



**EL SEWEDY
ELECTROMETER®**
MANAGE UTILITIES BETTER

STANDARD SINGLE PHASE METER

EM101-1

Residential Applications (Low Voltage)



OPEN
ACCOUNT



Optical



Super Capacitor



Tampers



Active Energy

INTRODUCTION

The EM101-1 is a single phase two wire type A electronic meter that benefits from modern technology and up-to-date manufacturing techniques resulting in low power losses, high reliability and more flexibility.

The EM101-1 has an advanced optical system that allows establishing a continuous relationship between the utility and consumers, including data retrieval and meter configuration whenever required by the utility.

The meter is digitally calibrated and provides a pulsed output for both active and reactive energy consumption.

STANDARDS

- IEC62053-21
- IEC61036 (2000)

METER SPECIFICATIONS

Electrical Characteristics

Accuracy Class	Class 1
Nominal Voltage	220V
Supply Variation	±20% Vn
Spike Voltage Tolerance	8kV
Starting Current	0.4% In
Nominal Current	10A, 40A
Maximum Current	40A, 80A
Nominal Frequency	50Hz
Frequency Variation	±5%
Inherent Consumption of Voltage Circuit	≤1W ; ≤8VA
Inherent Consumption of Current Circuit	≥2VA
Backup Power Supply	Super Capacitor

Memory

Type	Non volatile memory
Data Retention Period	10 Years

Environmental Conditions

IP Rating	IP51
Temperature Range	-20°C to +70°C
Storage Temperature	-30°C to +75°C
Humidity Range	95%
Altitude	0-3600 meters

Communication

Optical Port	Standard Optical Port - IEC 62056-21
Optical Port Data Transmission Rate	2400 bit/s

METER FEATURES

Feature

Description

Measurements	<ul style="list-style-type: none"> The EM101-1 is capable of measuring the active energy consumed in both forward and reverse directions The meter can calculate the maximum demand power in kW
Optical Operation	<ul style="list-style-type: none"> Used to retrieve various data from the meter including but not limited to consumption and tamper attempts Used to configure and/or update the meter's functionality
Communication Modules	<ul style="list-style-type: none"> Optical Port Module: used to allow a PC/HHU to communicate with the EM101-1
Tamper Proofing	<ul style="list-style-type: none"> The EM101-1 is tamper proof against: <ul style="list-style-type: none"> ✓ Remote control device ✓ Meter earthing ✓ Meter and Terminal cover open ✓ Current reversal ✓ Overvoltage ✓ Undervoltage ✓ Overload
Data Display	<ul style="list-style-type: none"> The EM101-1 allows users to set the information to be displayed on the 7 digit seven segment LCD screen The following Parameters are displayed on the LCD: <ul style="list-style-type: none"> ✓ Total Consumption ✓ Reverse Consumption ✓ Fault Consumption ✓ Maximum Demand ✓ Voltage ✓ Current ✓ Power Factor ✓ Meter ID ✓ Number Of Resets
Payment Forms	<ul style="list-style-type: none"> The EM101-1 supports open account payment form

MECHANICAL SPECIFICATIONS

- **Dimensions:** (L x W x D) = 155.4 mm x 134.6 mm x 57.2 mm
- **Weight:** 0.5Kg
- **Meter Housing:** Flame Retardant Polycarbonate

