

MACX-TR-1T-POFF-(PT)

Power off delay time relay



Data sheet
300003_en_00

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1 Description

MACX series industrial time relay, easy to install and control. Precise time setting with countdown monitoring and displaying.

You can use OLED display and buttons on the front panel or NFC wireless communication to configure.

Width of 22.5 mm, effectively save space of the cabinet.

Optional screw and push-in connection.

Features

- OLED display
- Power off delay function
- Adjustable time range from 10 ms to 10 min
- Wide-range power supply: 24 VAC/DC ... 240 VAC/DC
- Output: 2 PDT dry contact outputs
- Password protection
- Support NFC wireless communication function
- Download app for Android / iOS for free



WARNING: Danger to life by electric shock!



Make sure you always use the latest documentation.

It can be downloaded from the product at phoenixcontact.net/products.

This document is valid for the products listed in the "Ordering data".

2	Table of contents	
1	Description	1
2	Table of contents	2
3	Ordering data	3
4	Technical data	3
5	Basic circuit diagram	5
6	Structure	5
7	Display description	5
8	Communication	6
9	Installation	6
10	Operating instructions.....	7
11	Connection examples	8
12	Function.....	8

3 Ordering data

Description	Type	Order No.	Pcs./Pkt.
Power off delay time relay, 24 V AC/DC ... 240 V AC/DC wide-range supply, time range adjustable (10 ms ... 10 min), two configuration possibilities, password protection, 2 PDTs, push-in connection.	MACX-TR-1T-POFF-PT	1119399	1
Power off delay time relay, 24 V AC/DC ... 240 V AC/DC wide-range supply, time range adjustable (10 ms ... 10 min), two configuration possibilities, password protection, 2 PDTs, screw connection.	MACX-TR-1T-POFF	1119403	1
Accessories	Type	Order No.	Pcs./Pkt.
Bluetooth NFC adapter	MACX-BLUETOOTH-NFC	1142259	1

4 Technical data

Input data	
Input voltage range	24 V AC/DC ... 240 V AC/DC (-15% ... +10%)
Nominal frequency	48 Hz ... 63 Hz
Temperature coefficient, typical	≤ 0.01 %/°C
Recovery time	250 ms
Setting range time	10 ms ... 10 min.
Function	POFF: Power-off delay
Setting accuracy	≤ 0.5 % (> 3 s)
Repeat accuracy	≤ 0.2 % (> 3 s)
ON duration	≥ 250 ms
Nominal power consumption	2.5 VA (0.8 W)
Output data	
Contact type	2 floating PDT contacts
Contact material	AgNi (90/10)
Maximum switching voltage	400 V AC
Interrupting rating (ohmic load) max.	2000 VA (8 A / 250 V AC)
Output fuse	8 A (fast-blow)
General data	
Display	OLED
Mechanical service life	approx. 2×10^6 cycles
Service life, electrical	approx. 3×10^4 cycles, resistive load 2000 V A
Degree of protection	IP20
Rated insulation voltage	300 V AC
Mounting	on standard DIN rail NS 35 in accordance with EN 60715
Mounting position	any
Width	22.5 mm

General data

Height	109 mm
Depth	114 mm
Type of housing	PBT
Inflammability class in acc. with UL 94	V0
Color	traffic grey A RAL 7042
Overvoltage category	III
Dielectric strength	2 kV ((2 mA, 60 s) (IEC 60947-5-1))
Pollution degree	3
Impulse withstand voltage	4 kV (1.2/50 µs, IEC 60947-5-1)
Shock resistance	2 g (10 ... 150 Hz, IEC 60068-2-6)
Vibration resistance	15 g (11 ms, IEC 60068-2-27)

Connection data**Screw connection****Push-in connection**

GRP conductor cross section, solid	0.2 mm ² ... 2.5 mm ²	0.2 mm ² ... 2.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 2.5 mm ²	0.2 mm ² ... 2.5 mm ²
AWG	24 ... 14	24 ... 14
Stripping length	10 mm	10 mm
Torque	0.5 Nm ... 0.6 Nm / 5 lb in ... 7 lb in	

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Altitude	≤ 2000 m

Conformance/Approvals

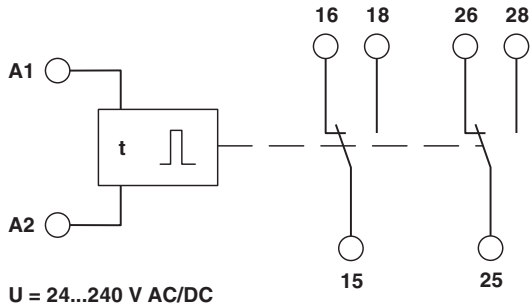
CE	CE-compliant
UL, USA/Canada	UL/C-UL Listed UL 508
CCC	GB/T 14048.5
Standards/regulations	IEC 60947-5-1 IEC 61812-1

Conformance with EMC Directive 2014/30/EU

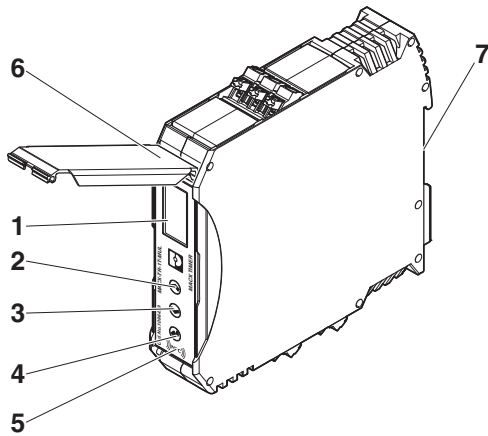
Noise immunity according to	EN 61000-6-2
Noise emission according to	EN 61000-6-4

Conformance with Low Voltage Directive 2014/35/EU**Conformance with Radio Equipment Directive 2014/53/EU**

5 Basic circuit diagram

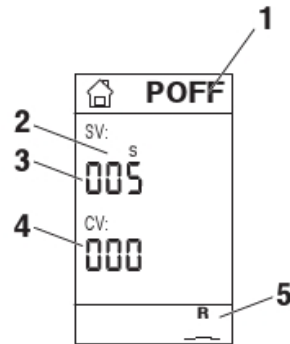


6 Structure



- 1 OLED display
- 2 Up key: plus/moving backward
- 3 Down key: minus/moving forward
- 4 Set key: confirm/menu
- 5 NFC identification
- 6 Transparent cover
- 7 Snap-on foot for DIN rail mounting

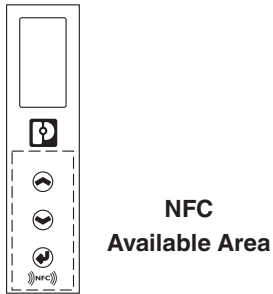
7 Display description



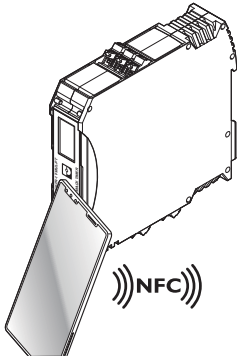
- 1 Current running function
- 2 Time set unit
- 3 Time set value
- 4 Current value of time (countdown)
- 5 Symbol R: relay state
Pick up/drop out

8 Communication

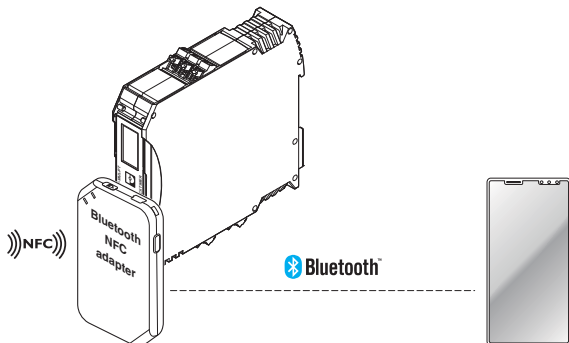
The module supports NFC communication and provides a wide NFC recognition area.



Android system: connect via NFC interface of mobile phone using MACX Timer Relay app and module.



Android or IOS system: connect via Bluetooth NFC adapter (order number: 1142259) and Bluetooth interface of mobile phone using MACX Timer Relay app and module.



9 Installation



WARNING: Danger to life by electric shock!

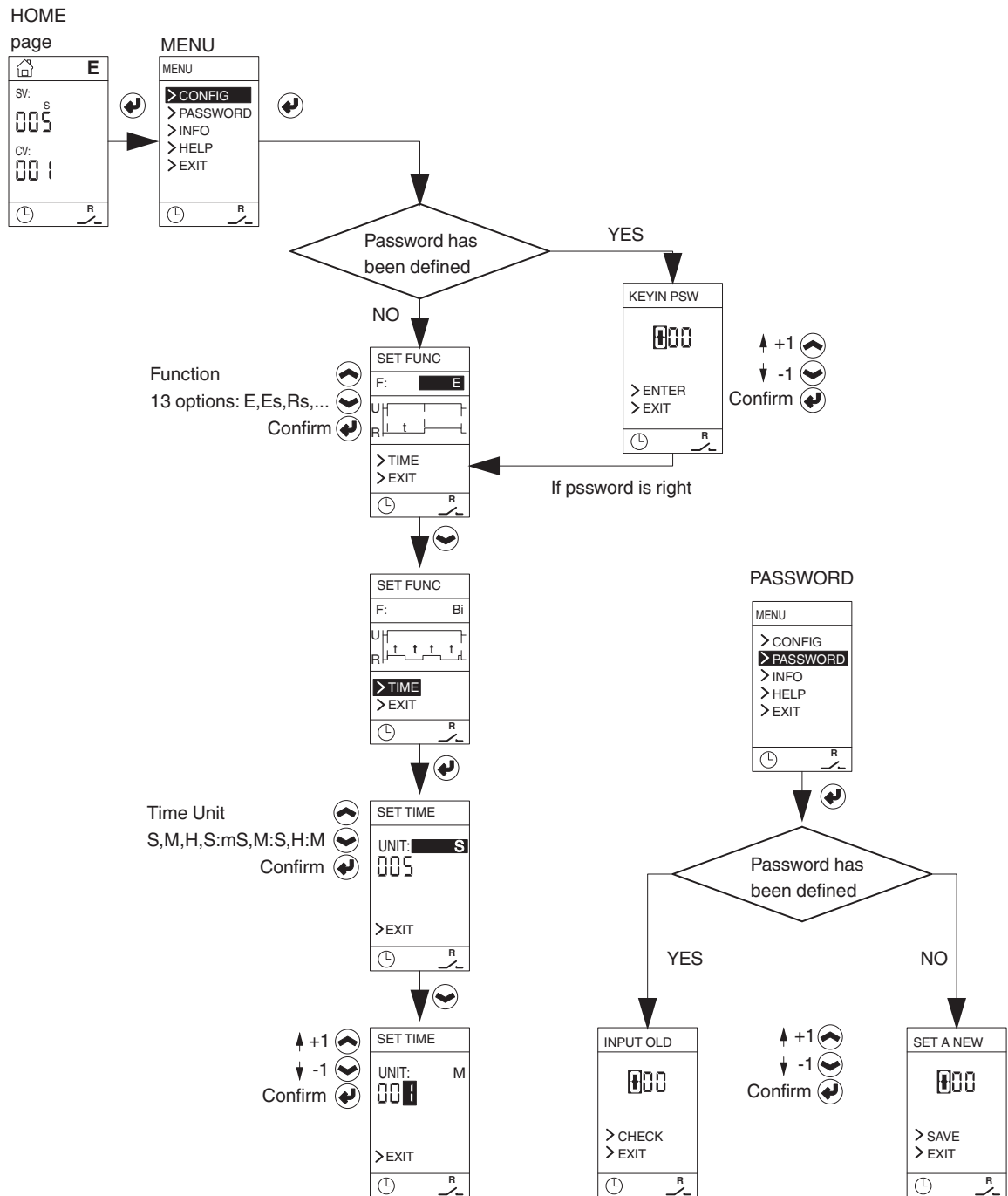
The device can be snapped onto a 35 mm DIN rail according to EN 60715.

UL requirement: Use copper cables approved for $\geq 75^{\circ}\text{C}$.

10 Operating instructions

Press the set key on the home page to enter the menu page.
Use up key and down key to select, and set key to confirm.

Please refer to the following figure for parameters and passwords.





Except for the home page, if there is no action in 30 s, it will automatically return to the home page.
 If there is no action in 3 min, the module automatically goes into a shallow sleep state.
 If there is no action in 30 min, the module automatically goes into deep sleep state

CONFIG

- Module function and time configuration
- Power off delay function (see 12)
- 4 time units available

S	M	S:10 mS*	M:S
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* actual value in milliseconds = set value x 10 (e.g., if set value is 50, the actual value in milliseconds should be 500).

PASSWORD

- Password settings
- Password is used to protect configuration information, the initial password is set to 000 as default, i.e. no password protection.

INFO

- Product information

HELP

- Key and code description

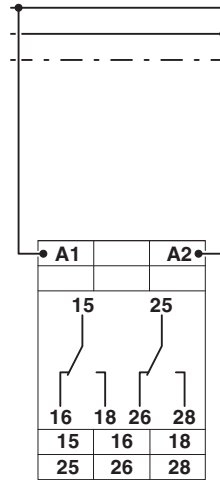
EXIT

- Return

Initializing

- Press up and set keys together for 3 s to enter the initialization interface, choose "yes", then the module restarts, and resets to the default settings (function POFF, time 5 s).

11 Connection examples



12 Function

POFF: Power off delay

When supply voltage U is applied, output relay picks up (symbol R picks up). Set time t starts running when supply voltage is interrupted. Once time t has elapsed, output relay drops out. If the supply voltage U is applied again before time t has elapsed, the elapsed time is deleted and restarted with the next cycle.

