

## Moving Coil DC Volt & Amp Meter Din panel, Analog meter



### Application

Square panel meters for direct current system. All panel meters are direct indication of measuring input. They are suitable to use on the distribution panel, control panel, switchboard panel, power plant, mimic board, machines and others.

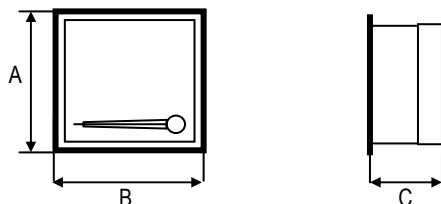
The instruments has designed for industrial applications which required precise, reliable and robust instruments for the display range and indicating. Each measuring instrument is suited for one of the following measuring tasks:

- DC voltage direct connection 0-150V, 0-300V or request.
- DC current direct 1, 3, 5, 10, , 20, 30A or see ordering. ( For DC48 dimension 48x48mm. max direct current is 5 A.)
- DC current with shunt resistor connection 60mV, 75mV, 150mV, 300mV or request.
- DC current direct 100uA, 300uA, 1mA, 5mA, 10mA, 20mA, 30mA, 50mA, 75mA, 100 mA, 150mA, 4...20mA or see ordering.
- more detail see ordering information.

### Description

Analog Panel Meter with Moving-Coil Movement and Spring-Loaded Pivot Bearings. Adjustments and balancing are especially easy for these rugged,compact instruments. Complete balancing of the model can be accomplished alone from factory.The pre-selection of measuring ranges is accomplished with clearly arranged numbering on ordering detail of the instruments. Zeroing Knop at the front meter's panel allow for precision zero adjustments. Measuring instruments for the remaining ranges are balanced to a standard value prior to shipment. Precision balancing can be performed at the factory upon request.

### Dimension



Size	A	B	C
48x48	48	48	65
72x72	72	72	65
96x96	96	96	65
144x144	144	144	65
80x80	80	80	65
120x120	120	120	65

- Dimension 144x144, 120x120, 96x96, 80x80, 72x72, 48x48mm.
- DIN43700, DIN43802, DIN43718, IEC1010, IEC473, IEC51, BS89
- Polycarbonate, self extinguishing and drip-proof per UL94V-0
- Rugged housing-non combustible, plastic-heat resistance.
- Accuracy  $\pm 1.5\%$  Or class1.0 Or customize.
- 90 Degree and 240 degree.

### Characteristic

#### Display

Scale Graduation  
Pointer

Coarse-fine  
Beam pointer with knife-edge comply with  
DIN 43802, parts 2 through 4.

#### Mechanical Design

Housing Material

Polycarbonate, self-extinguishing and drip-proof  
per UL94V-0

Mounting Fasteners

Standard type screw clamp

Scale

Interchangeable scales  
Scales may only be replaced under voltage-free  
conditions !

Replaceable

Bezels and glass face plates, May only be  
replaced under voltage-free conditions!

Terminals

M4 screw terminals with self-lifting terminal clips.  
Screws can be turned with standard screw  
drivers tool.

Contact Protection

Finger-safe full cover included

Accuracy

1.5, 1.0 or request.

#### Consumption

Ammeter

0.7  $\Omega$  for 4...20 mA.

Ammeter

8 mA for shunt operated.

Ammeter

60mV for direct connection.

Volt meter

1000  $\Omega$  / V.

#### Ambient Conditions

Operating Temperature

- 20 ... + 55  $^{\circ}\text{C}$

Storage Temperature

- 40 ... + 70  $^{\circ}\text{C}$

Relative Humidity

max. 95%

#### Compliance with Regulations

Protection

IP 52, front panel, Teminal IP20

Protection

Class 1

Size (mm.)	48x48	72x72	96x96	144x144	80x80	120x120
90 Deg.	DC48	DC72	DC96	DC144	DC80	DC120
240 Deg.	DC48-240	DC72-240	DC96-240	DC144-240	DC80-240	DC120-240
Scale Length	37mm.	63mm.	97mm.	120mm.	72mm.	108mm.
	73mm.	113mm.	151mm.	225mm.	136mm.	196mm.
Weight	0.20 Kg.	0.25 Kg.	0.40 Kg.	0.55 Kg.	0.30 Kg.	0.45 Kg.
	0.25 Kg.	0.30 Kg.	0.45 Kg.	0.65 Kg.	0.35 Kg.	0.55 Kg.
Cutout (mm.)	43x43	68x68	92x92	138x138	74x74	112x112
Max Voltage	300 V	600 V	600 V	600 V	600 V	600 V
Test Voltage	2.2 kV	3.25 kV	3.25 kV	3.25 kV	3.25 kV	3.25 kV

## Moving Coil DC Volt & Amp Meter Din panel, Analog meter



### Ordering Information.

#### 1) Model

DC48	Dimension	48x48 mm.	Scale	90 Degree
DC72	Dimension	72x72 mm.	Scale	90 Degree
DC96	Dimension	96x96 mm.	Scale	90 Degree
DC144	Dimension	144x144 mm.	Scale	90 Degree
DC80	Dimension	80x80 mm.	Scale	90 Degree
DC120	Dimension	120x120 mm.	Scale	90 Degree
DC48-240	Dimension	48x48 mm.	Scale	240 Degree
DC72-240	Dimension	72x72 mm.	Scale	240 Degree
DC96-240	Dimension	96x96 mm.	Scale	240 Degree
DC144-240	Dimension	144x144 mm.	Scale	240 Degree
DC80-240	Dimension	80x80 mm.	Scale	240 Degree
DC120-240	Dimension	120x120 mm.	Scale	240 Degree

#### 2) Input Type

DC Volt Meter

0-3, 0-5, 0-10, 0-15, 0-20, 0-30, 0-50, 0-75, 0-100, 0-120, 0-150V, 0-200, 0-250, 0-300V, 0-500V & customize

DC Amp Meter

Direct connection 1, 3, 5, 10, , 20, 30, 50, 60, 75, 100A<sup>1</sup>

Shunt resistor connection 60mV, 75mV, 150mV, 300mV or request.

Direct connection 100uA, 300uA, 1mA, 5mA, 10 mA, 20 mA, 30 mA, 50 mA, 75 mA, 100 mA, 150 mA, 300 mA, 4...20mA or request.

<sup>1</sup> for DC48 max 5A.

#### 3) Range

DC Volt Meter

DC Amp Meter

Factory standard range or specify when ordering or consult.

#### 4) Class

DC Volt Meter

DC Amp Meter

Class 1.5 is standard or others by request

#### Example

1) DC96 DC Volt Meter Input 0-150V, Range 0-150V\*  
class 1.5, Scale 90 Degree.

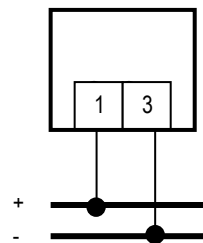
2) DC96 DC Am Meter Input shunt 100A/60mV, Range 0-100A\*,  
class 1.5, Scale 90 Degree.

\* factory standard range or specify when ordering or consult.

### Wiring Diagram.

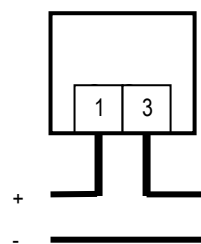
#### DC Volt Meter.

##### Direct Connection



#### DC Current Meter.

##### Direct Connection



##### Shunt Resistor Connection

