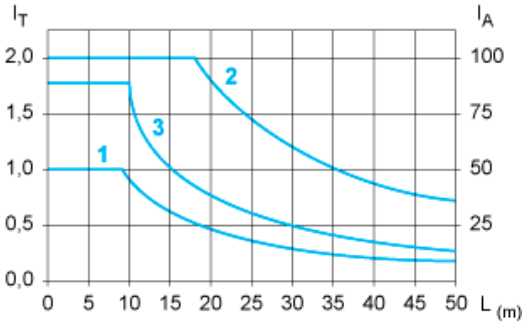
Wiring Diagram



(1) Inductive load

Curves for Determining Cable Type and Length According to the Current

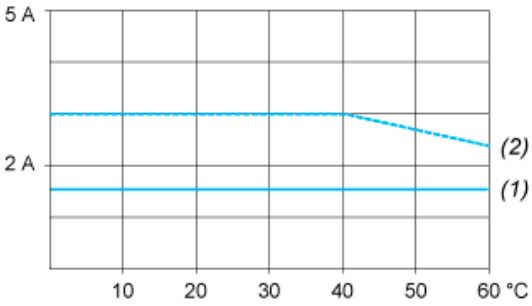
16-channel Sub-base



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



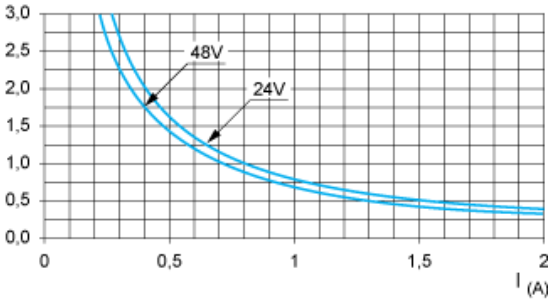
(1) 100 % of channels used
(2) 50 % of channels used

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

Multiply all durability values by 0.75 for ABR7S23.

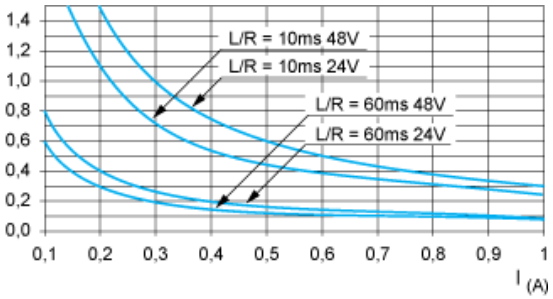
DC Loads

DC12 curves



DC12control of resistive loads and of solid state loads isolated by optocoupler, l/R ≤ 1 ms.

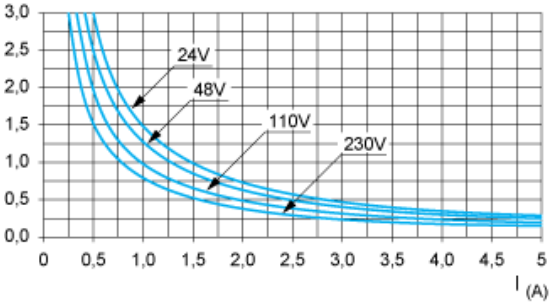
DC13 curves



DC13switching 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)

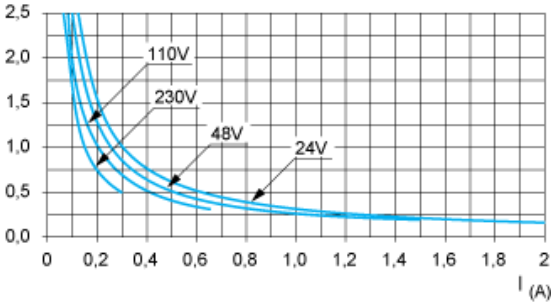
AC Loads

AC12 curves



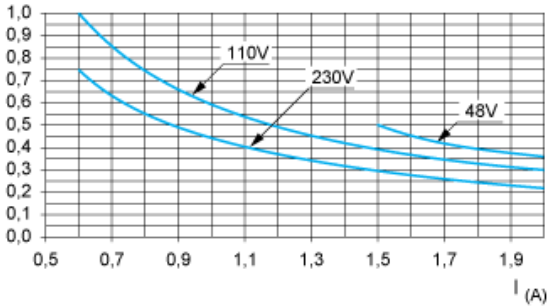
AC12control of resistive loads and of solid state loads isolated by optocoupler, cos ϕ ≥ 0.9.

AC14 curves



AC14control of small electromagnetic loads ≤ 72 VA, make: cos ϕ = 0.3, break: cos ϕ = 0.3.

AC15 curves



AC15control of electromagnetic loads > 72 VA, make: cos ϕ = 0.7, break: cos ϕ = 0.4.