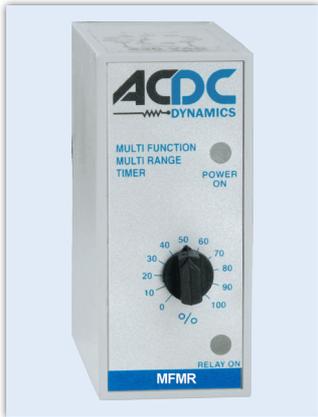


MFMR MULTI-FUNCTION MULTI-RANGE TIMER



This timer is microprocessor controlled, giving you high repeat accuracy. The specific advantage of the MFMR is that it replaces 5 standard timers, making it an excellent choice as a timer to carry in stock. These timers have a standard 11 Pin base and are part of a wide range of electronic timers and relays.

This MFMR will give you many years of service and is guaranteed for 12 months against faulty workmanship and materials. In addition, a full repair service is available through ACDC Dynamics Branch.

INSTALLATION

The MFMR should be installed by a competent electrician in accordance with the relevant diagram. Please read these instructions carefully to ensure that the correct functions and time range has been selected and that the control voltage of the timer is correct before switching on.

FUNCTIONS

The function is selectable on the DIP switches at the back of the timer.

Function	DIP Switch 4	DIP Switch 5
Delay ON Timer	Off	Off
Delay ON Timer Pulse Start	Off	Off
Interval Timer	On	Off
Equal Repeating Timer (Off First)	Off	On
Equal Repeating Timer (ON First)	On	On

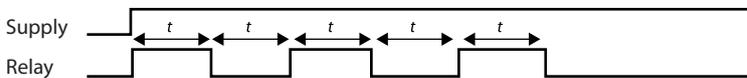
INTERVAL TIMER

No links required (DIP switch 4 on : 5 off). When the power is applied, the relay energises, the LED lights and the timer starts. When the time (t) expires, the relay de-energises and the LED goes off.



EQUAL REPEATING TIMER

No links required (DIP switch 4 on : 5 on). When the power is applied, the relay energises and the timer starts. When the time (t) expires, the relay de-energises and the timer starts again. After the time (t) expires, the relay energises again. This cycle is repeated until the power is switched off.



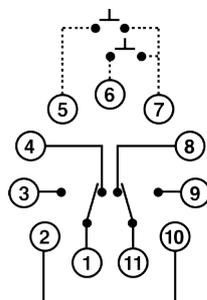
Specifications	
Range Accuracy	0.1%
Repeatability	0.1%
Scale Accuracy	± 5%
Reset Time	300m Sec
Operating Temperature	-20 - +70°C
Power Consumption	AC: 1.5VA, DC: 100mA
Contact Rating	DPDT: 5A 250VAC

CONNECTION DIAGRAM

Available Voltages:

AC: Galvanic isolation with internal transformer 12, 24, 48, 110, 230, 400 or 525VAC ± 15% (Test Volts 2kV)

DC: 12, 24, 48VDC, 24-250 VAC/DC



TIME RANGES

The time ranges can be changed using the DIP switches.

The time is adjustable on the pot on the front of the timer, as a percentage of your selected time.

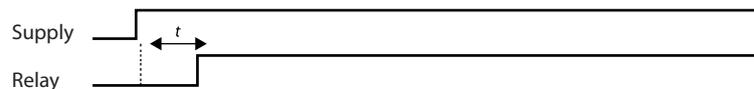
Time Range	DIP Switch 1	DIP Switch 2	DIP Switch 3
0.02s to 1s	Off	Off	Off
0.15s to 10s	On	Off	Off
1s to 1m	Off	On	Off
10s to 10m	On	On	Off
1m to 1h	Off	Off	On
10m to 10h	On	Off	On
22m to 24h	Off	On	On
3h45m to 240h	On	On	On

PULSE START CONNECTIONS

Pulse start functions are for use when a momentary or non-sustained field contact is required to start the timer. The MFMR generates its own low voltage signal to be connected to a volt-free field contact such as a relay, limit switch or pushbutton. Under no circumstances is an external voltage to be connected to pins 5, 6 and 7. If the field contact is further than 5 meters from the timer or control wires, run close to high current conductors, it may be necessary to shield the wires.

DELAY ON TIMER

No links required (DIP switch 4 & 5 off). When the power is applied, the relay is de-energised and the timer starts. When the time (t) expires, the relay energises and the Green LED lights up.



DELAY ON TIMER WITH PULSE START

DIP switch 4 & 5 off.

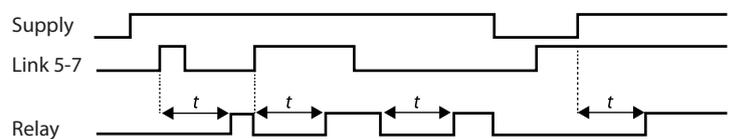
Link 5-7: Start function N.O. contact closes across 5 & 7.



When pins 5 and 7 make contact, the time period starts (delay ON). When the time (t) expires, the relay energises and the LED lights up. The timer will start after power is applied if pins 5 and 7 make contact.

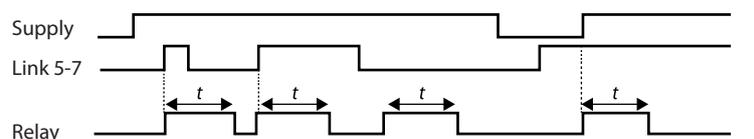
Link 5 & 7 contact to start

On power up, the relay will operate like a delay ON (Delay t then relay will close). When contact is closed across 5 & 7, relay will de-energise and a new time period will begin, after t has expired, relay will energise.



INTERVAL TIMER WITH PULSE START

DIP switch 4 on : 5 off. When pins 5 and 7 make contact, breaks contact, the relay energises and the timer starts. When the time (t) expires, the relay de-energises. The timer will start after power is applied if pins 5 and 7 make contact.



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Sales 010 202 3400
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