

Product datasheet

Specifications



sub-base - soldered solid state output relay ABE7 - 16 inputs - 24 V DC

ABE7S16E2B1E

! Discontinued

Main

Range of product	Modicon ABE7
Product or component type	Solid state input relay sub-base
[Us] rated supply voltage	24 V DC (PLC end) 24 V DC (sensor end)
Number of channels	16
Number of terminal per channel	2
Connections - terminals	Spring terminal, 1 x 0.09...1 x 1.5 mm ² (AWG 28...AWG 16) flexible with cable end Spring terminal, 1 x 0.14...1 x 2.5 mm ² (AWG 26...AWG 12) solid Spring terminal, 1 x 0.14...1 x 2.5 mm ² (AWG 26...AWG 14) flexible without cable end

Complementary

Terminal block type	Removable
Supply voltage limits	19...30 V DC (PLC end) conforming to IEC 61131-2 30 V DC (sensor end) conforming to IEC 61131-2
Isolation PLC/operative part	Yes
Protection type	Internal fuse 1 A 5 x 20 mm fast blow PLC end Adjustable by external fuse fast blow sensor end
Fixing mode	By clips (35 mm symmetrical DIN rail) By screws (solid plate with fixing kit)
Current per channel	0.012 A
Current state 0 guaranteed	<= 2 mA (sensor end)
Voltage state 0 guaranteed	<= 5 V for sensor end
Current state 1 guaranteed	>= 2 mA (sensor end)
Voltage state 1 guaranteed	>= 15 V for sensor end
Maximum switching current	15 mA (PLC end)
Minimum switching current	1 mA for PLC end
Maximum residual current	0.1 mA at state 0 (PLC end)
Maximum voltage drop	<1 V at state 1 PLC end
Response time	<= 0.05 ms from state 0 to 1 <= 0.4 ms from state 1 to 0
Switching frequency	<= 1000 Hz duty cycle: 50 %
[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

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

Tightening torque	0.6 N.m with flat Ø 3.5 mm screwdriver
Net weight	0.37 kg

Environment

Dielectric strength	2000 V at 50/60 Hz conforming to IEC 60947-1
Standards	IEC 61131-2 Type 1
IP degree of protection	IP2X conforming to IEC 60529
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
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

Contractual warranty

Warranty (in months)	18
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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

Environmental Disclosure

[Product Environmental Profile](#)

Use Better



Materials and Substances

EU RoHS Directive

[Compliant By Exemption](#)

Use Longer



Lifetime extension

Repair

No

Use Again



Repack and remanufacture

End of life manual availability

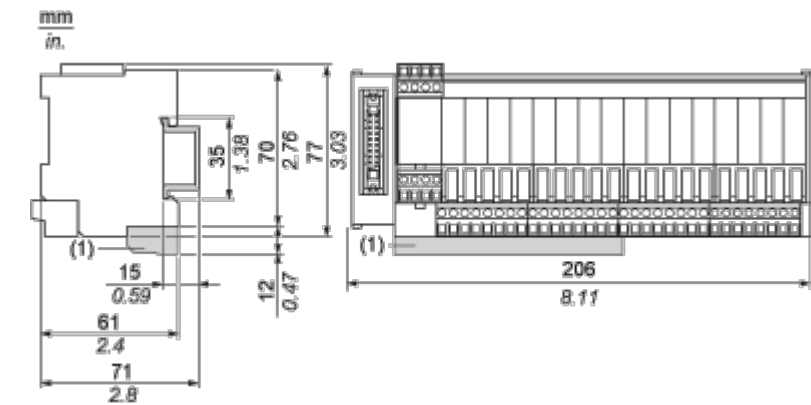
[End of Life Information](#)

WEEE Label



The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

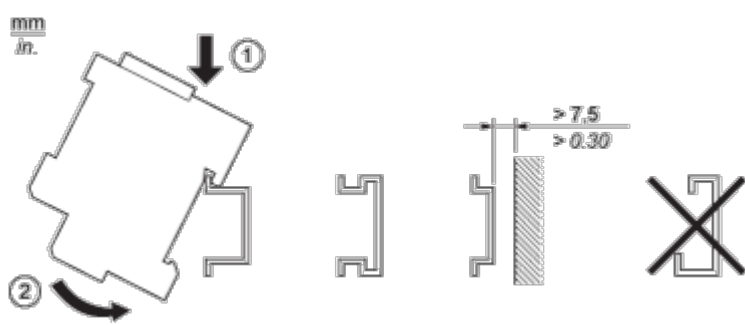
Dimensions



(1) ABE7BV20 / ABE7BV20E

Mounting and Clearance

Mounting

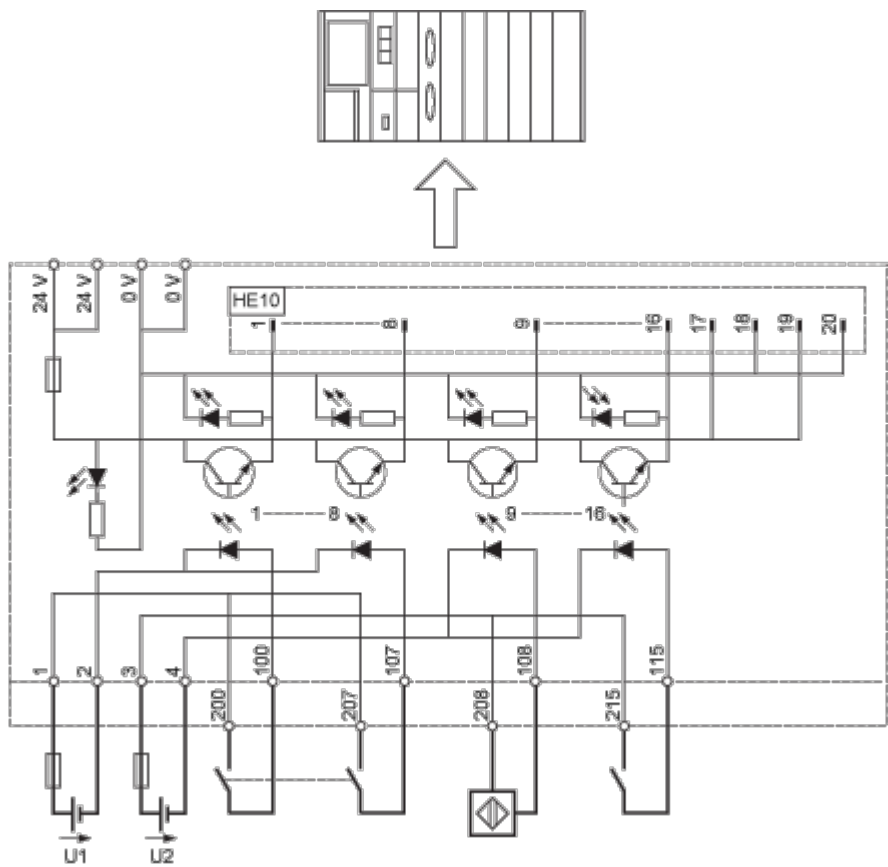


Connections and Schema

HE10 16 Channels



Wiring Diagram

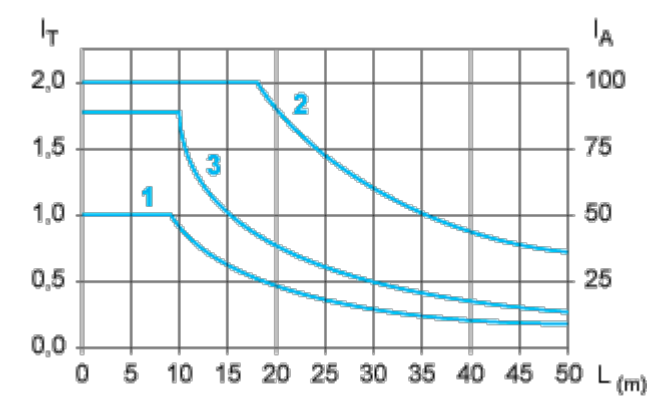


ABE7	U1, U2
S16E2B1 / E2B1E	24 VDC
S16E2E1 / E2E1E	48 VDC
S16E2E0 / E2E0E	48 VAC
S16E2F0 / E2F0E	115 VAC
S16E2M0 / E2M0E	230 VAC

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 mm² (AWG 28).
- (2) TSXCDP••3 cables with c.s.a. 0.34 mm² (AWG 22).
- (3) Cables with c.s.a. 0.13 mm² (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.