



LG

# DIGITAL MULTIFUNCTION METER

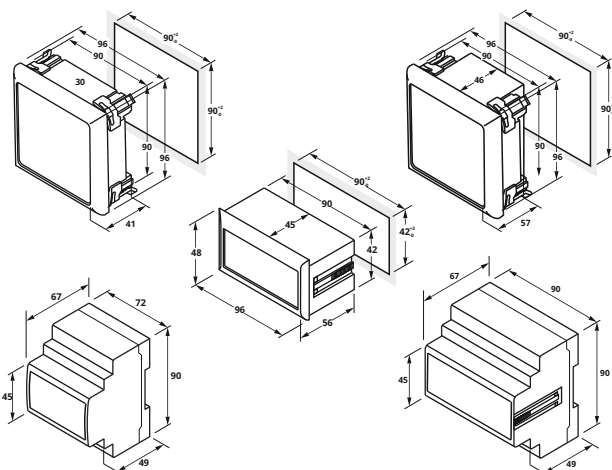
Basic | Power | Energy | Dual Source Meter | Load Manager

SIMULTANEOUS MEASUREMENT OF VARIOUS ELECTRICAL PARAMETERS!

## Features:

- Accuracy Class 1.0 (IEC 62053-21), 0.5s (IEC 62053-22) option
- Patented alpha numeric display with bar graph 14 mm height, 4 Digits 3 row for 64xx series, 10mm for single row
- Available in LED 1 row 6 Digits, LCD 1 Row 7 Digits & LED 3 Row 4 Digits each
- Field programmable Star (Wye) or Delta or Single Phase configuration
- Programmable PT, CT ratio upto 2000 MVA
- Wide measurement range 1: 600 (10mA – 6A)
- Graphical representation of programmable load available for (A/W/VA)
- High sampling rate 128 samples/cycle simultaneous sampling of Volts & Amps
- High & Low measurements for Voltage and Current (Last one minute of data)
- Motor load efficiency can be monitored for 5 different programmable slots along with time for Watts/Current
- Non re-settable Over voltage Hour in diagnostic communication mode for healthiness of system
- Sliding demand for W, VA, VAR (LG 6400)
- Energy display programmable – counter based or resolution based
- Energy resetting at 9999999 kWh x MF
- Individual phase energy through communication - helps branch monitoring, better load distribution study
- Front LED pulse 16000 imp/kWh of secondary input
- Communication with PCs, PLCs, DCS through optically isolated RS485 serial interface
- Finger touch proof terminals to voltage and current connections
- Dynamic Communication register map with the programmable address and user selectable parameter sequence
- CO<sub>2</sub> emission, ON Hrs, Power Interruptions

## Mechanical Specification:



Parameters:	LG 1119	LG 2119	LG 3120 *	LG 5110	LG 5120 *	LG 2520	LG 2600	LG 6425 Any 2 groups	LG 6435 Any 3 groups	LG 6445 Any 4 groups	LG 6400
<b>GROUP 1 (BASIC)</b>											
V V1 V2 V3 V12 V23 V31				✓	✓	✓	✓	✓	✓	✓	✓
A A1 A2 A3	•			✓	✓	✓	✓	✓	✓	✓	✓
Hz				✓	✓			✓	✓	✓	✓
RPM							✓	✓	✓	✓	✓
Phase angle V/A								✓	✓	✓	✓
Unbalance V/A								✓	✓	✓	✓
<b>GROUP 2 (POWER)</b>											
PF PF1 PF2 PF3	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
W W1 W2 W3	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VA VA1 VA2 VA3	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>GROUP 3 (ENERGY)</b>											
Wh (Import)	•	•	•	•	•	•	•	•	•	•	•
VAh (Import)	•	•	•	•	•	•	•	•	•	•	•
Load Hours (Import)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ON Hours		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Individual phase energy via communication only	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Number of interruptions							✓	✓	✓	✓	✓
CO <sub>2</sub>							✓	✓	✓	✓	✓
<b>GROUP 4 (REACTIVE)</b>											
VAR, VAR1 VAR2 VAR3							✓	✓	✓	✓	✓
kVARh inductive (Import)							✓	✓	✓	✓	✓
kVARh capacitive (Import)							✓	✓	✓	✓	✓
<b>GROUP 5 (ENERGY EXPORT)</b>											
Wh (Export)							✓	✓	✓	✓	✓
VAh (Export)							✓	✓	✓	✓	✓
Load Hours (Export)							✓	✓	✓	✓	✓
<b>GROUP 6 (REACTIVE EXPORT)</b>											
VAR VAR1 VAR2 VAR3							✓	✓	✓	✓	✓
kVARh inductive (Export)							✓	✓	✓	✓	✓
kVARh capacitive (Export)							✓	✓	✓	✓	✓
<b>GROUP 7 (THD)</b>											
Voltage THD upto 15th order								✓	✓	✓	✓
Current THD upto 15th order								✓	✓	✓	✓
<b>DEMAND</b>											
Demand W VA VAR											✓
Max. Demand W VA VAR											✓
<b>OPTIONAL</b>											
Class 0.2S				✓	✓	✓	✓	✓	✓	✓	✓
Class 0.5S		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
RS 485	✓	✓	✓	✓	✓	✓		Built In			
*50A projection CT (MOQ)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
*100A / 200A hanging CT (MOQ)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
DINrail - 4Din (LED)	✓	✓	✓	✓	✓	✓					
DINrail - 5Din (LCD)	✓						✓				
µG (96x48mm, LED)	✓			✓	✓						
DINrail - 80A Direct Current (LED)				✓	✓						
*IoT Add on with 14GB Memory							✓	✓	✓	✓	✓

• Programmable to either Wh or VAh. • Any one parameter for 1119  
\* Restricted additional option ★ Dual Source

## Multiplication factor for counter based energy mode

Full Scale in Watts :	0.4k	4.01k	40.1k	400.1k	4M	40 M	400M
$\sqrt{3} \times V_{Pri} \times A_{Pri} / 1000$	to	to	to	to	to	to	to
	4.0k	40k	400k	4000k	40 M	400 M	4000M
Multiplication Factor:	0.01	0.1	1.0	10	100	1000	10000
Unit of display	kWh			MWh		GWh	

## Technical Specification:

### LG 1000/3000/5000 Series

### LG 2000 Series

### LG 6000 Series

#### GENERAL CHARACTERISTICS

Display type	LED 1 row	LCD 1 row	LED 3 row
Integrated Digits	6	7	8
Instantaneous Digits	4		
Sensing / Measurement	True RMS, 1 Sec update time, 4 Quadrant Power & Energy		
Rated voltage	50-600 VLL		
Rated current	10mA-6A		
Frequency	45-65 Hz		
Poles description	1P + N, 3P, 3P + N		
Sampling rate	128 samples/cycle		
Measured Accuracy Class	Class 1 default / Class 0.5S / Class 0.2 as per IEC 62053-22 (Optional).		
Programmable Setting	110 or 415V LL Nominal & Primary Programmable up to 999 kV. Burden: 0.2VA Max. per phase		
Permissible overload	120%, Burden:0.2VA per phase		
External Fuse Rating	200mA slow blow		
CT PT Ratio Max	2000 MVA Programmable		
Auxiliary supply	80-300 V AC/DC (40 - 300V AC/DC Optional)		
Power consumption	4VA		
Data update rate	1sec		

#### COMMUNICATION

Device ID & Parity	1 to 247 & Odd, Even, None (Preferred Even)		
Protocol & Interface	Modbus. RTU & RS 485		
Baud rate	2400 bps to 38.4k bps (Preferred 9600)		
Isolation	2000 volts AC isolation for 1 minute between communication and other circuits		

#### ENVIRONMENTAL CHARACTERISTICS

Operating temperature	-10°C to + 55°C (14°F - 131°F)		
Storage temperature	-25°C to +70°C (-13°F - 158°F)		
Humidity	5% to 95% non-condensing		
Altitude	Below 2000 mts		
Measurement Category	CAT III		
Pollution degree	2 (As per IEC 61010)		

#### PROTECTION CLASS

Ingress protection	IP 51 ( IP 54 front facia optional ) & Double Insulation ( As per IEC 61010-1)		
--------------------	--	--	--

#### ELECTROMAGNETIC COMPATIBILITY

Electrostatic discharge	IEC 61000-4-2		
Immunity to Electromagnetic RF Fields	IEC 61000-4-3		
Conducted Immunity	IEC 61000-4-6		
Immunity to Magnetic Fields	IEC 61000-4-8		
Immunity to voltage dips and interruptions	IEC 61000-4-11		
Fast transient	IEC 61000-4-4		
Immunity to surge waves	IEC 61000-4-5		
Conducted and Radiated emissions	CISPR- 22		

#### SAFETY AND STANDARDS

Construction	IEC/EN 61010-1 edition 3, CAT III, 300 V LN / 600 V LL , Protection class II.		
Standards	UL 61010-1, IEC/EN 62052-11		

#### Mechanical characteristics

Weight	Unpacked: 275 gms, Packed: 350 gms		
Torque at terminals	1 N-m		
Wire Gauge at terminals	11 AWG		