Multi-Function Timer



MFT Series



Description

Multi-Function Timer featuring seven knob-selectable functions and seven knobselectable time ranges spanning from 0.1 seconds to 100 hours. Designed for DIN-rail mounting, it offers a housing width of 17.5 mm in a SPDT configuration, suitable for both back and front panel installation. Compatible with a wide power supply range: 24 VDC, 24 to 240 VAC, or 12 to 240 VAC/DC.

Main Features

- Selectable time range 0.1 s to 100 h
- 7 knob selectable functions:

Op delay on operate In interval

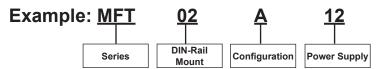
lo interval on trigger open double interval ld

Dr delay on release R symmetrical recycler ON first Rb symmetrical recycler OFF first

- Automatic or manual start
- Repeatability: ≤ 0.2%
 Output: 5 A SPDT or 5 A DPDT relays
- For mounting on DIN-rail in accordance with DIN/EN/EC 60715
- 17.5 mm DIN-rail housing (DIN 43880)
- Combined AC and DC power supply
- LED indication for relay status and power supply ON

Part Numbering System

Code	Option	Description
MFT		Product Series
-	02	DIN Rail Mount
-	Α	SPDT Configuration, 17.5 mm Package
-	12	Power Supply: 12 to 240 VAC/DC
	24	Power Supply: 24 VDC and 24 to 240 VAC



Time Specifications

Time ranges Knob selectable	0.1 to 1 s 1 to 10 s 6 to 60 s 60 to 600 s 0.1 to 1 h 1 to 10 h 10 to 100 h
Setting accuracy	≤ 5%
Repeatability	≤ 0.2%
Time variation Within rated power supply Within ambient temperature	≤ 0.05%/V ≤ 0.2%/°C
Reset Manual reset of time and/or relay Pulse duration Power supply interruption	Close the trigger contact between pins A1 and Y1 ≥ 100 ms ≥ 200 ms
Automatic start	Connect pins A1 and Y1

Output Specifications

Output	SPDT relay
Rated insulation voltage	250 VAC (rms)
Contact Ratings DMB51 (SPDT):	μ
Resistive loads AC 1 DC 12	5 A @ 250 VAC 5 A @ 24 VDC
Small inductive loads AC 15 DC 13	2.5 A @ 250 VAC 2.5 A @ 24 VDC
Mechanical life	≥ 30 x 10 ⁶ operations
Electrical life	≥ 50 x 10 ³ operations (at 5 A, 250 V, cos φ = 1)
Dielectric strength Dielectric voltage Rated impulse withstand	2 kVAC (rms)
voltage	2.5 kV (1.2/50 μs)

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Supply Specifications

Power supply

Rated operational voltage through terminals:

A1, A2 M24:

24 to 240 VAC + 10% -15%, 45 to 65 Hz

Overvoltage cat. III

24 VDC ± 15% and

W24:

12 to 240 VDC + 10% -15% and

(IEC 60664, IEC 60038)

12 to 240 VAC + 10% -15%, 45 to 65 Hz

Voltage interruption ≤ 10 ms

Consumption MFT02A12 MFT02A24

< 3.5 VA < 3 VA

Centre knob:

chosen range.

Lower knob:

Setting of time range

Time setting on relative scale:

1 to 10 with respect to the

Time Setting

Upper knob:

Setting of function:

Op - delay on operate

In - interval

lo - interval on trigger open

Id - double interval

Dr - delay on release

R - symmetrical recycler

(ON first)

Rb - symmetrical recycler

(OFF first)

Power ON delay	≤ 100 ms
Indication for Power Supply ON Output Relays ON (flashing when timing)	LED, green LED, yellow
Environment Degree of Protection Pollution Degree Operating Temperature Storage Temperature Housing Dimensions Material	(EN 60529) IP 20 2 (IEC 60664) -25° to +60°C, R.H. < 95% -30° to +80°C, R.H. < 95% 17.5 x 81 x 67.2 mm PA66
Weight	75 g
Screw terminals Tightening torque	Max. 0.5 Nm according to IEC EN 60947
Approvals Marking	cULus, RCM CE, UKCA
EMC Immunity Emissions	Electromagnetic Compatibillity According to EN 61000-6-2 According to EN 61000-6-3

General Specifications

Questions? Scan the QR code to submit your inquiry.



Mode of Operation

Function Op Delay on operate

The time period begins as soon as the trigger contact is closed.

At the end of the set delay time the relay operates and does not release until the trigger contact is closed again or the power supply is disconnected. If the trigger contact is closed before the end of the delay time, the device resets and a new time period starts.

Function In Interval

The relay operates and the time period begins as soon as the trigger contact is closed. The relay releases at the end of this period or when the power supply is disconnected. The relay operates again when the trigger contact is closed again. If the trigger contact is closed before the end of the delay time, the device resets and a new time period starts.

Function Io Interval on trigger open

The relay operates and the time period begins as soon as the trigger contact is opened. At the end of the set delay or when the power supply is disconnected the relay releases. The relay operates again when the trigger contact is opened again. If the trigger contact is opened before the end of the delay time the relay keeps ON and a new time period begins.

Function Id Double interval

The relay operates and the time period begins as soon as the trigger contact is closed. The relay releases at the end of this period or when the power supply is disconnected. When the trigger contact is opened the relay operates again for the set delay period. If the trigger contact is opened before the end of the first time period the second one begins; if the trigger contact is closed before the end of the second time period the device resets and the first time period begins again.



Mode of Operation (Continued)

Function Dr Delay on release

The relay operates as soon as the trigger contact is The time period closed. begins when the trigger contact is opened. The relav releases at the end of the set delay time or when the power supply is disconnected. The relay operates again when the input contact is closed again. If it is opened before the end of the delay time the relay keeps ON, a new time period begins as soon as the contact is closed again.

Function R Symmetrical Recycler ON-time period first

The relay operates and the time period begins as soon as the input contact is closed. After the set delay period the relay releases for the same time period. This sequence continues with equal ON- and OFF-time periods until the power supply is interrupted.

Function Rb Symmetrical Recycler OFF-time period first

The time period begins as soon as the input contact is closed. The relay is OFF during the set delay period, after this time it operates for the same time period. This sequence continues with equal OFF- and ON-time periods until the power supply is interrupted.

Additional Load

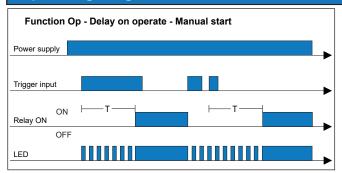
It's possible to wire an additional load (i.e. a relay) between pins Y1 and A2, driven by the trigger contact without damaging the device.

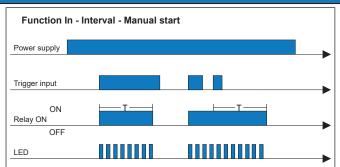
Yellow LED working mode

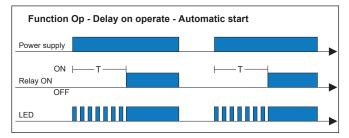
Timing: Slow blinking Relay ON: See operation diagrams

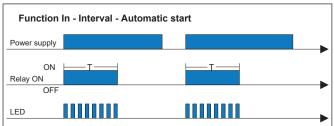
Incorrect knobs position: Fast blinking

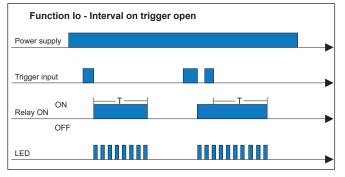
Operating Diagrams

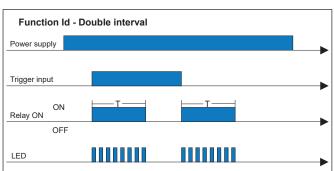






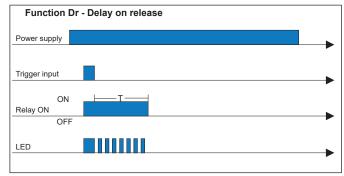


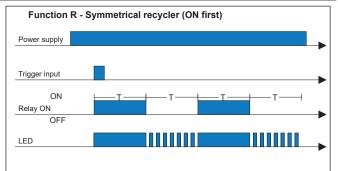


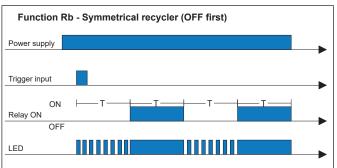


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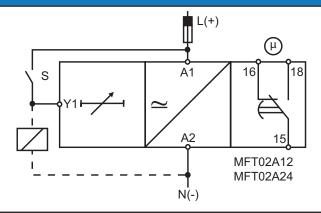
Operating Diagrams







Wiring Diagram



Dimensions

