

# Product datasheet

Specifications



## sub-base - soldered solid state output relay ABE7 - 16 inputs - 230 V AC

ABE7S16E2M0E

⚠ 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) 230/240 V AC 50/60 Hz (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 <sup>2</sup> (AWG 28...AWG 16) flexible with cable end Spring terminal, 1 x 0.14...1 x 2.5 mm <sup>2</sup> (AWG 26...AWG 12) solid Spring terminal, 1 x 0.14...1 x 2.5 mm <sup>2</sup> (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 61131-2 264 V AC (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	0.008 A
Current state 0 guaranteed	<= 2 mA (sensor end)
Voltage state 0 guaranteed	<= 40 V for sensor end
Current state 1 guaranteed	>= 4.5 mA (sensor end)
Voltage state 1 guaranteed	>= 164 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	<= 20 ms from state 0 to 1 <= 20 ms from state 1 to 0
Switching frequency	<= 25 Hz duty cycle: 50 %

<b>[Uimp] rated impulse withstand voltage</b>	2.5 kV conforming to IEC 60947-1
<b>[Ui] rated insulation voltage</b>	2000 V
<b>Installation category</b>	II conforming to IEC 60664-1
<b>Tightening torque</b>	0.6 N.m with flat Ø 3.5 mm screwdriver
<b>Net weight</b>	0.407 kg

## Environment

<b>Dielectric strength</b>	2000 V at 50/60 Hz conforming to IEC 60947-1
<b>Standards</b>	IEC 61131-2 Type 1
<b>IP degree of protection</b>	IP2x conforming to IEC 60529
<b>Resistance to incandescent wire</b>	750 °C, extinction time <30 s conforming to IEC 60695-2-11
<b>Shock resistance</b>	15 gn for 11 ms conforming to IEC 60068-2-27
<b>Vibration resistance</b>	2 gn (f= 10...150 Hz) conforming to IEC 60068-2-6
<b>Resistance to electrostatic discharge</b>	4 kV (contact) level 3 conforming to IEC 61000-4-2 8 kV (air) level 3 conforming to IEC 61000-4-2
<b>Resistance to radiated fields</b>	10 V/m (26000000...1000000000 Hz) conforming to IEC 61000-4-3 level 3
<b>Resistance to fast transients</b>	2 kV level 3 conforming to IEC 61000-4-4
<b>Ambient air temperature for operation</b>	-5...60 °C conforming to IEC 61131-2
<b>Ambient air temperature for storage</b>	-40...80 °C conforming to IEC 61131-2
<b>Pollution degree</b>	2 conforming to IEC 60664-1

## Packing Units

<b>Package 1 Weight</b>	0.425 kg
<b>Package 1 Height</b>	0.700 dm
<b>Package 1 width</b>	0.820 dm
<b>Package 1 Length</b>	2.100 dm

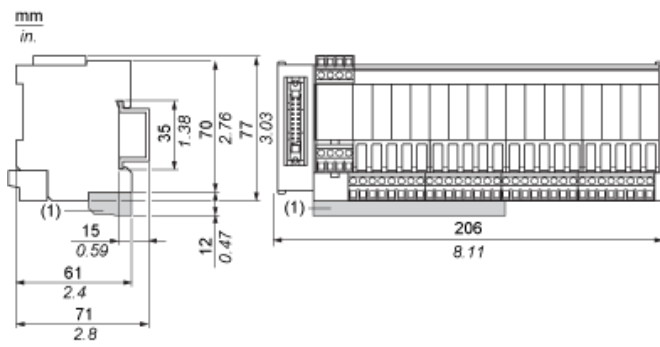
## Offer Sustainability

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

## Contractual warranty

<b>Warranty</b>	18 months
-----------------	-----------

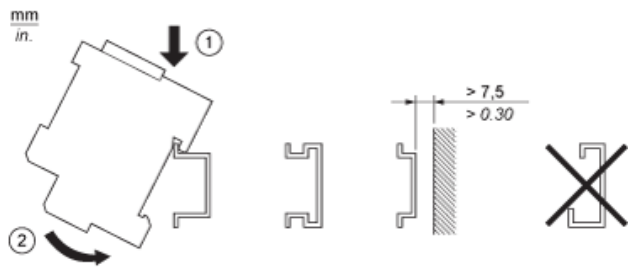
Dimensions



(1) ABE7BV20 / ABE7BV20E

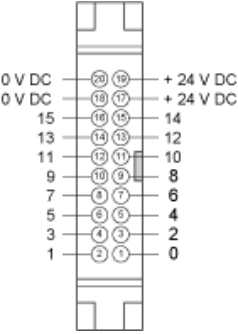
Mounting

---

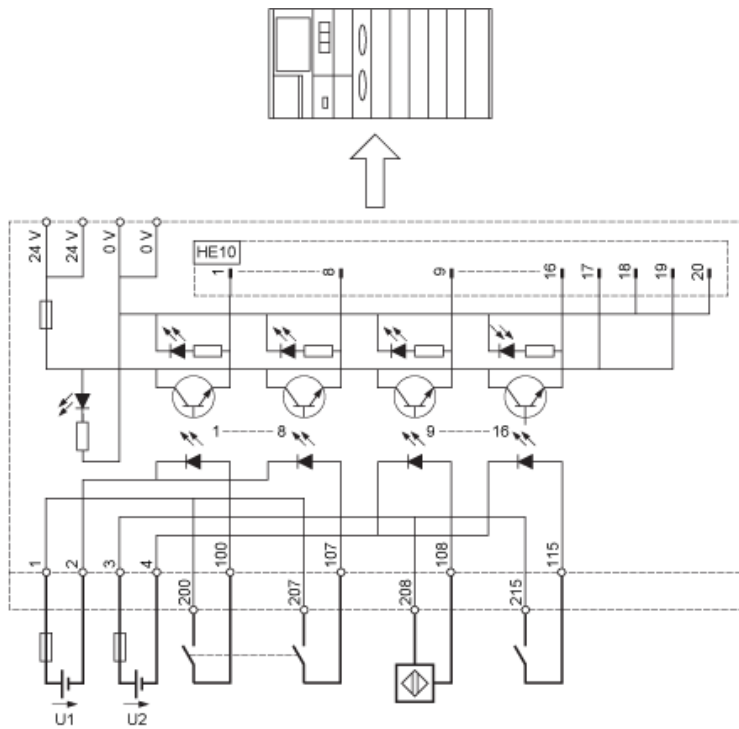


**HE10 16 Channels**

---



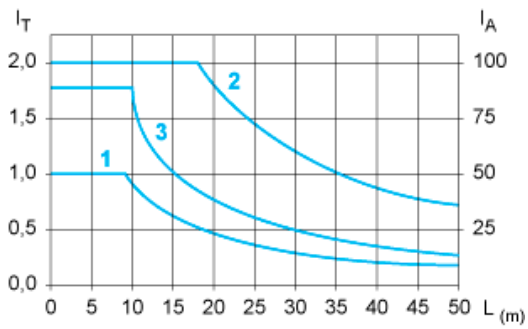
**Wiring Diagram**



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

**Curves for Determining Cable Type and Length According to the Current**

**16-channel Sub-base**



- L Cable length
- I<sub>T</sub> Total current per sub base (A)
- I<sub>A</sub> Average current per channel (mA)
- (1) TSXCDP••2 and ABFH20H••0 cables with c.s.a. 0.08 mm<sup>2</sup> (AWG 28).
- (2) TSXCDP••3 cables with c.s.a. 0.34 mm<sup>2</sup> (AWG 22).
- (3) Cables with c.s.a. 0.13 mm<sup>2</sup> (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.

**Recommended replacement(s)**

ABE7S16E2M0E is replaced by:

1x



sub-base - soldered solid state output relay ABE7 - 16 inputs - 230 V AC  
ABE7S16E2M0