Type: LMMT/2-NFC

Fully Programmable Multifunction Timer (with NFC Technology)

Terminal Protection to IP20

Dims: to DIN 43880
W. 17.5mm

- **Flexibility – 1 product covers all popular timing functions with option to customise to individual needs**
- **Built-in NFC (Near Field Communication) allows user to access and change settings via compatible Smartphone/Device with installed app^**
- **26 timing functions including supply initiated and switch initiated**
- **Dual timer capability**
- **High accuracy due to digital settings**
- **Easy to clone settings on further units**
- **Wide time delay adjustment (0.1s – 999h)**
- **Multi-voltage input (24 – 230V AC/12 – 230V DC)**
- **2 x SPDT independent relay outputs 8A - User configurable and assignable to various functions**
- **Compact dimensions – 17.5mm wide**
- **No external adjustments to tamper with**
- **Conforms to IEC 61812**

NFC

^ App available from:

GET IT ON Google Play

QMS ISO 9001 REGISTERED

ISO 9001:2015
Cert. No. 14125771

OVERVIEW

The LMMT/2-NFC is an innovative, compact multi-function timer designed for use in numerous control and automation applications. Thanks to NFC, there is no need to set any complicated switches or dials and setting up is carried out using the app in just a few simple steps.

There is a choice of settings that define how the unit operates (i.e. its timing function), the time delay required, how the timer is to be triggered (supply initiated or via external contact) and how the output relay(s) should operate.

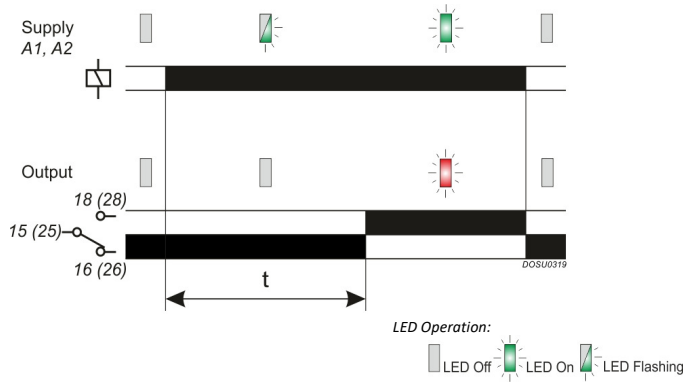
Additionally, the LMMT/2-NFC offers the user 2 separate timers which can operate independently. Typically used to set the “on” and “off” times for any asymmetrical timing function, but they can also be used to drive their own relays. For example, timer 1 can be used to drive Relay 1 and timer 2 used to drive Relay 2 - both being governed by a common function. This feature further extends the flexibility of the product by basically offering two timers in one unit.

Utilising NFC technology allows configuration to be carried out by the app without the need for the unit to be powered. This feature is useful where a panel needs to be shut down and power removed (for safety reasons) before any work or alterations need to be made.

A multi-voltage power supply ensures that the unit is suited to most applications that operate on different supply voltages.

FUNCTION DIAGRAM

Factory default operation shown
Supply initiated Delay On Operate (DPDT relay output), t = 5s



APP

To utilise the full features, the app must be downloaded and installed on to the device that will be used to communicate with the unit. This app can be obtained as follows:

- Visit https://play.google.com/store/apps and search for LMMT/2-NFC
- Scan the QR code below. This will take you directly to the app on Google Play

Instructions on using the app to set the additional features can be found in the Help menu (within the app)

SETTING UP

The unit is supplied with factory default settings for both the timing function and delay period (see Function Diagram above). However, using the app the user has the choice to alter and re-configure to operate as follows:

- Other Supply initiated[1] or Switch initiated[2] timing functions with both output relays operating simultaneously (i.e. as DPDT)
  For all timing functions, timer “t1” is used. For certain functions (i.e. asymmetrical recycling), both timer “t1” and “t2” are then used
- Supply initiated timing function with one relay assigned to timing and the other relay assigned to energise as soon as power is applied
- Two separate timers (“t1” and “t2”) operating independently and driving their own relays

A typical setting up procedure is carried out as follows:

1. Apply power to the unit
2. With the app running on the smartphone, hold against the front of the unit and tap “Read”
   Information about the configuration is displayed on the smartphone
3. The user can now carry out a change to the timing function, time delay period, relay operation, etc
4. Once the changes are confirmed, these can be downloaded back to the unit
5. If required, further units can also be configured (cloned) with the same settings

[1] Supply initiated defined as timing function commencing as soon as power applied to terminals A1 and A2
[2] Switch initiated defined as timing function commencing as soon as signal is either applied or removed to terminal B1. A1 and A2 always remain connected to a supply.

***Wiring Information** and **Product Demonstration** Videos can also be found on our YouTube channel*

https://www.youtube.com/user/BroyceControlLtd

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INSTALLATION

Installation work must be carried out by qualified personnel.

- BEFORE INSTALLATION, ISOLATE THE SUPPLY.
- Refer to the Connection Diagram below for terminal layout.
- The actual connections required will be based on how the unit is to be used.

Applying power (product operation based on factory default settings – Delay On Operate)

- Apply power and the green LED ❶ will start flashing to denote timing in progress. Both relays will remain de-energised.
- After the time delay period has elapsed, both output relays will energise simultaneously i.e.
  - "RLY1" red LED ❷ will illuminate and contacts 15 and 18 will close
  - "RLY2" red LED ❸ will illuminate and contacts 25 and 28 will close
- The relays will now remain in the energised state and the green LED constantly lit.
- To start the sequence over again, power must be removed and re-applied.

Other timing functions

- For all other timing functions and explanation of operation, please refer to the app.

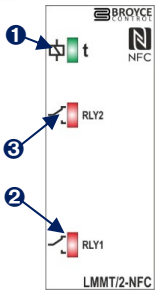
Note:

[3] *In accordance with IEC 61812, the green LED is permitted to extinguish during a voltage dip or momentary interruption of the power supply providing the state of the output relays do not change.*

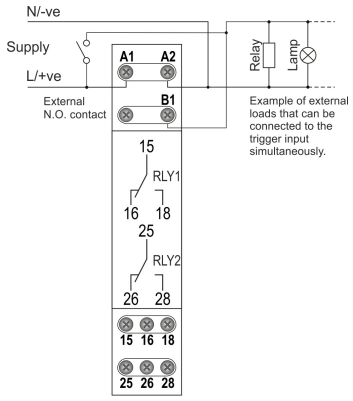
[4] *The dip / interruption (reset) duration and levels are defined in the product standard however, the standard allows for these to be different from the levels actually specified.*

FRONT LED INDICATION

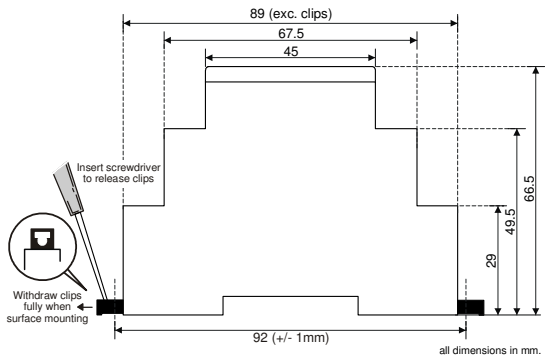
1. Power supply, Timing in progress and NFC error (Green) LED
2. Relay 1 status (Red) LED
3. Relay 2 status (Red) LED



CONNECTION DIAGRAM



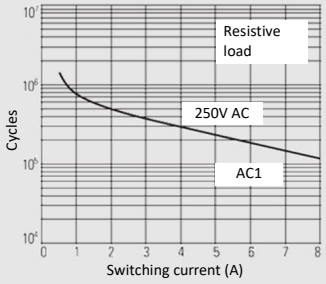
DIMENSIONS



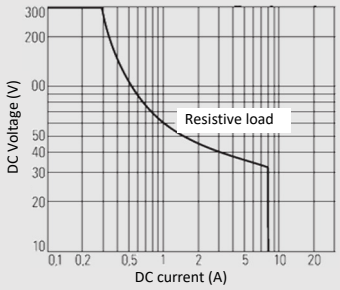
TECHNICAL SPECIFICATION

Auxiliary power				
Supply voltage U **(A1, A2):**	24 – 230V AC/12 – 230V DC			
Frequency range:	48 – 63Hz (AC supplies)			
Supply variation:	AC: +15/-20% DC: +/-15%			
Overvoltage category:	III (IEC 60664)			
Rated impulse withstand voltage:	4kV (1.2/50µS) IEC 60664			
Power consumption (max.):	12V	24V	110V	230V
AC:	-	0.8VA	2.6VA	6.8VA
DC:	0.52W	0.48W	0.94W	1.9W
Function/Timing				
No. of functions:	26		*Factory default Delay On Operate*	
No. of timers:	2 ("t1" and "t2")			
Timing range (t1/t2):	0.1s – 999h		*Factory default 5s*	
Setting resolution:	0.1 – 10s in 0.1s steps 10s – 999h in 1s steps			
Setting accuracy (@ 25°C):	± 20ms for 0.1 – 10s range ± 2% for 10s – 1h range ± 1% for 1 – 999h range			
Repeat accuracy (at constant conditions):	± 0.5% for 0.1 – 10s range ± 0.2% for 10s – 999h range			
Drift with temperature:	± 0.05% / °C (referenced to 25°C)			
Drift with voltage:	± 0.05% / V			
Reset time[4]:	< 100ms			
External triggering				
Trigger input **(A1 > B1):**	Volt Free Contact, Open Collector			
External loading:	Yes, between B1 and A2 (i.e. LED, Relay, Lamp)			
Trigger threshold:	>75% of voltage present between A1 and A2 (auto-set)			
Minimum trigger time:	AC: 60ms DC: 40ms (B1 terminal unloaded)			
Maximum input frequency:	10Hz (with 50:50 duty cycle)			
Maximum cable length:	10m (*between timer and external switching device)*			
LED indication				
Power on indication[3]/Timing/ NFC error:	Green x 1			
Relay status:	Red x 2			
Temperature rating				
Operating:	-20 to +60°C			
Storage:	-30 to +70°C			
Relative humidity:	+95% max.			
Output				
RLY1 **(15, 16, 18):**	SPDT relay			
RLY2 **(25, 26, 28):**	SPDT relay			
Output rating (all relays):	AC1		250V 8A (2000VA)	
	AC15		250V 5A (no), 3A (nc)	
	DC1		25V 8A (200W)	

Electrical life:



DC load capacity:



Dielectric voltage:	2kV AC (rms) IEC 60947-1	
Rated impulse withstand voltage:	4kV (1.2/50µS) IEC 60664	
Housing		
Material:	Grey flame retardant Lexan UL94	
Weight:	≈ 80g	
Mounting option:	On to 35mm symmetric DIN rail to BS EN 60715 or direct surface mounting via 2 x M3.5 or 4BA screws using the black clips provided on the rear of the unit.	
Terminals		
Terminal conductor size:	≤ 2.5mm² solid or stranded	
Terminal screw:	M2.5	
Tightening torque:	0.4Nm (3.5Lb-In) Max.	
Standards		
Product:	Conforms to: IEC 61812. c UL us LISTED IND. CONT. EQ. E111187 CE, UKCA and RoHS Compliant. C-tick	
EMC:	Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m 80MHz - 2.7GHz). Emissions: EN 61000-6-4	

Numbers shown above in bold/within brackets refer to terminal numbers on housing.