

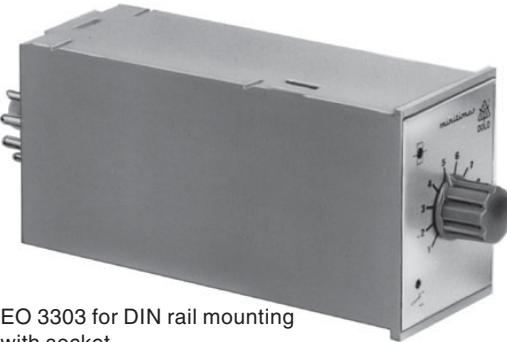
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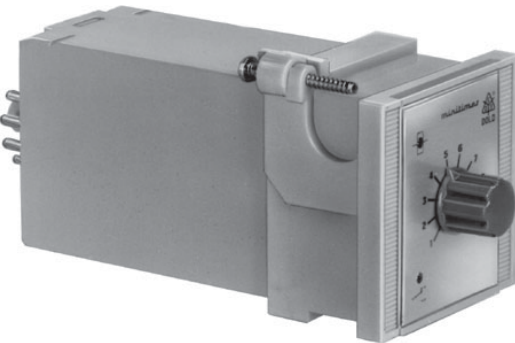
BA 7981



AI 303



EO 3303 for DIN rail mounting with socket



EO 3303 with front frame ET 4048-3

- According to IEC/EN 61 812-1
- Impulse time up to 3 s settable
- Repeat accuracy $\pm 3\%$
- Setting on absolute scale
- Start with impulse
- Available with 1 or 2 changeover contacts
- AI 303 also with GL-approval available
- EO 3303 with 11-pole socket according to IEC 76-1-18 a
- LED display for operation and contact position
- BA 7981, AI 303: width 45 mm
- EO 3303: front size 35 x 48 mm

Approvals and marking



Application

Time dependent controls

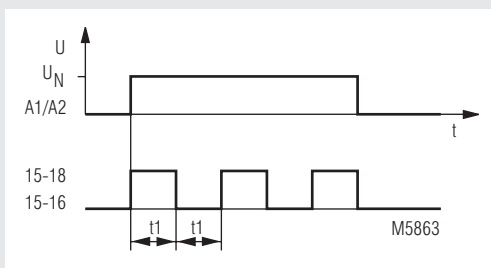
Indication

upper LED: on when operating voltage applied
 untere LED: on when output relay activated

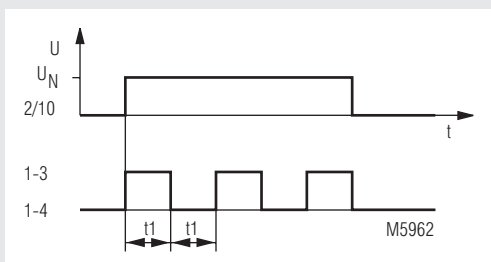
Notes

When DC-connection, pay attention to the correct polarity

Function diagrams

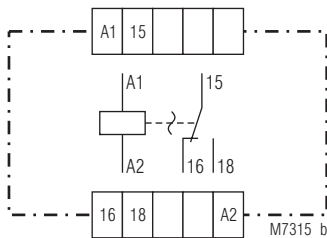


BA 7981, AI 303

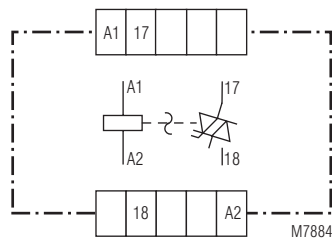


EO 3303

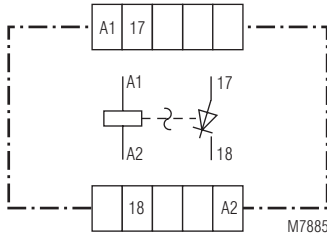
Circuit diagrams



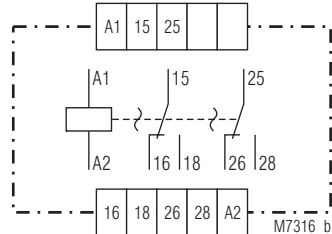
BA 7981.81, AI 303.81



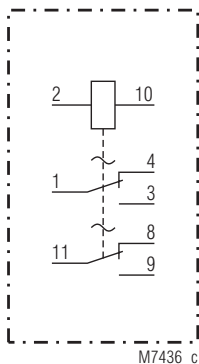
BA 7981.91



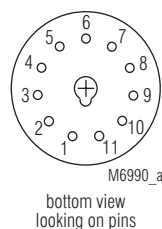
BA 7981.95



AI 303.82



EO 3303.82



M6990_a
bottom view
looking on pins

Technical data

Time circuit

Impulse time:	0,3 ... 3 s resp. 100 ... 10 Imp./min.
Pulse duty factor:	1 : 1
Time setting:	infinite external setting
Repeat accuracy:	< ± 3 %
Voltage influence:	< ± 1 %
Temperature influence:	< 0,4 % / K

Input

Nominal voltage U_N:	AC 24, 42, 110, 127, 230, 240 V DC 24 V residual ripple ≤ 48 % with polarity protection
	DC 48 V*: ZWS 20 SL 680 Ω 20 W
	DC 60 V*: ZWS 20 SL 1 kΩ 20 W
	DC 110 V*: ZWS 20 SL 2 kΩ 20 W
	DC 220 V*: ZWS 20 SL 5,1 kΩ 20 W
	* only for AI 303 and EO 3303 with external series resistor

The series resistors have to be used together with DC 24 V - devices.
The series resistors has to be connected to (+).

Voltage range:	0,8 ... 1,1 U _N
Nominal consumption:	
BA 7981, AI 303:	AC 24 42 110 127 230 240 V 0,8 1,8 5 5 10 10 VA DC 24 48 60 110 220 V 0,8 1,8 2,2 4 9 W
EO 3303:	AC < 3 VA DC 24 48 60 110 220 V 1,2 2,4 3 5,5 11 W
Nominal frequency:	50 / 60 Hz

Technical data

Output

Contacts:

BA 7981.81, AI 303.81, EO 3303.81:	1 changeover contact
AI 303.82, EO 3303.82:	2 changeover contacts

Release time of the contacts: 50 ms

Thermal current I_{th}: 5 A

Switching capacity

to AC 15

NC contact: 1 A / AC 230 V IEC/EN 60 947-5-1

NO contact: 3 A / AC 230 V IEC/EN 60 947-5-1

Electrical life IEC/EN 60 947-5-1

to AC 15 at 1 A, AC 230 V: ≥ 2,5 x 10⁵ switching cycles

Permissible switching frequency:

depends on the flasher frequency

Short circuit strength

max. fuse rating:

6 A fast, 4 A sluggish IEC/EN 60 947-5-1

Mechanical life:

> 30 x 10⁶ switching cycles

Semiconductor outputs

BA7981.91:

Switching voltage: AC 12 ... 275 V

Output current: 4 A

BA7981.95:

Switching voltage: DC 0 ... 30 V

Output current: 5 A

General data

Operating mode:

Continuous operation

Temperature range

AI 303, BA 7981: - 20 ... + 60 °C

EO 3303: - 20 ... + 50 °C

Clearance and creepage distances

overvoltage category /

contamination level:

4 kV / 2

IEC 60 664-1

EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2

HF irradiation: 10 V/m IEC/EN 61 000-4-3

Fast transients: 2 kV IEC/EN 61 000-4-4

Surge voltage

between

wires for power supply: 2 kV IEC/EN 61 000-4-5

between wire and ground: 4 kV IEC/EN 61 000-4-5

Interference suppression: Limit value class B EN 55 011

Degree of protection: Housing: IP 40 IEC/EN 60 529

Terminals: IP 20 IEC/EN 60 529

Housing: Thermoplast with V0 behaviour

according to UL subject 94

Vibration resistance: Amplitude 0,35 mm

frequency 10...55Hz, IEC/EN 60 068-2-6

20 / 060 / 04 IEC/EN 60 068-1

Climate resistance:

Terminal arrangement

AI 303, BA 7981: DIN 46 199-5

Terminal designation

BA 7981, AI 303: EN 50 005

Wire connection

BA 7981, AI 303: 2 x 2,5 mm² solid or

2 x 1,5 mm² stranded wire with sleeve

DIN 46 228-1/-2/-3/-4

EO 3303: suitable to 11-pole plug-in-socket via

plug-in-socket according to IEC 67-1-18a

Flat terminals with self-lifting

clamping piece IEC/EN 60 999-1

Wire fixing:

Mounting

BA 7981, AI 303: DIN rail IEC/EN 60 715

Weight:

BA 7981, EO 3303: 250 g

AI 303: 300 g

Technical data

Dimensions

Width x height x depth:

BA 7981:	45 x 73 x 133 mm
AI 303:	45 x 77 x 127 mm
EO 3303:	35 x 48 x 109 mm
Front panel cut-out	
EO 3303:	45 ^{+0,6} x 45 ^{+0,6} mm

Standard types

BA 7981.81 AC 230 V 50/60 Hz 0,3 ... 3 s	
Article number:	0022425 stock item
• Output:	1 changeover contacts
• Nominal voltage U_N :	AC 230 V
• Impulse time:	0,3 ... 3 s
• Width:	45 mm
EO 3303.81 DC 24 V 0,3 ... 3 s	
Article number:	0005997 stock item
• Output:	1 changeover contacts
• Nominal voltage U_N :	DC 24 V
• Impulse time:	0,3 ... 3 s
• Width:	45 mm

Ordering example

BA 7981	.95	5 A	AC 230 V	50 / 60 Hz	
					Nominal frequency
					Nominal voltage
					Output current
					Contacts
					Type

Accessories

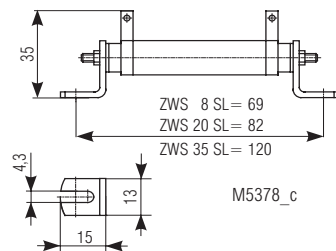
BA 7981, AI 303:

K 70-34:

Transparent cover

ZWS 20 SL:

Series resistor



EO 3303:

for DIN rail mounting:

ET 4048-21:

plug-in-socket without fixing clamp

ET 4048-22:

plug-in-socket with fixing clamp

for flush mounting:

ET 4048-13:

plug-in adapter

ET 4048-3:

front frame

