AD13R.10-2-1

Adderra — Efficient Rental Resources

THREE PHASE STAND-ALONE SMART PREPAY METER WITH DISCONNECTING RELAY FOR HOTELS AND GUESTHOUSES

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0.25 - 5(60)A
50Hz
3x230 / 400V
-40°C to 70°C
Ⓑ - ACTIVE

1000 imp/kWh

Made in Moldova 2021

Li

CE

Plug-and-play   Prepayment function   Automatic disconnecting   Data encryption

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DLMS/COSEM SUPPORT

- » Standard data model
- » Standard communication protocols

PREPAYMENT FUNCTIONALITY

- » Interoperability
- » Pre-payment and post-payment mode supported
- » Single tariff metering
- » Consumers' load disconnecting on credit amount exhaustion

MEASURED QUANTITIES & DATA

- » Active energy, class B, import/export
- » Phase voltage/current, active power - instantaneous values
- » Current meter readings, logs and statuses
- » Timestamp

METER PARAMETERIZATION

- » Remote via communication channel
- » Access rights assignment from HES

EVENTS & ALARMS HANDLING

- » Continuous control of current state of meter functional nodes and alarms/events
- » Standard set of events processing including: registration and event reporting
- » User notification, when:
  - No data exchange with the meter for a long time
  - The meter credit is exhausted
  - The payment time is close to expiring
  - The order time is close to expiring

DATA STORAGE

- » Non-volatile memory
- » Stores the last 120 profile entries (recharge token, the current balance in the local currency and in watt-hours, start service time, stop service time, etc.)
- » Last 200 TID, to avoid ID repetition
- » No personal data or money transfer data storing
- » Based on FIFO mechanism

SOFTWARE UPGRADE

- » Remote, via BLE
- » Image Block Transfer Mechanism is used.

INFORMATION SECURITY

- » E2E security provided
- » Communication encryption (AES-GCM-128-0 security suite)
- » User authentication according to the user role
- » Data access according to access rights stated
- » Firmware protection

METER SELF-CONTROL

- » Built-in test for continuous self-control
- » Quick response on severe error

DATA TRANSMISSION

- » Sending data via tenant's mobile application on each communication session

LOAD CONTROL

- » Built-in relay (80 A)
- » Control modes:
  - remote (by command)
  - local (by condition)
- » Continuous relay state control

BUILT-IN CLOCK

- » Real Time Clock (RTC), accuracy 0.5 s per day
- » IEC 62052-21 standard compliant
- » Daylight saving
- » External synchronization

TEST OUTPUTS

- » Outputs: 2 optical outputs (LEDs)
- » Parameters under control: active energy, communication channel state

BACKUP POWER SUPPLY

- » Battery to support clock/meter operation when the power is off
- » Lifetime - not less than 15 years

COMMUNICATION INTERFACES

- » BLE 5.0:
- » Built-in modem
- » Provides communication channel between the meter and market players mobile apps
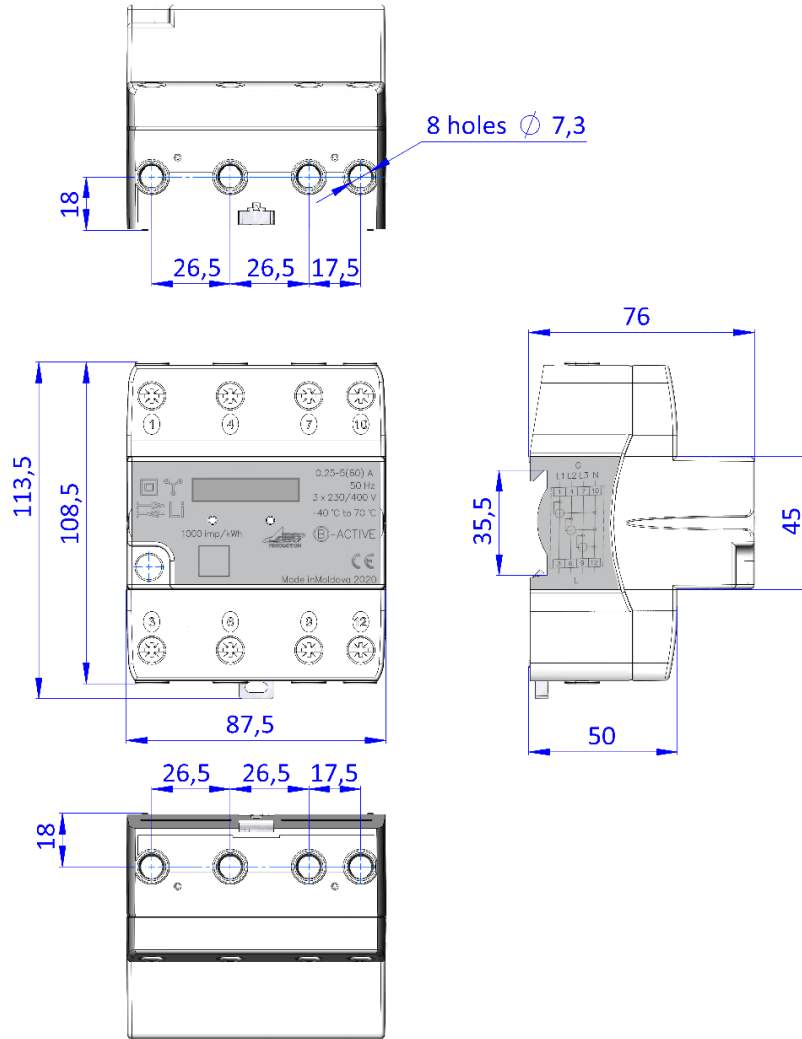
DISPLAY

- » Built-in display, 6 digits
- » Special symbols, metering data, screen number
- » Configurable list of parameters to be displayed
- » Automatic screen scrolling
- » Display test mode

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OPERATING SPECIFICATIONS:

VOLTAGE

Reference voltage, Un	3×230 V
Voltage range	0.7 Un … 1.2 Un

CURRENT

Reference current, Iref	5 A
Maximum current, Imax	60 A
Minimum current:	0.05 Iref
Starting current:	0.004 Iref

FREQUENCY

Reference frequency	50 Hz
Tolerance	± 2 %

MEASUREMENT ACCURACY

Active energy	B

INTERNAL CLOCK

Built-in RTC	quartz crystal 32 kHz
Clock accuracy	≤0.5 s /24 h, (at 25°C) (IEC 62052-21)

POWER CONSUMPTION

Current circuit	Not more than 1 VA inherent consumption
Voltage circuit (active/total)	Not more than 3 W / 10 VA inherent consumption per phase

TEMPERATURE AND HUMIDITY

Operating range	-40°C … +70°C, Humidity ≤ 95%, non-condensing

COMMUNICATION

Chanel type	BLE
Data rate	Up to 2 Mbit/s

TESTS

Insulation strength	4 kV, 50 Hz, 1 min, (IEC 61010-1-90)
Impulse voltage	8 kV, 1.2/50 µs, (IEC 60060-1)
Electrostatic discharge	15 kV, (IEC 61000-4-2)
High frequency radiant field	30 V/m, (IEC 61000-4-3)
High frequency interferences	4 kV, (IEC 61000-4-4)
Surge immunity test	6 kV, (IEC 61000-4-5)

OTHER SPECIFICATIONS

Meter constant:	1000 imp/kWh (active energy)
IP rating	IP54
Mechanical class	M1
Electromagnetic class	E2
Mean total lifetime, not less	20 years
MTBF, less than, per year	0.5 %

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OVERALL DIMENSIONS

INSTALLATION

Mounting	On DIN rail (35 mm)
Connection diagram	
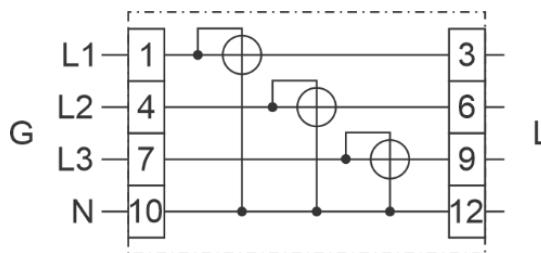
DISPLAY

Data presentation	

ORDERING INFORMATION

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