

DIGITAL PANEL METER



MG-96A-5

1. for correctly use of this instrument, please read carefully this specification before operation.
2. keep properly this specification after reading.

Technical date

TECHNICAL DATA

Power supply:	AC 220V AC, DC 90-270V OR AC, DC 36-72V	MAX. INPUT	VOLTAGE METER 600V CURRENT 5A AC > 5A CT / 5A DC / 75mV
Display range:	MAX. DISPLAY 1999 LED 12.2mm H	Weight:	About 300g
Precision:	0.5%fs ± 1 digit	Size:	96mm(w) × 48mm(h) × 112mm(d)
Sampling speed:	About 2.5 TIMES/S	Hole:	93mm × 45mm
A/D convert:	Dual scope	Insulation strength:	AC 1500V 1MIN
Operation temperature:	0~50 °C	Insulation impedance:	DC 500V > 100M Ω
Power consumption:	<3W		

OPERATION RANGE

AC voltage range change

MAX. INPUT: AC600V

NO	4	3	2	1
	600			
7		199.9		
6			19.99	
5				

First: AC600V
Model: MG 35-AV
Model: MG-96-AC

AC current range change

MAX. INPUT: AC5A

NO	4	3	2	1
	1999	1500	1000	500
7	199.9	150.0	100.0	50.0
6	19.99	15.00	10.00	5.00
5	1.999	1.500	1.000	500

First: AC 1999/5V
Model: MG 35-AA
Model: MG-96-AA

DC voltage range change

MAX. INPUT: AC600V

NO	4	3	2	1
	600			
7		199.9		
6			19.99	
5				1.999

First: DC600V
Model: MG 35-DV
Model: MG-96-DV

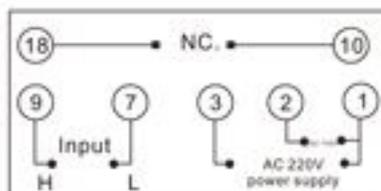
DC current range change

MAX. INPUT: DC75mV

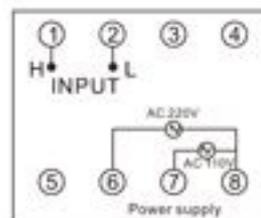
NO	4	3	2	1
	1999	1500	100	500
7	199.9	150.0	100.0	50.0
6	19.99	15.00	10.00	5.00
5	1.999	1.500	1.000	500

First: DC 199/75mV
Model: MG 35-DA
Model: MG-96-DA

DESCRIPTION OF WIRING TERMINAL



Mg35 wiring terminal
SIZE: 96 × 48 × 112mm
HOLE: 92 × 44mm



MG-96 wiring terminal
SIZE: 96 × 96 × 65mm
HOLE: 90 × 90mm

NOTE

- (1). For best performance, the meter should be pre-heated 15 minutes before operation if it is not use for a long time.
- (2). The meter should be used under condition of:
Ambient temperature: 0-50°C, Relative humidity: ≤85%
- (3). The calibration interval should be one year; the precision of calibrator should be superior to 0.1 Grade.
- (4). The meter should prevent from shocking and im pulsing, and should not use under condition of heavy dust or high concentration chemical drug or gas. Please apply power supply filter or other antiinterference circuit when use the meter in environment of high magnetic field, high frequency or high voltage spark.
- (5). The calibrating rheostat is use for calibrating the meter, nonprofessional should not calibrate or disassembly the meter, as well as no calibrator available.



MODULAR TYPE PANEL METER

DC VOLTMETERS

Model: MG-C45V

Accuracy: Class 1.5

Specification: 20V 30V 50V 100V 150V 200V 250V 300V 450V 600V 1000V

Measuring ranges over 450V with external resistor (rated current 5mA)

Heat resistance: case of non-combustible plastic material.

Mounting type: DIN rail

FREQUENCY METERS

Model: MG-F45V

Accuracy: Class 1.0

Specification:

Voltmeter: 100V 220V 380V 440V

Frequency: 45-55Hz 45-65Hz 47-63Hz 57-63Hz 44-56Hz 54-66Hz 350-450Hz 450-550Hz 550-650Hz

Heat resistance: case of non-combustible plastic material.

Mounting type: DIN rail

AC VOLTMETERS

Model: MG-F45V

Accuracy: Class 1.0

Specification: 30V 50V 75V 120V 120V 150V 250V 400V 450V 500V 600V

For 450V-450KV, meters can use potential transformer with secondary voltage 100V.

Heat resistance: case of non-combustible plastic material.

Mounting type: DIN rail

DC AMMETERS

Model: MG-T45A

Accuracy: Class 1.5

Specification: 100 μ A 500 μ A 1mA 3mA 5mA 10mA 20mA 30mA 50mA 100mA 150mA 200mA 250mA

300mA 500mA 1A 3A 7.5A 10A 15A 20A

For 10A-10KA, use external 75mV 60mV or 45mV shunt. For the direct reading from 20A to 60A meter the class is 2.5A.

Heat resistance: case of non-combustible plastic material.

Changeable scale: The dial plate with the same scale division, which is at the same internal value, can be changeable.

POWER FACTOR METER COS Φ

Model: MG-PF45

Accuracy: Class 2.5

Single phase: 100V 220V 380V 440V current: 5A

Three phase: 100V 220V 380V 440V current: 5A

Specification: 0.5cap-1-0.5ind 0.3cap-1-0.7ind 0.4cap-1-0.4ind 0.7-1-0.2ind

Heat resistance: case of non-combustible plastic material.

Frequency: 50Hz or 60Hz

Mounting type: DIN rail

AC VOLTMETERS

Model: MG-T45A

Accuracy: Class 1.5 2.5

Specification: 0.1A 0.5A 1A 7.5A 10A 15A 20A 30A 40A 60A

For 10-10KA, use external current transformer with secondary current 5A. For the direct reading from 20A to 60A meter, the class is 2.5.

Heat resistance: case of non-combustible plastic material.

Changeable scale: All scales with printing technique. The dial plate with the same scale division, which is at the same division and internal value, can be changeable.

MOVING COIL INSTRUMENT POWER METERS

Wattmeter Model: MG-W45

Varmeter Model: MG-VAR45

Accuracy: Class 1.5

Specification:

Voltage: Single phase: 100A 200V 380V

Three phase three wire: 100A 220V 380V 415V

Three phase four wire: 100A 220V(380)V 240V(415)V

Above-mentioned can be connected directly. The following should be connected with voltage transformers: 380/100V 500/100V 3K/100V 6K/100V 10K/100 15K/100V 35K/100V...

Current: 1A, 5A

The voltage circuits of the meter connected with voltage transformers. Which secondary voltage is 100V, if the secondary voltage is lower than 450V, it also can be connected directly. The current circuits connected with current transformers, which secondary current is 5A or 1A. Wattmeters and Varmeters with converter for three-phase three wires or four wire and single phase, which can be used for balance and unbalance burden circuit.

Heat resistance: Case of non-combustible plastic material.

Frequency: 50Hz or 60Hz

Fastening: By means of nut, absolutely safe, fast, robust, side-by-side

Mounting: DIN rail: 72mm × 87.2mm × 65mm



MG-VAR45



MG-W45



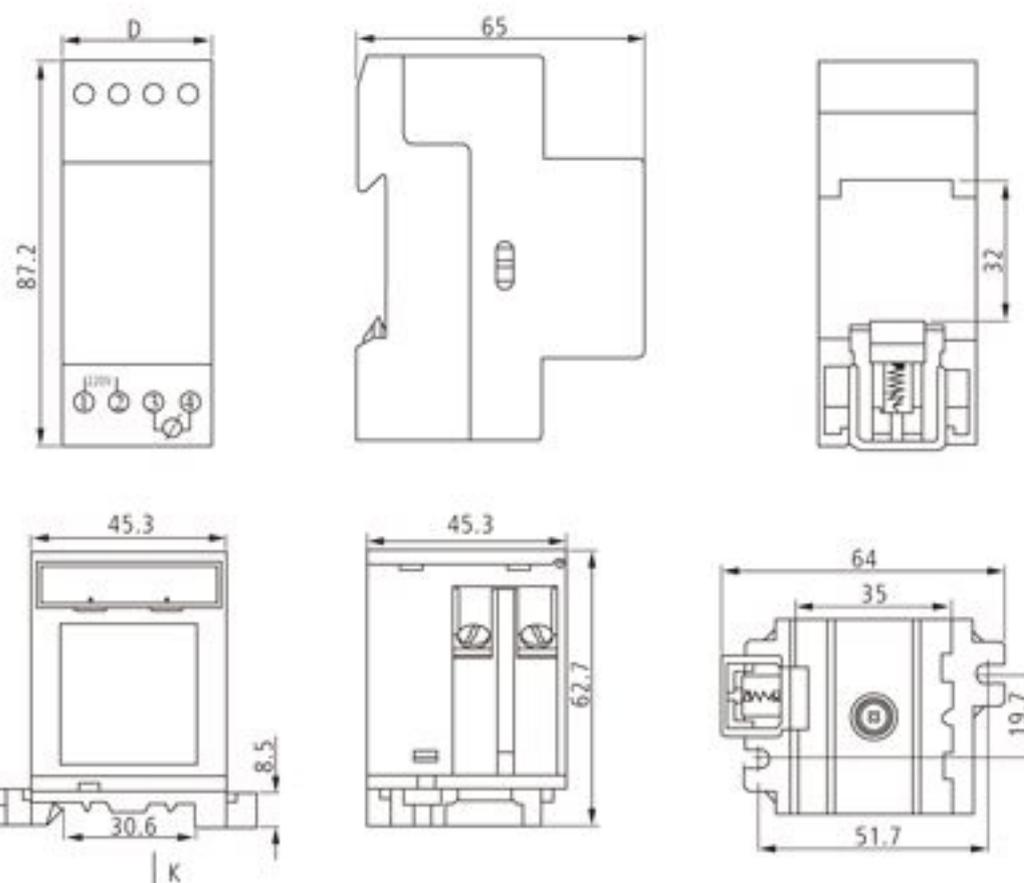
MG-36



MG-100

MODULAR (EXPLOSION-PROOF)

OUTLINE DRAWING



SIZE OF DIN RAIL TYPE SERIES METER

Model	Unit	D	Number of Terminal	Measurement of Din Rail
MG-36	mm	36	4	35
MG-45	mm	45	4	35
MG-100	mm	100	10	35

DIGITAL MODULAR AC & DC AMMETER AND VOLTMETER

Model: MG-D365 AC MG-D365 DC

Feature:

1. Display: 3 1/2 digits. LED display (red or green)
2. Accuracy: $\pm 0.5\% \pm 2$ digits
3. Auxiliary power: AC $110V \pm 10\%$ 50/60Hz or AC $110V \pm 10\%$ 50/60Hz
4. Input signal: AC current.
5. Measuring range: 0-10A AC, if the current more than 1A, the meter should be used with current transformer. 0-10A DC, if the current more than 10A, the meter should be used with shunt.
6. Consumption: <1.8VA
7. Max Signal Consumption: <0.3VA
8. Operating Environment: temperature $0^{\circ}\text{C} \sim -40^{\circ}\text{C}$ humidity: $\leq 85\%$
9. Storage Environment: temperature $-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$ humidity: $\leq 70\%$
10. Heat resistance: case of non-combustible plastic material
11. Hi-pot testing: more than 2000V



POWER FACTOR METER $\cos \phi$

ORDERING MODEL

(SINGLE PHASE): MLY-D725PF(1P)

(3 PHASE): MLY-D725PF(3P)

Feature:

1. Display: 4 digits. LED display (with red and green options)
2. Accuracy: $\pm (0.5\% \text{ reading} + 3 \text{ digits})$
3. Auxiliary power: AC $110V \pm 10\%$ 50/60Hz or AC $110V \pm 10\%$ 50/60Hz
4. Input Signal: 100V, 220V, 380V
Current 0-1A or 0-5A is at users' option.
5. Measuring range: 0° - 360° phase angle.
6. Power Consumption: <3.2VA
7. Maximum Voltage Consumption: <0.5VA
Maximum Current Consumption: <0.5VA
8. Operating Environment: $0^{\circ}\text{C} \sim -40^{\circ}\text{C}$
Relative Humidity: $\leq 85\%$
9. Shelf Environment: $-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$
Relative Humidity: $\leq 70\%$
10. Hi-pot Testing: AC 2000V/1min
11. External Case: Made of non-flammable plastic material.
12. Fixing Mode: Sliding in (MLY-D120);
Din rail mode (MLY-D725)
13. Imbedding Depth: 53mm (MLY-120);
65mm (MLY-D725)

DIGITAL POWER METER

Ordering Model: MLY-D725W (Var)

Function: For measuring single phase with power, single phase without power.

Feature:

1. Display: 4 1/2 digital LED display (with red and green options)
2. Accuracy: $\pm (0.5\% \text{ reading} + 3 \text{ digits})$
3. Auxiliary power: AC $110V \pm 10\%$ 50/60Hz and AC $220V \pm 10\%$ 50/60Hz
4. Input Signal: Voltage 100V, 220V, 380V.
Current 0-1A or 0-5A is at users' option.
5. Measuring Range: At users option.
6. Power Consumption: <3.2VA
7. Maximum Voltage Consumption: <0.5VA
Maximum Current Consumption: <0.5VA
8. Operating Environment: $0^{\circ}\text{C} \sim -40^{\circ}\text{C}$.
Relative Humidity: $\leq 85\%$
9. Shelf Environment: $-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$
Relative Humidity: $\leq 70\%$
10. Hi-pot Testing: AC 2000V/1 min
11. External Case: Made of non-flammable white plastic material.
12. Fixing Mode: Sliding in (MLY-D120); Din rail mode (MLY-D725)
13. Imbedding Depth: 53mm (MLY-120); 65mm (MLY-D725)



DIGITAL AC/DC AMMETER & VOLTMETER



Function: For measuring the DC/AC current and voltage.

Ordering Model: MLY-D725A/V or DC

Feature:

1. Display: 3 1/2 digital LED display (with red and green options)
2. Accuracy: $\pm(0.5\% \text{ reading} + 2 \text{ digits})$
3. Auxiliary Power: AC 110V $\pm 10\%$ 50/60Hz or AC 220V $\pm 10\%$ 50/60Hz
4. Input Signal: AC/DC current and voltage.
5. Measuring Range: 0-20A AC, for those above 20A, match with current transformer;
0-20A DC for those above 20A, match with shunt;
0-600V-AC for those above 600V, match with voltage transformer.
0-600V-DC
6. Power Consumption: <3.2VA
7. Maximum Signal Consumption: <0.5VA
8. Operating Environment: 0°C ~ 40°C. Relative Humidity: $\leq 85\%$
9. Shelf Environment: -40°C ~ +60°C Relative Humidity: $\leq 70\%$
10. Hi-pot Testing: AC 2000V/1 min
11. External Case: Made of non-flammable plastic material.
12. Fixing Mode: Flush fixing with nuts.
13. Imbedding Depth: 43mm

DIGITAL FREQUENCY METER



Ordering Model: MLY-D725F

Feature:

1. Display: 4 digital LED display (with red and green options)
2. Accuracy: $\pm(0.1\% \text{ reading} + 1 \text{ digit})$
3. Auxiliary Power: AC 110V $\pm 10\%$ 50/60Hz or AC 220V $\pm 10\%$ 50/60Hz
4. Input Signal: VC voltage, rated signal amplitude value 0-600V optional (Input voltage error allowance: -80%, +100%)
5. Measuring Range: 1.000-9999Hz
6. Power Consumption: <3.2VA
7. Maximum Signal Consumption: <0.5VA
8. Operating Environment: 0°C ~ 40°C Relative Humidity: $\leq 85\%$
9. Shelf Environment: -40°C ~ +60°C Relative Humidity: $\leq 70\%$
10. Hi-pot Testing: AC 2000V/1 min
11. External Case: Made of non-flammable plastic material.
12. Fixing Mode: Sliding in (MLY-D120); Din rail mode (MLY-D725)
13. Imbedding Depth: 53mm (MLY-120); 65mm (MLY-D725)