

## Stepping Relay BA 7632

Translation  
of the original instructions



0232901

### Your Advantage

- Wide voltage range AC/DC 24 ... 230 V
- Energy-saving, no holding power required
- Defined switching position in the case of supply voltage failure

### Features

- According to IEC/EN 61810-1
- High switching capacity of contacts
- High switching safety
- With pulse excitation A1-A2
- As option with 1 or 2 changeover contacts or 3 NO contacts
- Optionally in common mode or in networked mode
- Width 45 mm

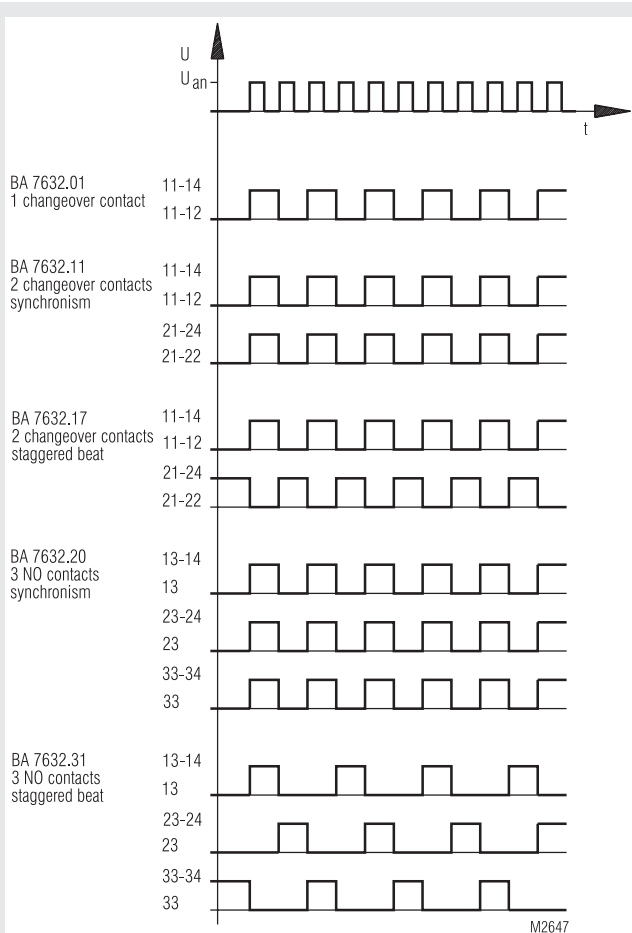
### Product Description

The stepping relay BA7632 is suitable for cyclic control processes. With an impulse of the control voltage to the terminals A1-A2, a symmetric rotation tongue-magnetic system will be actuated, which switches the cam wheels of the contact links further on step. The sequence of the contact actuation effects according to the desired switching program. Energy is not required to maintain the switching state. This is energy-efficient and reduces self-heating. If the supply voltage fails, the relay remains in its defined switching position.

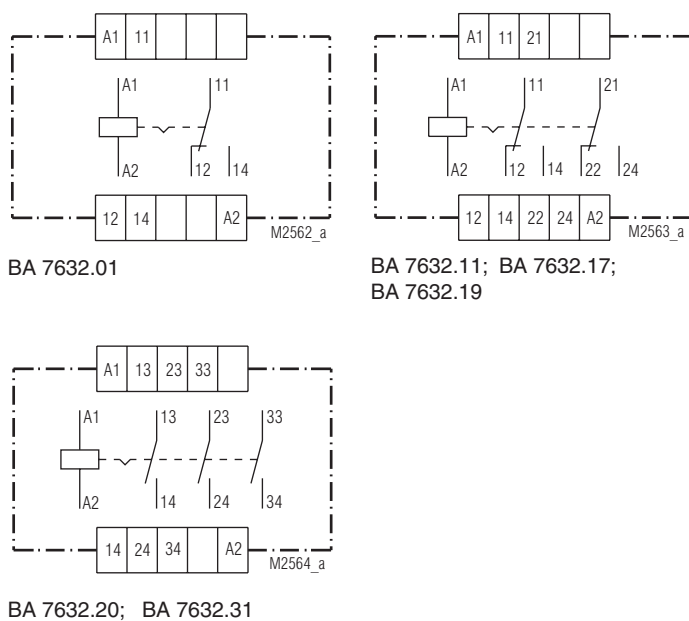
### Approvals and Markings



### Function Diagram



### Circuit Diagrams



### Connection Terminals

Terminal designation	Signal description
A1(+)	L / +
A2(-)	N / -
11, 12, 14	1. changeover contact
21, 22, 24	2. changeover contact
13, 14, 23, 24, 33,34	NO contacts

## Technical Data

### Standard - switching programs

<b>For 1 changeover contact</b>	Contact 1
Program .01:	E-A etc.
<b>For 2 changeover contacts</b>	Contact 1      Contact 2
Program .11:	E-A etc.      E-A etc.
Program .17:	E-A etc.      A-E etc.
Program .19:	E-A etc.      A-E-E-A etc.
<b>For 3 NO contacts</b>	Contact 1      Contact 2      Contact 3
Program .20:	E-A etc.      E-A etc.      E-A etc.
Program .31:	E-A-A etc.      A-E-A etc.      A-A-E etc.
	Other switching program on request
	A = contact in initial position
	E = contact in switching position

### Input

<b>Nominal voltage <math>U_N</math>:</b>	AC 24, 110, 230 V DC 24 V
<b>Voltage range:</b>	0.8 ... 1.1 $U_N$
<b>Min. transition time:</b>	≥ 100 ms
<b>Min. break time:</b>	≥ 200 ms
<b>Nominal consumption:</b>	AC 14 VA / 7 W
<b>Nominal frequency:</b>	50 / 60 Hz

### Output

<b>Operate time of contacts:</b>	< 90 ms
<b>Release time of contacts:</b>	< 180 ms
<b>Nominal breaking capacity:</b>	AC 24 V    AC 110 V    AC 230 V    AC 380 V
cos φ 1 ... 0.7:	6 A      6 A      4 A      3 A
cos φ 0.4:	4 A      4 A      3 A      2 A
	DC 24 V    DC 60 V    DC 110 V    DC 220 V
Resistive:	1.5 A    0.8 A    0.4 A    0.2 A
Inductive:	0.8 A    0.3 A    0.2 A    0.12 A
<b>Thermal current <math>I_{th}</math>:</b>	10 A
<b>Short circuit strength</b>	10 A gG / gL
<b>max. fuse rating:</b>	1 x 10 <sup>6</sup> switching cycles, 3 000 switches / h at 50 % of the switching capacity
<b>Electrical life:</b>	0,5 x 10 <sup>6</sup> switching cycles, 1 500 switches / h at 100 % of the switching capacity
<b>Mechanical life:</b>	> 5 x 10 <sup>6</sup> switching cycles
<b>Permissible switching frequency:</b>	3 000 switching cycles / h

### General Data

<b>Operating mode:</b>	Continuous operation
<b>Temperature range:</b>	
Operation:	- 20 ... + 70 °C at 40 % ED (cycle duration 250 s) - 20 ... + 60 °C at 60 % ED (cycle duration 160 s) - 20 ... + 45 °C at DB
Storage:	- 40 ... + 70 °C
<b>Altitude:</b>	< 2000 m
<b>Clearance and creepage distances</b>	
Rated impulse voltage / pollution degree:	4 kV / 2      IEC 60664-1
<b>EMC</b>	
Electrostatic discharge:	6 kV (air)      IEC/EN 61000-4-2
HF-irradiation:	
80 MHz ... 6.0 GHz:	10 V / m      IEC/EN 61000-4-3
Fast transients:	2 kV      IEC/EN 61000-4-4
Surge voltages between	
Wires for power supply:	2 kV      IEC/EN 61000-4-5
Between wire and ground:	4 kV      IEC/EN 61000-4-5
HF-wire guided:	10 V      IEC/EN 61000-4-6
Interference suppression:	Limit value class B      EN 55011

## Technical Data

### Degree of protection

Housing	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529
<b>Housing:</b>	Thermoplast PC	ISO 1043-1
	with V0-behaviour to UL subject 94	
<b>Vibration resistance:</b>	Amplitude 0.35 mm, frequency 10...55Hz,	IEC/EN 60068-2-6
<b>Climate resistance:</b>	Humid heat	IEC/EN 60068-2-30
	24-hours-rhythm: 40°C, 92 % relative air humidity and 23°C, 83 % relative air humidity	
<b>Terminal designation:</b>	EN 60947-1	
<b>Wire connection:</b>	2 x 2.5 mm <sup>2</sup> solid or 2 x 1.5 mm <sup>2</sup> stranded wire with sleeve	
	DIN 46228-1/-2/-3/-4	
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece	IEC/EN 60999-1
<b>Mounting:</b>	DIN rail	IEC/EN 60715
<b>Weight:</b>	450 g	

### Dimensions

<b>Width x height x depth:</b>	45 x 74 x 121 mm
--------------------------------	------------------

### Standard Type

BA 7632.31	AC 230 V	50/60 Hz
Article number:	0028206	
• Output:	3 NO contacts	
• Nominal voltage $U_N$ :	AC 230 V	
• Width:	45 mm	

### Ordering Example

BA 7632 .11 AC 230 V 50 / 60 Hz

