TIME RELAY AND PROTECTION RELAY WITH NFC TECHNOLOGY AND APP

Lovato electric

ENERGY AND AUTOMATION

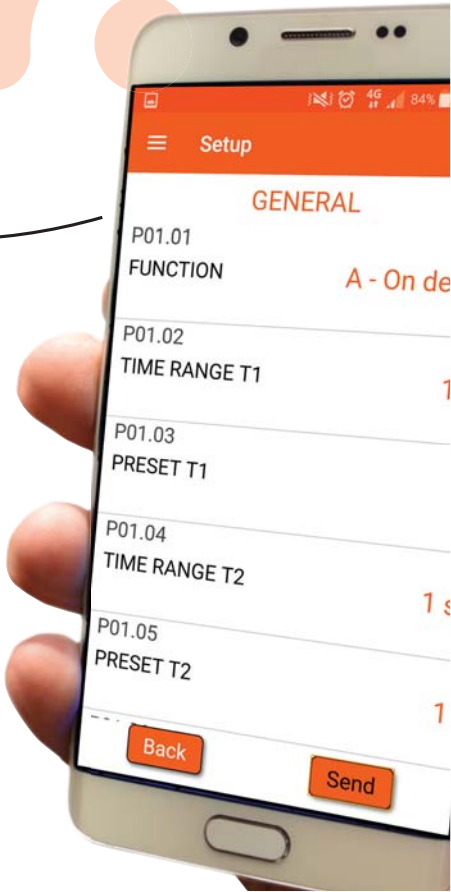
MULTIFUNCTION TIME RELAY,
COUNTER AND HOUR COUNTER,
multiscale and multivoltage
1 output contact
NFC technology and App

TM M1 NFC

NFC

MULTIFUNCTION PROTECTION RELAY,
with voltage and frequency monitoring
for three-phase systems with or without neutral
1 output contact
NFC technology and App

NFC



PMV95N...NFC

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ENERGY AND AUTOMATION

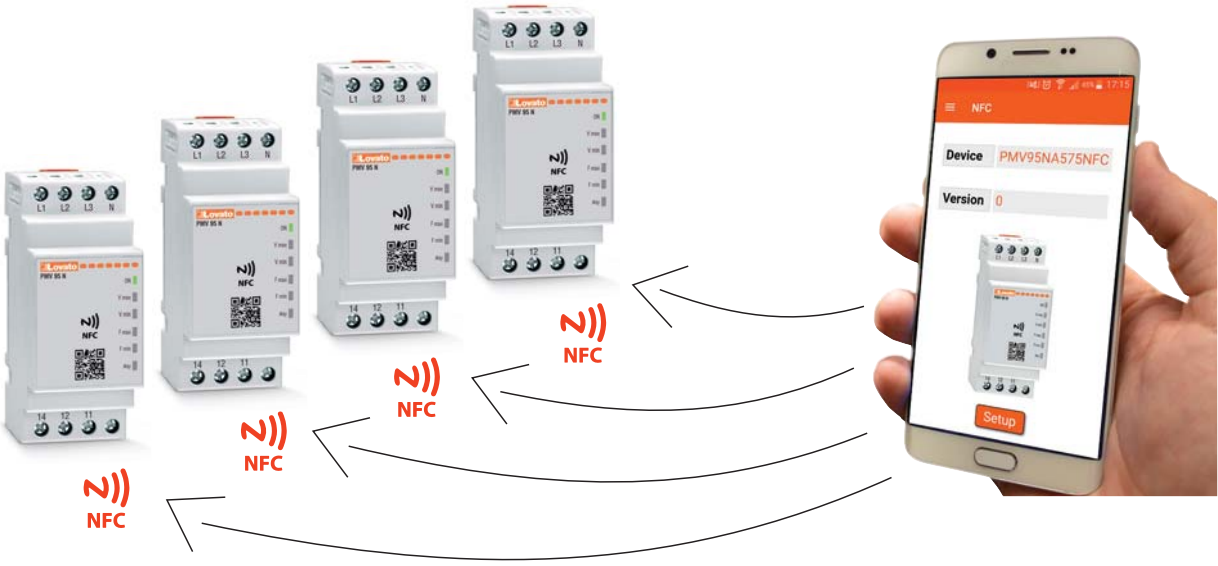
Accuracy of settings

Programming via NFC ensures **excellent accuracy** in time settings and tripping thresholds.

Repeatability of settings

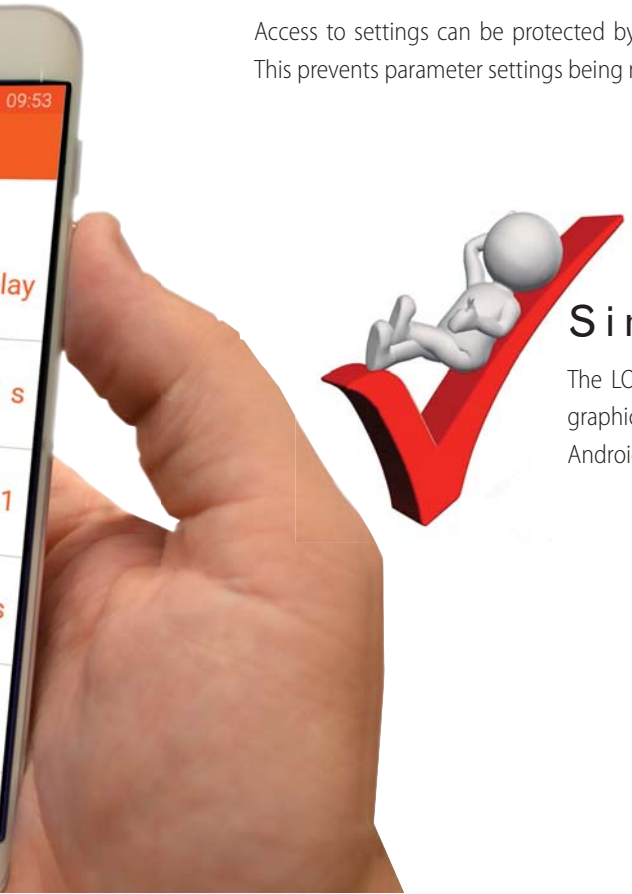
Programming can be saved to a smart device for extremely rapid copying to other timers or protection relays via NFC, **even without having to power the devices on**.

This ensures a significant **reduction in setup times**, especially for series programming, as well as **the easy correction of setting errors and repeatability**.



Protection of settings

Access to settings can be protected by setting a 4-digit password using the LOVATO NFC App. This prevents parameter settings being modified by unauthorised personnel.



Simple and intuitive programming

The LOVATO NFC App makes programming extremely intuitive, rapid and flexible thanks to a graphic interface that displays selected functions and parameters directly on the screen of the Android smart device (smartphone or tablet), eliminating the need to consult the manual.

GET IT ON Google Play

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ENERGY AND AUTOMATION

TIME RELAY, COUNTER AND HOUR COUNTER WITH NFC TECHNOLOGY AND APP

Order code

TM M1 NFC

- Multifunction, multiscale and multivoltage time relay with NFC technology and App
- **Hour counter**
- **Counter**
- Auxiliary power supply: **12…240VAC/DC**
- Time of scale range: from **0.1 seconds** to **999 days**
- 1 relay output with changeover contact, **8A 250VAC**
- **DIN43880 modular housing (1 module),** suitable for mounting on 35mm DIN rail
- Certifications: **cULus, EAC**
- **QR code on front** for direct access to the website www.LovatoElectric.com to download the technical manual.

EXTENSIVE SET OF TIMER FUNCTIONS

40 available functions
On delay, off delay, flasher (pause-work), pulse generator, ON-OFF trigger, watchdog, pulse on relay energising at contact opening or closing, analog filter, etc.
Several variants of the above functions are also available, including the possibility to pause timing and reload or reset the counting by closing an external contact.

FULLY INTERCHANGEABLE

with traditional potentiometer versions
The many functions integrated in the TM M1 NFC include those of the following potentiometer-based timers:
- TM M1 (multifunction)
- TM P (on delay)
- TM PL (recycle with independent timings)

Terminal numbering identical to potentiometer versions makes the TM M1 NFC fully interchangeable without having to modify connections.

EXTERNAL COMMAND INPUT

The TM M1 NFC incorporates a command input (S) that can be connected to an external contact for one of the following functions:
- start of timing function;
- pause of timing;
- reset of timing.

3 PRODUCTS IN ONE

Timer: can perform any of 40 available timing functions.

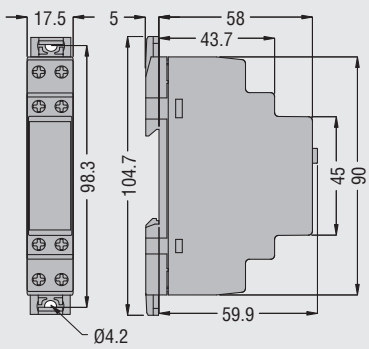
Counter: simultaneously with the timing function, a threshold can be set for the number of times the timer output closes. When this threshold is reached, the TM M1 NFC deactivates the function for which it is programmed. The timer must then be switched off and back on to reset the counter and restart.
Possible applications: counting pieces passing under a photocell or controlling the activation of a turnstile with a limited number of accesses, etc..

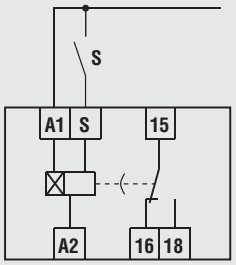
Hour counter: the TM M1 NFC can be used to count the hours for which a machine functions. The hour count is saved in the unit's internal memory (non-volatile) and an output contact is energised to signal that the programmable threshold has been reached. The LOVATO NFC App permits monitoring of the value of the hour counter.
Possible applications: signalling a request of maintenance of a machinery after a certain number of working hours.

RESET MODE

In the case of functions activated by the external command input (S), a parameter can be set to establish the method of resetting the function, i.e the condition necessary for re-starting the function after its first execution.
Two options are available:
- **input** (INP): the function is re-performed every time the command input (S) is closed;
- **power** (PWR): after the first execution of the function, the time relay locks out and the function is no longer executed (new closures of the command input are ignored). The time relay must be powered off and on again to restart.

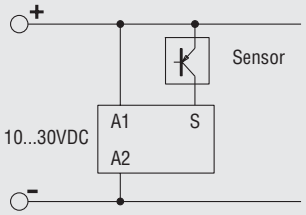
DIMENSIONS AND WIRING DIAGRAMS



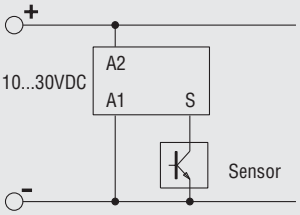


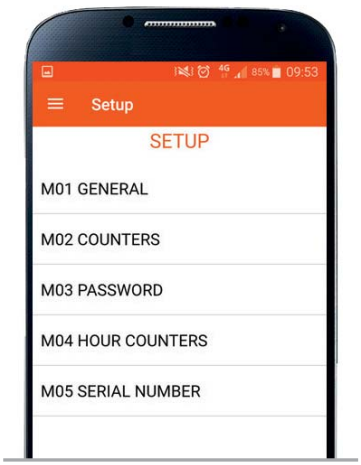
COMMAND WITH STATIC OUTPUT

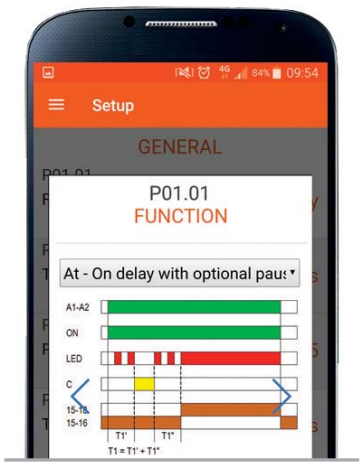
Connection to a sensor with PNP output

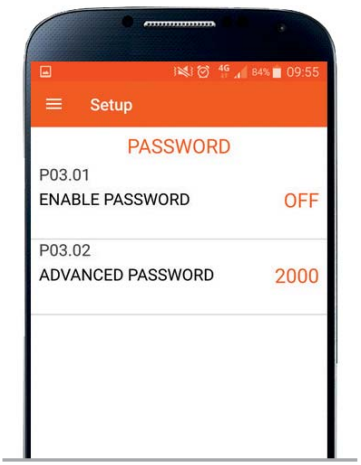


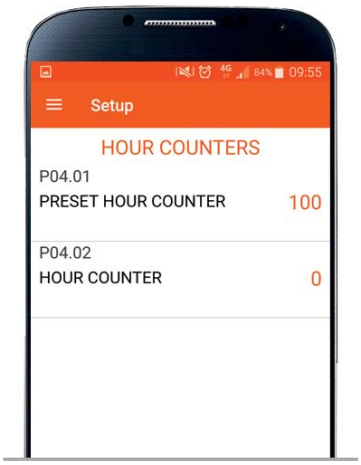
Connection to a sensor with NPN output

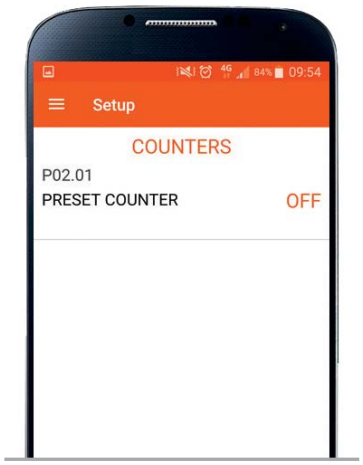


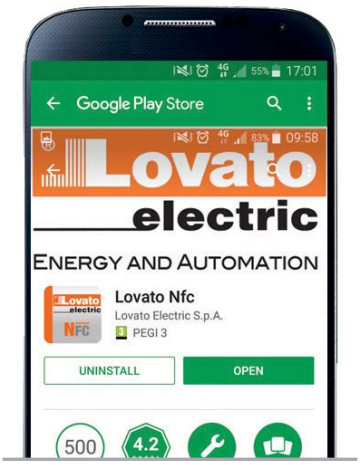












PROTECTION RELAY WITH NFC TECHNOLOGY AND APP

Order codes

PMV95N A240 NFC
PMV95N A575 NFC

- Multifunction protection relay with voltage and frequency monitoring for three-phase systems with or without neutral, with NFC technology and App
- **Self-powered** from mains
- Rated control voltage (phase to phase):
  - **208...240VAC** (code PMV95N A240 NFC)
  - **380…575VAC** (code PMV95N A575 NFC)
- Rated frequency **50/60Hz**
- 1 relay output with changeover contact, **8A 250VAC**
- **DIN43880 modular housing (2 modules)**, suitable for mounting on 35mm DIN rail
- Certifications: **cULus, EAC**
- **QR code on front** for direct access to the website www.LovatoElectric.com to download the technical manual.

8 PROTECTION FUNCTIONS

The PMV95N...NFC includes **all the functions** of PMV... series protection relays with potentiometer:
- maximum voltage;
- minimum voltage;
- maximum frequency;
- minimum frequency;
- asymmetry;
- phase loss;
- neutral loss;
- incorrect phase sequence.

COMPACT SIZE

The PMV95N...NFC is designed for use on three-phase systems **with or without neutral** and provides **1 output relay** with changeover contact. It comes in a **2 DIN module** modular housing.

ENABLING OF INDIVIDUAL FUNCTIONS

The LOVATO NFC App cab be used to enable or disable protection functions individually.

	PMV95N...NFC	PMV50N	PMV70N	PMV80N
Modular version	● (2U)	● (3U)	● (3U)	● (3U)
NFC technology and App	●			
Settings via potentiometers		●	●	●
Minimum AC voltage	●	●	●	●
Maximum AC voltage	●	●	●	●
Phase loss	●	●	●	●
Neutral loss	●	●	●	●
Incorrect phase sequence	●	●	●	●
Asymmetry	●		●	
Minimum frequency	●			●
Maximum frequency	●			●

DIMENSIONS AND WIRING DIAGRAMS