

# Invest just once in Energy Meters

The New generation KRYKARD Load Managers change the way energy is measured and managed on electrical panels. Meters with conventional measurement technology offer inaccurate measurements on non-linear loads resulting in wrong energy accounting and energy costing, leading to incorrect energy balancing. Using conventional energy meters, most industries therefore do not even know where they are losing energy.

With increasing non-linear loads, the new PLM Cube 300 series ensures guaranteed accuracy, thereby becoming a one-time investment even for the future. And when you add these meters to the AIEnSoft Energy Management Software, the scope of energy savings increases substantially and enables you to take charge of your loads.

## PLM Cube 300

### Load Manager to replace Energy meters



#### ➤ kW & kWh in a single meter

- ❖ Direct kWh reading - no hassles with MF
- ❖ Accurate Energy accounting & costing possible
- ❖ Integrate with AIEnSoft software for detailed analysis - no load, overload, loading factor, productivity, specific energy consumption

#### ➤ Unconditional Accuracy under various load conditions

- ❖ Accuracy maintained even on drives, UPS, ringframes, compressors & other similar loads with high harmonic content
- ❖ True RMS upto 30<sup>th</sup> harmonic order
- ❖ PF range from -0.1 to 1.0 to 0.1 - no problem with no-loads & partial loads

#### ➤ Energy management networks made simpler

- ❖ RS-485 serial port with Modbus RTU protocol makes networking simpler & faster
- ❖ Substantially less wiring for increased data reliability & reduced network maintenance

#### ➤ Rugged & Reliable - Ideal for industrial shopfloor environments

- ❖ Direct LCD reading - no counters
- ❖ Fully isolated current inputs (2.5kV) for trouble-free performance even in disturbed environments
- ❖ IP-54 rating for dust resistance, Temperature range from -10°C to 65°C

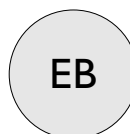
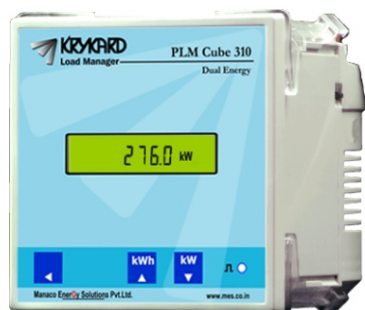
## PLM Cube 310

### Dual Energy Meter

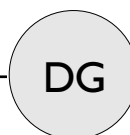
#### All PLM Cube 300 features PLUS

#### ➤ Dual energy option - For precise energy accounting

- ❖ Dual energy registers for separate DG and EB energy accounting
- ❖ kW as additional parameter for increased applications
- ❖ Ideal for IT Parks, Shopping Malls & Commercial complexes
- ❖ DG energy counter trigger input operates on AC input range of 60V to 300V



Energy Counter 1



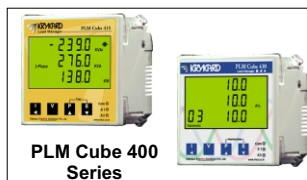
Energy Counter 2

DG Trigger Input  
60V < Vin < 300V

# Specifications

<b>Specifications of the PLM Cube Series</b>	
<i>PLM Cube 300 Series</i>	
<b>INPUTS</b>	
Voltage	400/230V - 3 Phase 3 or 4 Wire
Current	5A from external CTs. 1A optional. Fully isolated @2.5kV
Volt. Meas. Range	20% to 120%
Curr. Meas. Range	0.2% to 120%
Freq. Range	Fundamental 45 to 65Hz
PF Range	0 lag to 1.0 to 0 lead
Burden	Voltage & Current input <0.1VA per phase each
Overload	Voltage x 2 for 1 hr; Current x 40 for 0.5 s max
<b>DISPLAY</b>	
Type	Type Custom, Supertwist, Single-line LCD
Format	Format 8 x 6.6mm high digits with DPs & 3.2mm legends
Legends	Autoscaling depending on user settings
<b>AUXILIARY SUPPLY</b>	
Rating	Standard 230V 50/60 Hz +15% -20%; 1VA ; Optional 110Vac
Overload	x1.2 continuous
<b>GENERAL</b>	
Temp. & Humidity	Operating -10°C to +65°C; < 75% non-condensing
IP Rating	IP54 standard, IP65 optional
<b>ACCURACY</b>	
Power	kW - Better than Class 0.25 IEC 60688
Active Energy	kWh - Better than Class 1.0 as per EN62053-21 & BS8431
<b>MODBUS COMMUNICATION</b>	
Protocol	MODBUS® RTU with 16 bit CRC; 2-wire
Baud Rate	Baud rate 4800, 9600 or 19,200 user-settable
Resp. Time	Reply within 250ms max; New cmd within 5ms of previous one
<b>MECHANICAL</b>	
Terminals	Rising Cage. 4mm <sup>2</sup> (12 AWG) cable max.
Case	Mablex adhering to UL94-V0. Self extinguishing
Dimensions	96 x 96 x 83.5 mm (72mm behind panel)
Weight	250 gms
<b>DUAL ENERGY OPTION (Cube 310 only)</b>	
Type	Voltage trigger (Vin)
Trigger value	60V < Vin < 300V
<b>CONTROL OUTPUTS</b>	
No. & Type	One, kWh; Normally open volt free contacts
Programmable	Pulse rate & length selectable
Contacts	100V ac/dc, 100mA, 5W max
Isolation	2.5kV for 1 minute
<b>SAFETY</b>	
Safety	Conforms to EN 61010-1 Installation Category III

## Other exciting Energy Management products



**PLM Cube 400 Series**

### Appropriate & Feature-packed Load Managers to meet every need

Measure V, I, Power, Energy, Demands & Individual Harmonics on V & I, depending on the model. Connect on any panel : Incomers, Feeders, DG or Load Program control actions with the new range of DI/DO models



### AIEnSoft EMS - Powerful & Easy to use

EMS for plant-wide monitoring, analysis & reporting

### Range of 1-phase & 3-Ph Portable analysers for multiple applications

Perfect for comprehensive analysis across a wide range of applications. For use on 1-ph or 3-ph systems for energy audits, load analysis, maintenance studies, disturbance & power quality studies.

**ALM 30**

**ALM 10**

**ALM 8**



conservation begins here



## Manaco EnerGy Solutions Pvt. Ltd.

conservation begins here

**Head Office:** A-6, Shanti Apts., 21&22, 1<sup>st</sup> Cross St, TTK Road, Alwarpet, Chennai -18.

**Tel:** 44- 42316164 **Fax:** 44- 42316165 **Email:** sales@mes.co.in [www.mes.co.in](http://www.mes.co.in)

**Branches:**

Ahmedabad	: ahm@mes.co.in;	Ph: +91- 93271 02033
Bangalore	: blr@mes.co.in;	Ph: +91- 93410 03147
Chennai	: chn@mes.co.in;	Ph: +91- 93805 73027
Coimbatore	: cbe@mes.co.in;	Ph: +91- 93666 22334
Delhi	: del@mes.co.in;	Ph: +91- 93125 46020
Hyderabad	: hyd@mes.co.in;	Ph: +91- 93940 43970
Mumbai	: mmb@mes.co.in;	Ph: +91- 93233 14156

MES has a strategic alliance with Alacritty Electronics Ltd. to offer the KRYKARD range of Instrumentation & Control products

Specifications subject to change without notice.