

# DIGITAL POWER METER

## MCA Series



- Depth 75mm Only
- High Contrast Bright LED Display
- True RMS Measurements
- More than 50 Electrical Parameters
- Displayed
- Programmable Ct and Pt Ratio
- Standards IEC664 VDE0110 UL94 IEC801

### MCA

#### Digital DIN 144x144 Meter

- MCA is a digital meter able to measure the electrical parameters on three-phase system. It provides accurate measurements even for distorted waveform.
- Three high brightness LED display ensure maximum visibility even in difficult environment lighting condition.
- MCA replaces multiple analog meters as well as single function meters such as Voltmeters, ammeters, wattmeters, varmeters, frequency-meters, powerfactor-meters, energy-meters, harmonic (up to 31<sup>st</sup> d%) etc.
- The basic instrument can be customized with some options to fit the specific application.
- MCA is a compact, cost effective meter operating both as a stand-alone device or as an integral part of a more extensive energy monitoring and management network.

#### Main Features

##### Measurements

- Three-phase 3 or 4 –wire unbalanced load operation
- Direct measurement up to 750V AC
- Programmable CT ratio
- True RMS metering
- With isolated transformer for voltage and current.
- More than 50 electrical parameters displayed (instantaneous, demand and peak indication)
- Fully bi-directional, four-quadrant readings via serial port

##### Front Panel Display

- High contrast bright, easy to read, LED display

##### Easy to Use

- Four keys for all the operations

#### Communication

- Optional RS485 optoisolated communication port
- Modbus RTU protocol
- Communication speed programmable up to 9,600 bps

#### Inputs and Outputs

- Two digital outputs for energy pulsing or for alarm tripping
- Optional one digital input for time sincronization (high/low tariff)

#### Applications

##### Power Metering

The MCA provides all the main electrical parameters at a very low cost. The market it ideal for switchboards, gensets, power monitoring & control systems, individual machine load monitoring, remote metering.

##### Analog Meters Replacement

The power meter can replace conventional meters since it is ultracompact and flexible on mounting. Its advantages are: powerful capabilities compared to traditional analog meters and time and cost saving on mounting, compared to many individual single-function instruments.

##### Demand Control

The power demand information is essential to work out proper strategies aimed at avoiding uncontrolled power peaks and consequent penalties.



## Remote Metering

Via optional communication port it is possible to read and log on a PC all the readings. The remote monitoring is carried out by serial communication port (RS232 or RS485) or by external devices such as telephone line or Ethernet/Internet.

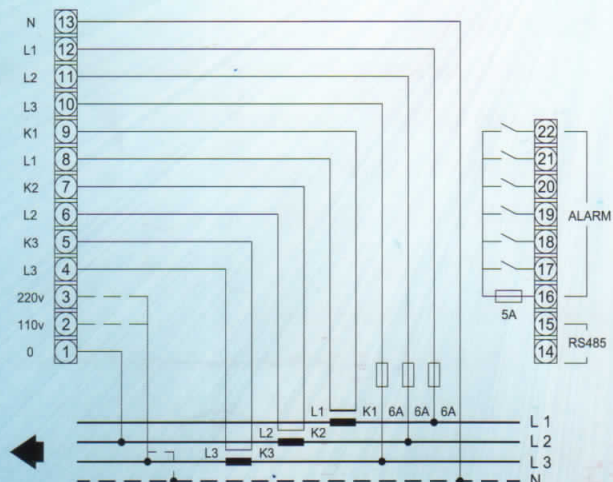
INSTANTANEOUS MEASUREMENT		DISP	COM
Phase voltage	$V_{L-N}$ [V]	●	●
Line voltage	$V_{L-L}$ [V]	●	●
Line current	I [A]	●	■
Power factor	PF [COS $\theta$ ]	●	●
Apparent power	S [VA]	●	■
Active power	P [W]	●	■
Reactive power	Q [VAR]	●	■
Frequency	F [Hz]	●	●
Demand power	[W]	●	●
Active energy	[WH]	●	■
Apparent energy	[VAH]	●	■
Reactive energy	[VARH]	●	■
Harmonic voltage %	[V-thd%] up 31 <sup>st</sup>	●	●
Harmonic current %	[A-thd%] up 31 <sup>st</sup>	●	●

● Basic ■ Bi-Directional, four quadrant values

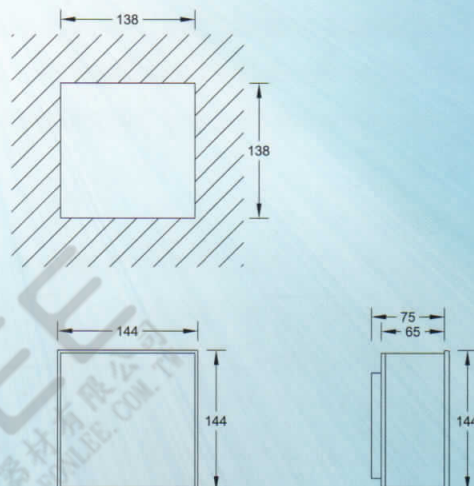
## Technical Characteristics

Rated voltage (*)	110/230 VAC $\pm 10\%$
Frequency	45 - 65 Hz
Max measurable voltage	750V(L-L), 600V(L-N)
Max continuous overload	2KV rms L-L (<1sec)
Rated current (Ib)	5A
Max overload	10A continuous-100A/sec
Display update interval	100 ms
Voltage typical accuracy	$\pm 0.2\%$ full scale $\pm 1$ digit
Current typical accuracy	$\pm 0.2\%$ full scale $\pm 1$ digit
Active power typical accuracy	$\pm 0.25\%$ full scale $\pm 1$ digit
Power Factor typical accuracy	$\pm 0.25\%$ full scale $\pm 1$ digit
Active energy typical accuracy	$\pm 0.4\%$ full scale $\pm 1$ digit
Frequency typical accuracy	$\pm 0.05\%$ full scale $\pm 1$ digit
Harmonic typical accuracy	$\pm 1\%$ full scale $\pm 1$ digit
Display	3 line 4 LED digits display
Keyboard	4 push-buttons
Com port	RS-485(RS-232 optional)
Baud rate	300 to 57600
Operation temperature	-10°C to +60°C
Storage temperature	-20°C to +75°C
Protection degree	IP42 (IP66 with cover)
Size	144 x 144 x 75 mm
Weight	750g

## Wiring Diagrams



## Dimensions [mm]



## Manufacturer

**WILCOLECTRIC (M) SDN. BHD.**

3. PERSIARAN KILANG PENGKALAN 30.

TAMAN PERINDUSTRIAN PENGKALAN MAJU