



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 31st 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

- **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**

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 synchronization (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.

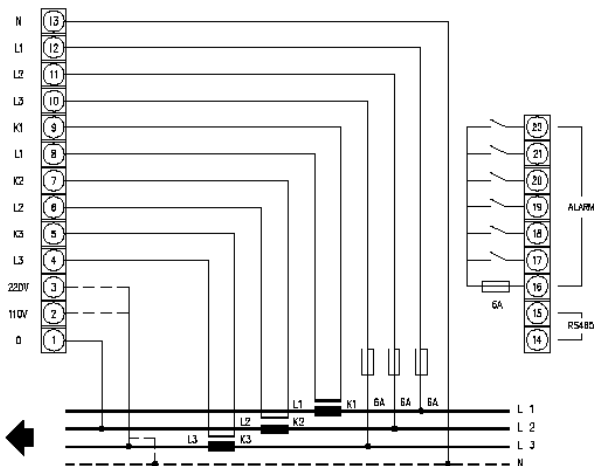
INSTANTANEOUS MEASUREMENT		DISP	COM
Phase voltage	V_{L-N} [V]	●	●
Line voltage	V_{L-L} [V]	●	●
Line current	I [A]	●	■
Power factor	PF [$\cos \theta$]	●	●
Apparent power	S [VA]	●	■
Active power	P [W]	●	■
Reactive power	Q [VAR]	●	■
Frequency	F [Hz]	●	●
Demand power	[W]	●	●
Active energy	[WH]	●	■
Apparent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

● Basic ■ Bi-Directional, four quadrant values

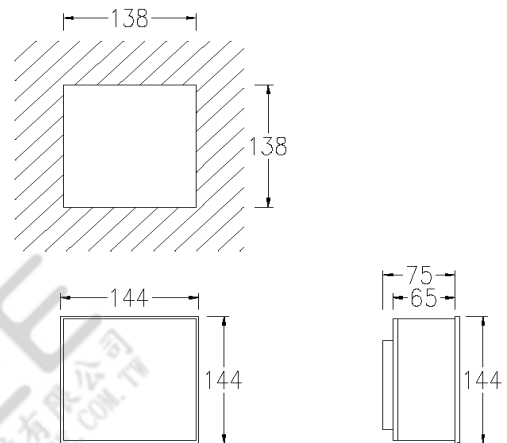
Technical Characteristics

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 ± 1 digit
Current typical accuracy	$\pm 0.2\%$ full scale ± 1 digit
Active power typical accuracy	$\pm 0.25\%$ full scale ± 1 digit
Power Factor typical accuracy	$\pm 0.25\%$ full scale ± 1 digit
Active energy typical accuracy	$\pm 0.4\%$ full scale ± 1 digit
Frequency typical accuracy	$\pm 0.05\%$ full scale ± 1 digit
Harmonic typical accuracy	$\pm 1\%$ full scale ± 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