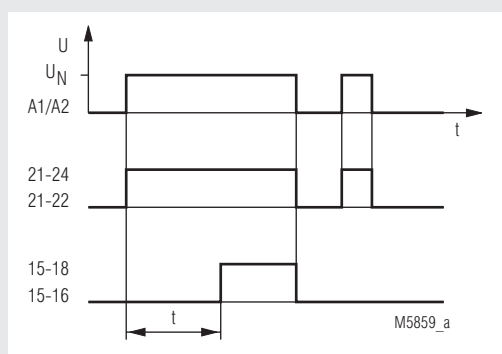




- According to IEC/EN 61 812-1
- For delay up to 100 h
- Repeat accuracy $\leq \pm 1 \%$
- LED indicators for power supply and state of contact
- As option 1 or 2 changeover contacts
- As option with instantaneous contact
- As option with time delay
- 48 x 72 mm front surface

Function diagram



Approval and marking



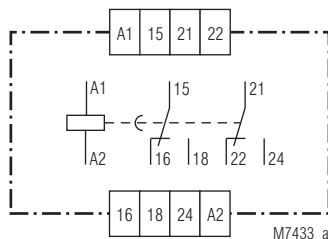
Application

Time dependent controls

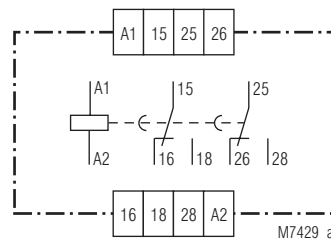
Indicators

LED left: on when supply connected
LED right: on, when corresponding output relay is active

Circuit diagrams



EC 9901.32



EC 9901.82

Technical Data

Time circuit

Time range:	0,05 ... 1 s
	0,15 ... 3 s
	0,5 ... 10 s
	1,5 ... 30 s
	5 ... 100 s
	15 ... 300 s
	0,5 ... 10 min
	1,5 ... 30 min
	3 ... 60 min
	0,15 ... 3 h
	0,5 ... 10 h
	1,5 ... 30 h
	5 ... 100 h
Time setting:	infinite variable
Recovery time	20 ms
Repeat accuracy:	$\leq \pm 1 \%$ of full scale value
Voltage influence:	$< 0,5 \%$ at 0,8 ... 1,1 U_N
Temperature influence:	$\leq \pm 0,1 \%$ / K

Input

Nominal voltage U_N : AC 24, 42, 110, 127, 230, 240 V
DC 24 V with polarity protection

Special voltages

with external series resistor	EC 9901. __
DC 48 V:	ZWS 8 SL 390 Ω 8 W
DC 60 V:	ZWS 8 SL 640 Ω 8 W
DC 110 V:	ZWS 20 SL 1,2 k Ω 20 W
DC 127 V:	ZWS 20 SL 1,5 k Ω 20 W
DC 220 V:	ZWS 35 SL 3 k Ω 35 W
with external series resistor	EC 9901/03
DC 48 V:	ZWS 8 SL 390 Ω 8 W
DC 60 V:	ZWS 8 SL 510 Ω 8 W
DC 110 V:	ZWS 20 SL 1 k Ω 20 W
DC 127 V:	ZWS 20 SL 1,2 k Ω 20 W
DC 220 V:	ZWS 35 SL 2,4 k Ω 35 W

Technical Data

Voltage range:	0,8 ... 1,1 U _N
Nominal consumption:	AC 2,5 VA DC 24V 48 V 60 V 110/127 V 220 V 4 W 4 W 6 W 15 W 21 W
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 %

Output

Contacts

EC 9901.81:	1 changeover contact delayed
EC 9901.82:	2 changeover contacts delayed
EC 9901.32:	1 changeover contact instantaneous 1 changeover contact delayed

Release time of the contacts:

10 ms

Thermal current I_{th}:

5 A

Switching capacity

according to AC 15

EC 9901.81, EC 9901.32

NO contact: 10 A / AC 230 V IEC/EN 60 947-5-1

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

EC 9901.82

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

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

Electrical life

acc. to AC 15 at 3 A, AC 230 V: 1,5 x 10⁶ switching cycles IEC/EN 60 947-5-1

Permissible switching frequency:

6 000 switching cycles / h

Short circuit strength

max. fuse rating:

EC 9901.81, EC 9901.32: 10 A gL IEC/EN 60 947-5-1

EC 9901.82: 6 A gL IEC/EN 60 947-5-1

Mechanical life:

> 30 x 10⁶ switching cycles

General Data

Nominal operating mode: continuous operation

Temperature range: - 20 ... + 60°C

Clearance and creepage distance

overvoltage category /

pollution degree: 4 kV / 2 IEC 60 664-1

EMC

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

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

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

Surge voltages

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

HF-wire guided: 10 V IEC/EN 61 000-4-6

Interference suppression: Limit value class A EN 55 011

Degree of protection

Front plate: IP 50 IEC/EN 60 529

Housing: IP 30 IEC/EN 60 529

Terminals: IP 10 IEC/EN 60 529

Enclosure: Thermoplastic with VO behaviour

according to UL Subject 94

Vibration resistance: Amplitude 0,35 mm IEC/EN 60 068-2-6

Frequency: 10 ... 55 Hz

Climate resistance: 20 / 060 / 04 IEC/EN 60 068-1

Terminal designation: EN 50 005

Wire connection:

2 x 2,5 mm² solid or

2 x 1,5 mm² stranded wire with sleeve

DIN 46 288-1/-2/-3/-4

Wire fixing: Flat terminals with self-lifting clamping

piece IEC/EN 60 999-1

Flush mounting: 2 clamps with screws

Weight: 320 g

Dimensions

Width x height x depth: 48 x 72 x 120 mm

Front panel cut-out: 44 x 67 mm

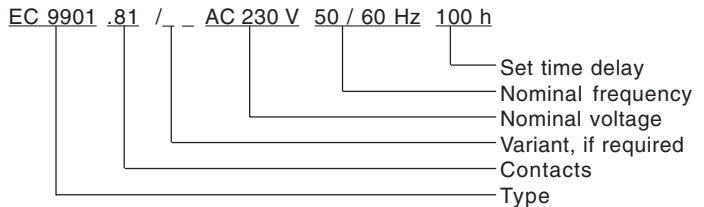
Standard type

EC 9901.81	AC 230 V	50 / 60 Hz	100 s
Article number:	0016457		
• Output:	1 changeover contact		
• Nominal voltage U _N :	AC 230 V		
• Set time delay:	100 s		
• Front surface:	48 x 72 mm		

Variant

EC 9901. __ / 03: with set time delay as LED chain

Order reference for variant



Accessories

ZS 700.06:	Cover
ET 7001.404.034:	Plug-in-socket for EC 9901.81, EC 9901.82
ET 7800-12:	Plug-in-socket for EC 9901.32