

LMM-2540
Load Management
Module/M-Bus

Designed for Smart
Load Management



Designed to replace traditional ripple control receivers of residential and small commercial energy consumers



The Load Management Module LMM-2540/M-Bus permits on the basis of bi-directional communication reliable remote configuration and proper execution of asynchronous switching commands. In addition to standard ripple control functions the LMM-2540/M-Bus also supports customer specific and autonomous, time based switching actions. Full integration into the Networked Energy Services (NES)¹ infrastructure enables automatic device discovery and registration.

Features Characteristics

- Replaces traditional ripple control receivers
- Permits activation of emergency power generators in case of power outages
- Equipped with up to four 25A or 40A latching relays with normally open, normally closed or switch over contacts
- Integrated time switch enables autonomous operation
- Extensively supports daily, weekly, monthly, yearly, seasonal, holiday based and customer specific switching schedules
- Switching schedules may be updated locally or remotely
- Supports assignment of relays to switching groups
- Astronomical calendar ensures reliable execution of street lighting applications
- Configurable behavior during power outage and return
- Configurable random delays ensure reduced peak demand during equal switching times
- Reliable remote configuration on basis of bi-directional communication

- Supports automatic load sheds during power outages or mains frequency sags
- Permits activation of emergency power generators in case of power outages

M-Bus Interface

- Equipped with an M-Bus Interface that allows direct connection to Echelon Smart Meters or foreign utility meters with M-Bus master interface

Integrated Real Time Clock

- Accurate to ± 0.5 seconds per day
- When connected to Echelon Smart Meters, the real time clock becomes automatically synchronized with the meter time

Tamper Detection

- Cover tamper is detected, logged and communicated

Time keeping Battery

- Integrated battery supplies power during power outages to reliably operate the real time clock and the cover tamper detector

Other standard features

- Seamlessly integrates into the NES infrastructure
- Managed by the NES Data Concentrator and the Edge Control Node (ECN).
- Permits automatic device discovery and registration
- Supports status readouts, firmware and configuration updates, either remotely via the NES infrastructure or locally via the M-Bus interface.
- Supports asynchronous unicast, multicast and broadcast addressing
- Event log with circular buffer to store up to 100 events including time stamp

Specifications

Nominal Mains Voltage

230 V (-20 % to +15 %)

Nominal Mains Frequency

50 Hz (± 2 %)

Power Consumption

< 3 W, 25 VA according to
EN 62052-21[2004]

Relays

Up to 4 plug in polarized latching
relays

25 A, 400V, $\cos \varphi = 1$, normally open
or normally closed

25 A, 400V, $\cos \varphi = 1$, change over
40 A, 400V, $\cos \varphi = 1$, normally open
or closed

Mechanical life = 10^6 cycles

Max. switching voltage = 440 VAC

Max. switching power = 6.25 kVA for
25 A relays; 10 kVA for 40 A relays

Insulation strength = 4kV for 1 min
between coil and contact; 1.5 kV for
1 min between open contacts

Dielectric strength between coil and
contact = 12 kV, 1.2 μ s / 50 μ s

M-Bus Interface

Complies with EN 13757-2 and
EN 13757-3

Timekeeping Accuracy

Real-time clock accurate per EN
62054-21 to ± 0.5 seconds

Data Storage

Non-volatile memory

Operation Reserve

Time keeping battery; operation
reserve > 7 years

Temperature Range

-25 °C to +70 °C operating
temperature range

-40 °C to +70 °C limit for storage
and transport

Humidity

$\leq 95\%$ relative humidity,
non condensing

Enclosure

Insulating sealable enclosure of
protection class II, IP 52

Dimensions

Compliant with DIN 43861-2,
105 x 180 x 80

Mounting

Mountable on walls, 35 mm DIN rails
and on terminal covers for ancillary
equipment according to DIN 43857-
5

Fixing Triangle

125 x 83 mm according to
DIN 43857-5

Power Wiring Terminals

Wire size up to 1 x 6 mm sq.

Relay Wiring Terminals

Wire size up to 2 x 2,5 mm sq.
or 1 x 6mm sq.

M-Bus Wiring Terminals

Wire size up to 1 x 2,5 mm sq

Surge Immunity

6 kV, 1.2/50 μ s

Electrostatic Discharge

15 kV air, 8 kV contact

Approvals

EN 62052-21[2004],
EN 62054-21[2005].

Certifications

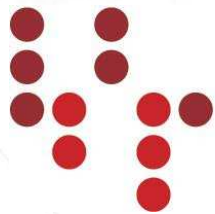
EN 61010-1 [2001]
EN 13757-2
EN 13757-3
CE marked

RoHS Compliance

Compliant with European Directive
2002/95/EC on the restriction of the
use of certain hazardous substances
(RoHS) in electrical and electronic
equipment

Ordering Information

Product: LMM-2540/M-Bus
Load Management Module
Model Number: 50010-235200



ubitronix
system solutions gmbh