

Installation Guide

Single Phase direct connected 63 Amps kWh DIN rail meter

Model Number: DRK-1P-230-D63

Warning: Engineering work should only be performed by qualified, trained personnel abiding by local safety regulations. Ensure power is disconnected from the unit before commencing work. Follow all local regulations and site rules to ensure a safe working environment. The unit must be installed in a protective housing so that the terminals are inaccessible after fitting. Voltage connections must be fused. Do not power or connect the instrument if any part of it is damaged. Please read through these instructions before commencing installation.

WIRING GUIDE

1. The instrument should be connected as shown in the Diagram (A).
2. Pass the Load cable through the product as shown in Diagram (A). If the Red LED light remains lit and the meter is displaying Phase Error, reverse the CT phasing.
3. Connect the kWh pulsed output as shown in Diagram (A) ensuring that the polarity is correct. Terminals marked -(10) & +(11).
4. Disconnect power before attempting any changes.

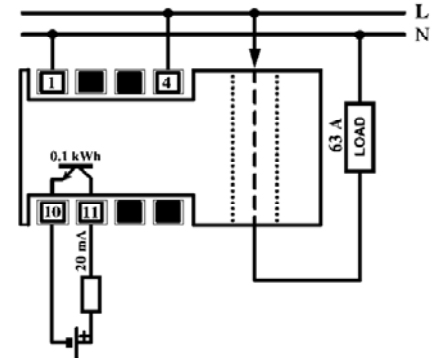
TECHNICAL SPECIFICATIONS

- Accuracy: **Class 1** in accordance with CEI-EN 62053-21 standard
- Operating voltage: **230 V** (-15% / +10%)
- Frequency: 50/60 Hz
- Input current: $I_b = 10A$
- Maximum current: 63A
- Maximum power consumption (device only): voltage circuit <2.5 VA, power circuits < 2.5 VA
- Operating temp: -10 °C to +45 °C
- Relative humidity: 10% at 90% non condensing
- Protection level: IP20/IP51 at the front
- Connection type: Direct for pulse output with galvanic isolation between the voltage and power terminals, by direct insertion of the power conductor vertically into the housing.
Maximum size of pulsed cable 2.5 mm²
Maximum diameter of through-hole for phase cable 12.5mm
- Pulsed Output : Opto isolated, open collector type
Impulse duration 100ms ± 15%
Pulse voltage 9-24VDC ± 10%
Switchable output current 20mA max
- Signaling LEDs: Green = Power on
Red = Flashing at 10Wh
- Display unit: LCD, 7 + 5 digit
- Reading resolution: 0.1kWh and/or 0.1MWh (automatic)
- Insulation voltage: 4kV between output pulse and all other terminals
4kV between accessible parts (front) and all other terminals
- Air and surface Distances: According to standards for products CEI-EN 62052-11 & CEI-EN 62053-21 as required in conformity with current directive CEI-EN 62052-11 for static power meters of Class 1.
- EMC Specifications:
- Housing: 3 DIN, colour grey RAL 7035

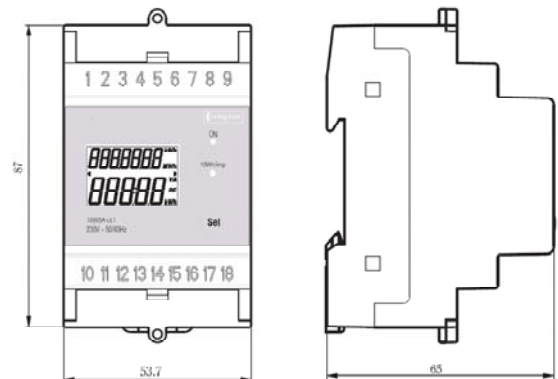
FEATURE LOCATION

1. Display reading total/partial energy (0.1kWh and/or 0.1MWh resolution).
2. Green LED: When lit indicates power is on.
3. Red LED: When flashing indicates energy is being metered (1 flash = 10Wh).
4. Opto isolated pulsed output.
5. Page/backlight selection key.
6. Through-hole for direct connection of phase cable to be metered.

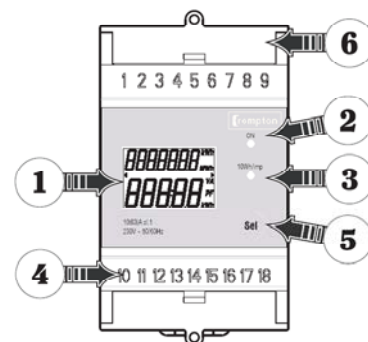
(A) Electrical Connections



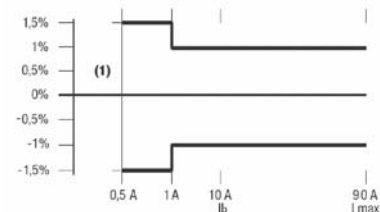
(B) Dimensions



(C) Instrument Feature Location




(D) Maximum Measurement Error




OPERATION


- Green LED lit indicates power is on.
 - After connecting the device, correct operation is indicated by the flashing Red LED which occurs every 10Wh.
 - At the moment the device is turned on, the main page is displayed representing Total Energy (upper reading, 7 digits) and the Partial Energy (lower reading, 5 digits) of energy metered.
 - Readings are displayed with 0.1 unit resolution. When end scale measurement is reached within the range the unit switches from kWh to MWh.
 - To display Total Energy only, press the "Sel" key. Note that this reading cannot be reset.
 - To display Partial Energy, press the "Sel" key again. Note that when the maximum value is reached the unit automatically resets the value back to zero.
 - To reset the Partial Energy value to zero, read the 'Partial' reading only and then press and hold the "sel" key for more than 4 seconds.
 - To return to the main page, where both readings can be viewed, press the "Sel" key again.
 - In order to enable/disable the backlight, while on the main page, press and hold the "Sel" key for more than 5 seconds and the ON/OFF backlight status will be displayed. Note that when backlight is switched ON by pressing the "Sel" key, this will enable the light to be ON for 30 seconds. Each time the key is pressed the light will remain on for 30 seconds.
- **Warning:** In case of incorrect connection, the Red LED remains lit and the meter is locked. The message "Phase Error" is displayed. To restore correct operation of the unit, first turn the unit off and correct the connections, then switch ON again.



Main Page



Total Reading



Partial Reading



Backlight status



Connection Error

CONFORMITY TO EU DIRECTIVES:

73/23/EEC modified by **93/68/EEC** (Low Voltage Electrical Equipment)

89/336/EEC modified by **92/31/EEC** and **93/68/EEC** (EMC) is declared with reference to the following harmonised standard:

1. **Safety:** CEI-EN 62052-11 (2003-03) and CEI-EN 62053-21 (2003-03)
2. **Electromagnetic compatibility:** CEI-EN 62052-11 (2003-03)) and CEI-EN 62053-21 (2003-03)