

MINITIMER Timer, On-delay BA 7905

Translation
of the original instructions



Your Advantages

- Higher safety at connection of machine parts during start up
- High repeat accuracy
- Wide setting range
- Easy setting

Features

- Power ON-delay according to EN 61812-1
- Delay up to 300 s
- Repeat accuracy $< \pm 1\%$
- Voltage up to DC 220 V without series resistor
- With remote potentiometer connection
- With LED indication for operation and contact position
- 1 or 2 changeover contacts
- Width 45 mm

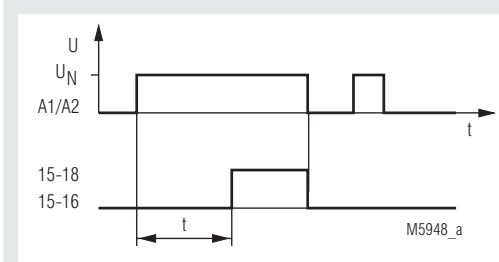
Product Description

The timer BA 7905 can be used to switch devices and controls with an adjustable on delay. With these timer the start behaviour of machine parts e. g. the starting of motors can be influenced. With a potentiometer the time delay can be adjusted simply over a large setting range.

Approvals and Markings



Function Diagram



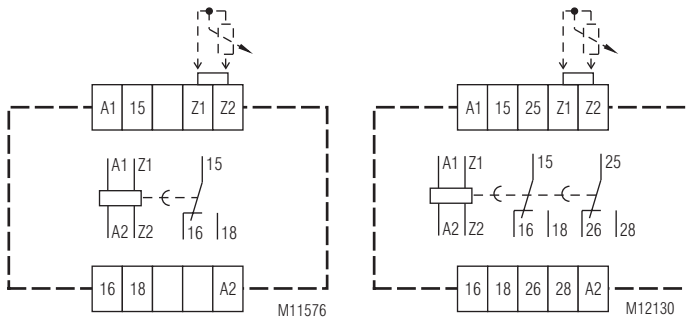
Application

Time dependent control

Indication

Upper LED: On when operating voltage applied
Lower LED: On when output relay activated

Circuit Diagrams



BA 7905.81

BA 7905.82

Connection Terminals

Terminal designation	Signal description
A1(+), A2(-)	Voltage supply AC/DC
Z1, Z2	External potentiometers
15, 16, 18	C/O contacts (output relays)
25, 26, 28	C/O contacts (2nd output relays)

Technical Data

Time circuit

Time ranges:	0.05 ... 1 s	1.5 ... 30 s
	0.15 ... 3 s	5 ... 100 s
	0.5 ... 10 s	15 ... 300 s
Setting:	Stepless, setting on absolute scale. Connection possibility for external variable resistor on terminal Z1-Z2 (5-6). Variable resistor in the device to be set to the minimum value and bridge Z1-Z2 (5-6) is to be removed.	

Recovery time

tw 50 / 100:	100/50 ms
Repeat accuracy:	≤ ± 1 % of max. scale value
Voltage influence:	0.5 %
Temperature influence:	0.2 % / K

Input

Nominal voltage U_N:	AC 24, 42, 110 ... 127, 230, 240 V
	DC 24, 42, 60, 110 ... 127, 220 V
Voltage range:	0.8 ... 1.1 U _N
Nominal consumption:	AC 24 230 V 1.9 18 VA
	DC 24 220 V 0.8 2.6 W
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 % f _N

Output

Contacts

BA 7905.81:	1 changeover contact, delayed
BA 7905.82:	2 changeover contacts, delayed
Contact material:	AgNi
Measured nominal voltage:	AC 250 V
Release time:	10 ms
Thermal current I_{th}:	5 A
Switching capacity	
To AC 15:	3 A / AC 230 V IEC/EN 60947-5-1
To DC 14:	2 A / DC 24 V IEC/EN 60947-5-1
Electrical life	IEC/EN 60947-5-1
To AC 15 at 3 A, AC 230 V	
BA 7905.81:	2.5 x 10 ⁵ switching cycles
BA 7905.82:	0.5 x 10 ⁵ switching cycles
Permissible switching frequency:	6000 switching cycles / h
Short circuit strength	
Max. fuse rating:	4 A gG / gL IEC/EN 60947-5-1
Mechanical life:	50 x 10 ⁶ switching cycles

General Data

Operating mode:	Continuous operation	
Temperature range:		
Operation:	- 20 ... + 60 °C	
Storage:	- 20 ... + 60 °C	
Altitude:	≤ 2000 m	
Clearance and creepage distances		
Rated impulse voltage / pollution degree		
in- / output:	4 kV / 2	IEC 60664-1
EMC		
Electrostatic discharge:	8 kV (air)	IEC/EN 61000-4-2
HF irradiation:		
80 MHz ... 1 GHz:	12 V / m	IEC/EN 61000-4-3
1 GHz ... 2.7 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:	1 kV	IEC/EN 61000-4-5
Between wire and ground:	2 kV	IEC/EN 61000-4-5
HF-wire guided:	10 V	IEC/EN 61000-4-6
Interference suppression:	Limit value class B	EN 55011
Degree of protection		
Housing:	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529

Technical Data

Housing:	Thermoplast with V0 behaviour according to UL subject 94
Vibration resistance:	Amplitude 0.35 mm frequency 10...55Hz IEC/EN 60068-2-6
Climate resistance:	20 / 050 / 04 IEC/EN 60068-1
Terminal designation:	EN 50005
Wire connection:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded wire with sleeve DIN 46228-1/-2/-3/-4
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60999-1
Fixing torque:	0.8 Nm
Mounting:	DIN rail IEC/EN 60715
Weight:	170 g

Dimensions

Width x height x depth:	45 x 74 x 133 mm
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Standard Type

BA 7905.81	AC 230 V	50/60 Hz	0.5 ... 10 s
Article number:	0021737		
• Output:	1 changeover contact, delayed		
• Nominal voltage U _N :	AC 230 V		
• Time range:	0.5 ... 10 s		
• Width:	45 mm		

Varianten

BA 7905.82/200	with guided contacts
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Ordering example for variants

BA 7905	.81	/	AC 230 V	50 / 60 Hz	300 s	
						Time range max. value
						Nominal frequency
						Nominal voltage
						Variant, if required
						Contacts
						Type

Accessories

AD 3:
External variable resistor

0,05 ... 1 s	1 MΩ	Article number: 0004082
0,15 ... 3 s	2,2 MΩ	Article number: 0006154
0,5 ... 10 s	10 MΩ	Article number: 0004084
1,5 ... 30 s	10 MΩ	Article number: 0004084
5 ... 100 s	10 MΩ	Article number: 0004084
15 ... 300 s	20 MΩ	Article number: 0004085

Degree of protection front side: IP 40

