# 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



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

ABE7R16S210

# Main

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

# Complementary

Terminal block type	Removable	
Polarity distribution	Volt-free	
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 for 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	
Maximum power dissipation per channel in W	0.36 W (PLC end)	
Contacts type and composition	1 NO for preactuator end	
Maximum switching voltage	250 V AC 50/60 Hz conforming to IEC 60947-5-1 30 V DC conforming to IEC 60947-5-1	
Electrical durability	500000 cycles, maximum switching current: 600 mA at 24 V DC-13 10 ms (preactuator end) 500000 cycles, maximum switching current: 1500 mA at 230 V AC-12 (preactuator end) 500000 cycles, maximum switching current: 1500 mA at 24 V DC-12 (preactuator end) 500000 cycles, maximum switching current: 900 mA at 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 le	

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 with flat Ø 3.5 mm screwdriver
Width	206 mm
Product weight	0.405 kg

# **Environment**

Max immunity to microbreaks	5 ms	
Dielectric strength	2000 V conforming to IEC 60947-1	
Product certifications	GL	
	CSA	
	DNV	
	UL	
	EAC	
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 radiated fields	10 V/m (260000001000000000 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	-560 °C conforming to IEC 61131-2	
Ambient air temperature for storage	-4080 °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 Height	7.000 cm
Package 1 Width	8.200 cm
Package 1 Length	21.100 cm
Package 1 Weight	581.000 g
Unit Type of Package 2	S03
Number of Units in Package 2	15
Package 2 Height	30.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	9.103 kg

# **Contractual warranty**

Warranty 18 months



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	1040
Environmental Disclosure	Product Environmental Profile

### **Use Better**

Materials and Substances	
Packaging made with recycled cardboard	No
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	1bbe7d20-74c0-4e7e-b98b-d2946f4ab8b4
REACh Regulation	REACh Declaration
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

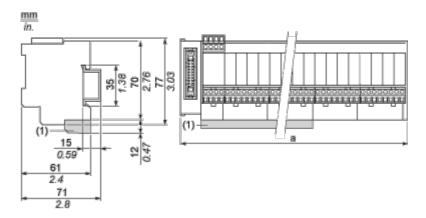
### **Use Again**

○ Repack and remanufacture	
End of life manual availability	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

# ABE7R16S210

### **Dimensions Drawings**

### **Dimensions**



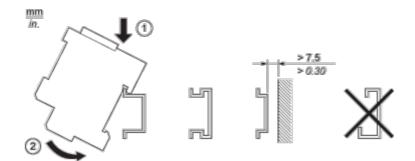
### (1) ABE7BV20 / ABE7BV20E

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

# ABE7R16S210

Mounting and Clearance

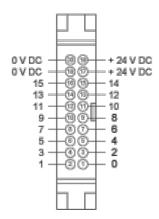
# Mounting



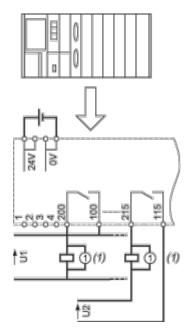
# ABE7R16S210

Connections and Schema

### HE10 16 Channels



# Wiring Diagram

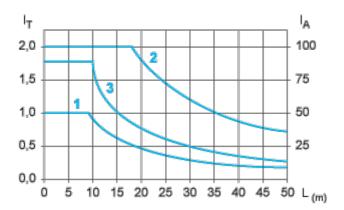


(1) Inductive load

### Performance Curves

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

### 16-channel Sub-base

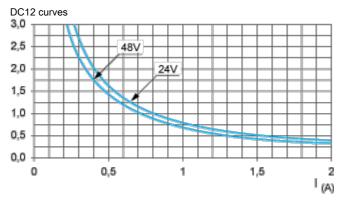


- L Cable length
- $I_{\mathsf{T}}$  Total current per sub base (A)
- I<sub>A</sub> Average current per channel (mA)
- (1) TSXCDP••2 and ABFH20H••0 cables with c.s.a. 0.08 mm<sup>2</sup> (AWG 28).
- (2) TSXCDP••3 cables with c.s.a. 0.34 mm<sup>2</sup> (AWG 22).
- (3) Cables with c.s.a. 0.13 mm<sup>2</sup> (AWG 26).

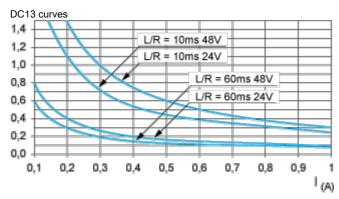
The curves are given for a voltage drop of 1 V in the cable. For n volts tolerance, multiply the length determined from the graph by n.

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

### **DC Loads**

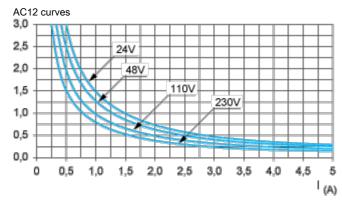


DC12 control of resistive loads and of solid state loads isolated by optocoupler,  $I/R \le 1$  ms.



DC13 switching electromagnets,  $L/R \le 2 x$  (Ue x le) in ms, Ue: rated operational voltage, le: 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**

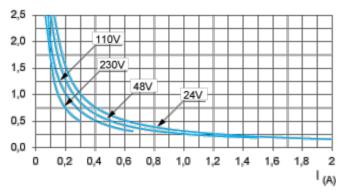


AC12 control of resistive loads and of solid state loads isolated by optocoupler,  $\cos \phi \ge 0.9$ .

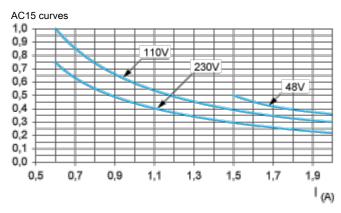
AC14 curves

# **Product data sheet**

### ABE7R16S210



AC14 control of small electromagnetic loads  $\leq$  72 VA, make:  $\cos \varphi = 0.3$ , break:  $\cos \varphi = 0.3$ .



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

# **Product data sheet**

### ABE7R16S210

Image of product / Alternate images

**Alternative** 

