



**HO LUNG**  
ENTREPRISE CO., LTD

The company to discover

**Explore·Incredible  
expectation**



[www.ho-lung.com](http://www.ho-lung.com)

## About Us

Ho Lung Company was established in 1980, as a leading manufacturer in Taiwan, has been specializing in variety of taut band meter movement, pivot jewel movement, analog meter, shunt, meter accessories, stamping parts and CNC turning and milling parts over 40 years. With more than four decades' experience in this industry, we completely understand what our client need.

We do OEM/ODM for our clients if required. Our relative products are widely used in each single electronic machine or up to capacitor, current transformer, plastic injection, switchboard, mechanical machine, generating equipment, train, ship, simulator, electronic measuring instrument, generating equipment and power plant with numerous of industries.

## Supplying best quality and stability to our clients

We keep the production in Taiwan to ensure producing process can reach quality control requirement.

The team of Ho Lung is combined with a group of engineer and well-skilled employees. We continuously keep innovation, R&D, do more efforts to improve work efficiency, enhance production in automation way and provide highest quality to achieve customer requirement.

## 40 years experienced background in molding and customize design

What the Ho Lung offer is not only our general product, it's more concern about we have capability to propose a unique and flexible teamwork for accomplishing client needs. We had nearly 40 years well experienced background in mold, pressing, mechanical design and R&D. 50% of product components are manufactured and pressed in our own factory. All product specification, exceptional design, even to color can be discussed with our engineer team. We also offer service for customized design, develop tooling, plastic injection mold, pressing parts, CNC tuning and milling parts service.



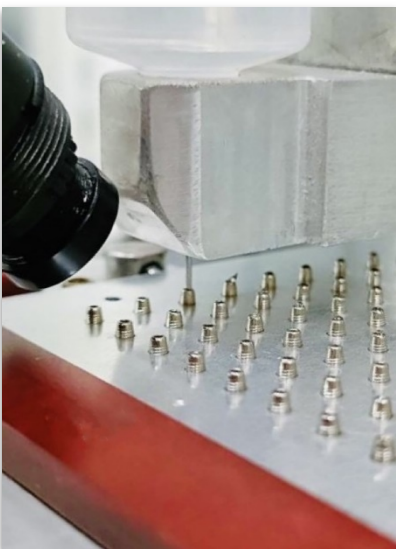
### **Technology**

Core of our company from over 40 years history and background is about precision machining and assembly technique.



### **Commitment to quality**

By adhering to fundamental principles, the management and employees work together in unity, dedicated to daily operations.



### **Total power**

Mold assembly, stamping, machining, plastic injection, and assembly processing are all completed within our relative companies, providing customers with total solutions and services."

**Our company is developing a wide variety of business**

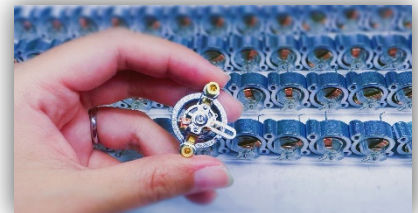


**Electrical measuring instrument**

One of the major manufacturer in Taiwan from meter parts to detailed assembly.

**Meter accessories, pivot jewel and taut band movement**

We are the only one who can produce meter parts and taut band movement to meter assembly in Taiwan

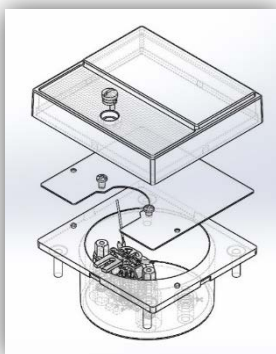
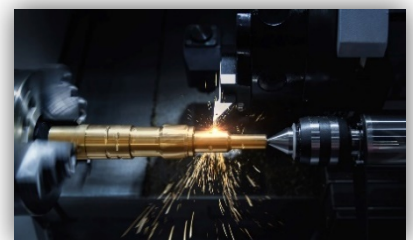


**Stamping manufacturing**

Mold design, assembly and manufacturing service for all clients

**CNC turning and milling**

Variety of parts for current transformer, capacitor, plastic injection and electronic machine.



**Customize project development (OEM / ODM)**

Utilize company's comprehensive coordination capabilities to achieve rapid immediacy and contribution in cooperative development with customer OEM & ODM service.

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## Taut Band Movement

250 Degree

### Description

Taut band suspension movement has demonstrated superiority over the pivot jewel movement in all types of analog panel meters. Benefits of taut band movement demonstrated superior accuracy, improved repeatability, lower temperature influences, and reduced operation influence. The manufacturing skills needed to produce a high-quality taut-band movement are scarce in the meter industry.

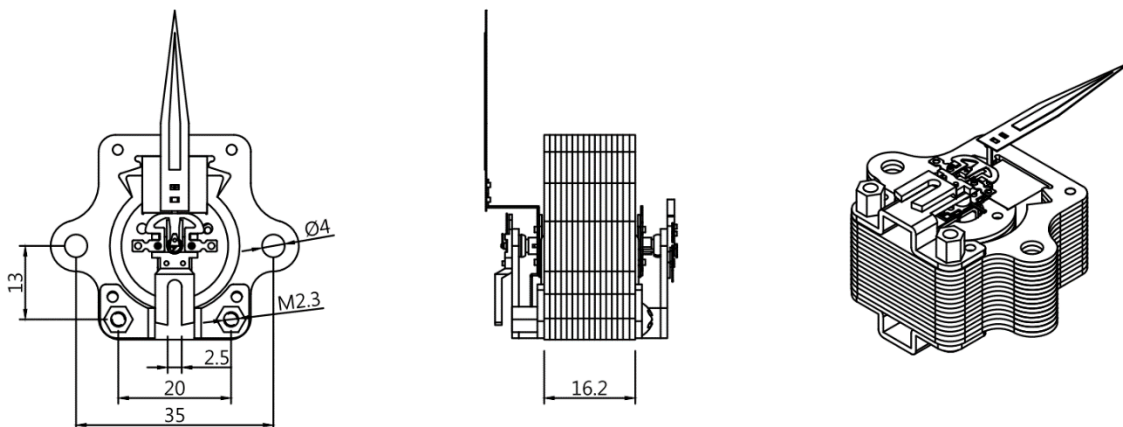


### Specification

- Moving Angle: 240° / 250°
- Pointer Shape: Tube/Lance/Knife-edge/Customized
- Pointer Length: DIN 48/72/96/Customized
- Pointer Color: Black / Red / White / Customized
- Temperature Range: -25°C ~ +40°C
- \*\*Custom specifications and design are available

Item Code	Frame Size	Measuring Range	Class(%)
<b>Direct Input DC Movement</b>			
TBM-25096	DIN 96 / Customized	25uA ~ 5mA	± 1.0/1.5/2.0
TBM-25072	DIN 72 / Customized	25uA ~ 5mA	± 1.0/1.5/2.0
TBM-25048	DIN 48 / Customized	25uA ~ 5mA	± 1.0/1.5/2.0

### Drawing.



## Taut Band Movement

90 Degree

### Description

Taut band suspension movement has demonstrated superiority over the pivot jewel movement in all types of analog panel meters.

Benefits of taut band movement demonstrated superior accuracy, improved repeatability, lower temperature influences, and reduced operation influence.

The manufacturing skills needed to produce a high-quality taut-band movement are scarce in the meter industry.



### Specification

-Moving Angle: 90° / 100°

-Pointer Shape: Tube/Lance/Knife-edge/Customized

-Pointer Length: DIN 48/72/96/Customized

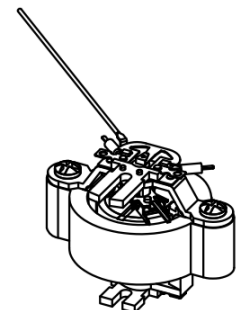
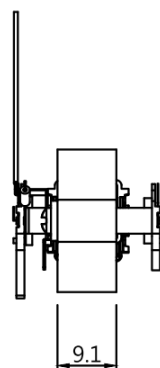
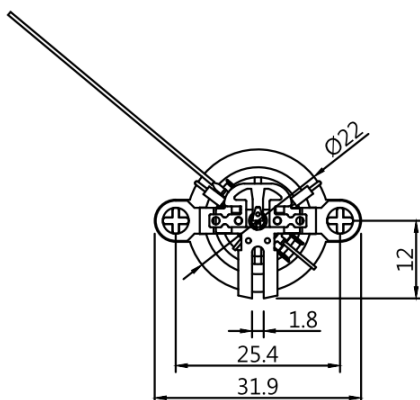
-Pointer Color: Black / Red / White / Customized

-Temperature Range: -25°C ~ +40°C

\*\*Custom specifications and design are available

Item Code	Frame Size	Measuring Range	Class(%)
<b>Direct Input DC Movement</b>			
TBM-50096	DIN 96 / Customized	25uA ~ 5mA	± 1.0/1.5/2.0
TBM-50072	DIN 72 / Customized	25uA ~ 5mA	± 1.0/1.5/2.0
TBM-50048	DIN 48 / Customized	25uA ~ 5mA	± 1.0/1.5/2.0

### Drawing.



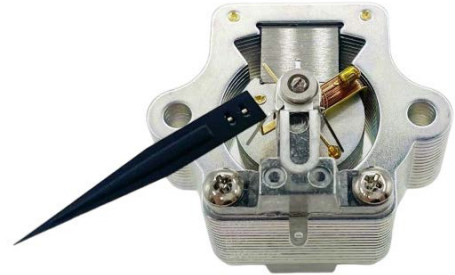
## Pivot and Jewel Movement

250 Degree

### Description

This meter movement is a self-shielded pivot and spring-loaded jewel meter, built for rugged industrial applications.

This shock resistant movement incorporates precision aligned, mechanically interlocked construction with very high torque.



### Specification

-Moving Angle: 240° / 250°

-Pointer Shape: Tube/Lance/Knife-edge/Customized

-Pointer Length: DIN 48/72/96/Customized

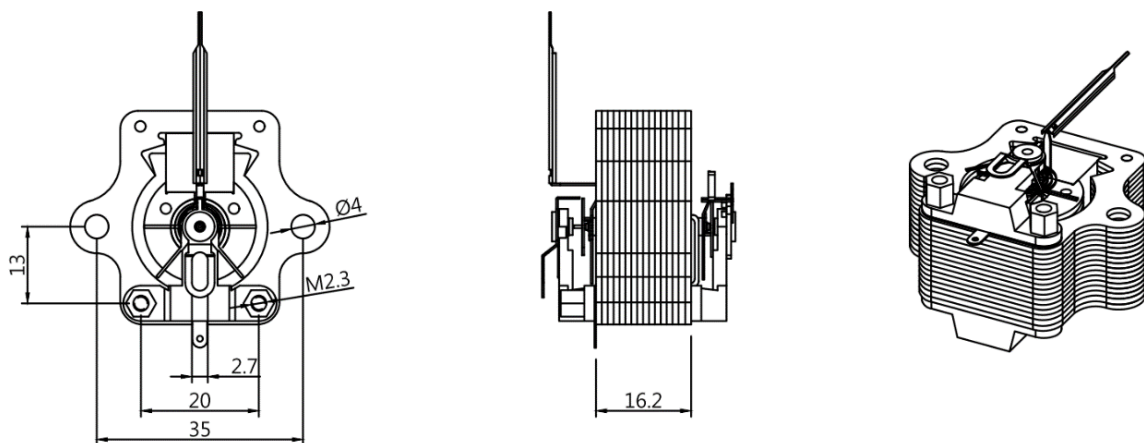
-Pointer Color: Black / Red / White / Customized

-Temperature Range: -25°C ~ +40°C

\*\*Custom specifications and design are available

Item Code	Frame Size	Measuring Range	Class(%)
<b>Direct Input DC Movement</b>			
MM-25096	DIN 96 / Customized	50uA ~ 5mA	± 1.0/1.5/2.0
MM-25072	DIN 72 / Customized	50uA ~ 5mA	± 1.0/1.5/2.0
MM-25048	DIN 48 / Customized	50uA ~ 5mA	± 1.0/1.5/2.0

### Drawing.



## Pivot and Jewel Movement

90 Degree

### Description

This meter movement is a self-shielded pivot and spring-loaded jewel meter, built for rugged industrial applications.

This shock resistant movement incorporates precision aligned, mechanically interlocked construction with very high torque.



### Specification

-Moving Angle: 90° / 100°

-Pointer Shape: Tube/Lance/Knife-edge/Customized

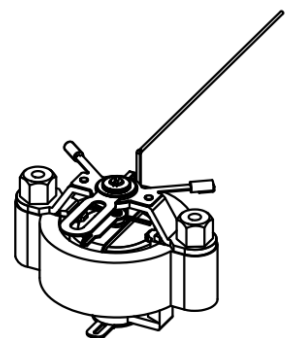
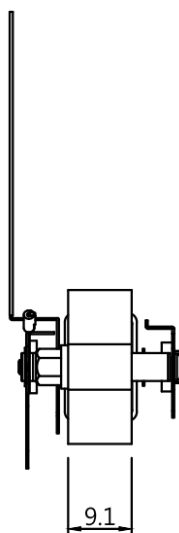
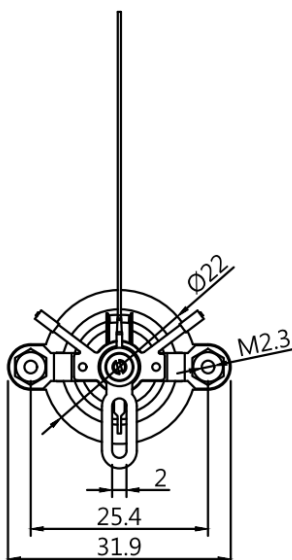
-Pointer Length: DIN 48/72/96/Customized

-Pointer Color: Black / Red / White / Customized

-Temperature Range: -25°C ~ +40°C

\*\*Custom specifications and design are available

Item Code	Frame Size	Measuring Range	Class(%)
<b>Direct Input DC Movement</b>			
MM-50096	DIN 96 / Customized	50uA ~ 5mA	± 1.0/1.5/2.0
MM-50072	DIN 72 / Customized	50uA ~ 5mA	± 1.0/1.5/2.0
MM-50048	DIN 48 / Customized	50uA ~ 5mA	± 1.0/1.5/2.0



## Pivot and Jewel Movement

90 Degree

Low Cost 2 holes

### Description

This meter movement is a self-shielded pivot and spring-loaded jewel meter, built for rugged industrial applications.

This shock resistant movement incorporates precision aligned, mechanically interlocked construction with very high torque.

### Specification

-Moving Angle: 90°

-Pointer Shape: Tube/Lance/Knife-edge/Customized

-Pointer Length: DIN 48/72/96/Customized

-Pointer Color: Black / Red / White / Customized

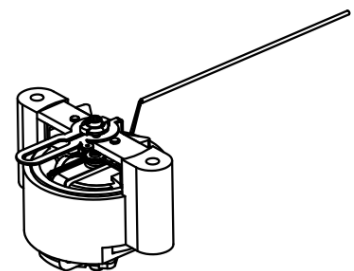
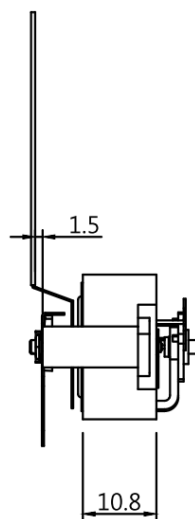
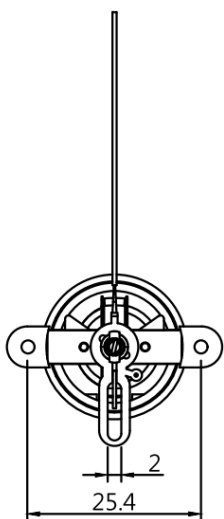
-Temperature Range: -25°C ~ +40°C

\*\*Custom specifications and design are available



Item Code	Frame Size	Measuring Range	Class(%)
<b>Direct Input DC Movement</b>			
MM-10096	DIN 96 / Customized	100uA ~ 5mA	± 1.5/2.5
MM-10072	DIN 72 / Customized	100uA ~ 5mA	± 1.5/2.5
MM-10048	DIN 48 / Customized	100uA ~ 5mA	± 1.5/2.5

### Drawing.



## Pivot and Jewel Movement

90 Degree

Low Cost 6 holes

### Description

This meter movement is a self-shielded pivot and spring-loaded jewel meter, built for rugged industrial applications.

This shock resistant movement incorporates precision aligned, mechanically interlocked construction with very high torque.

### Specification

-Moving Angle: 90°

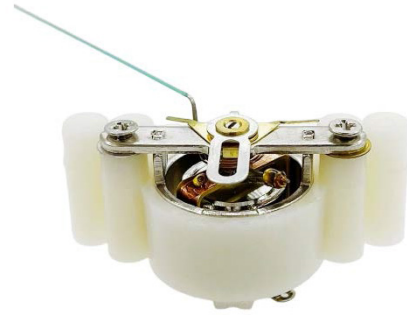
-Pointer Shape: Tube/Lance/Knife-edge/Customized

-Pointer Length: DIN 48/72/96/Customized

-Pointer Color: Black / Red / White / Customized

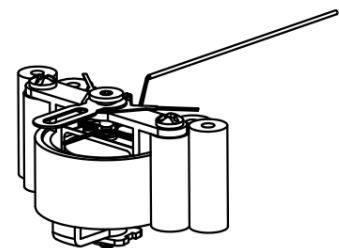
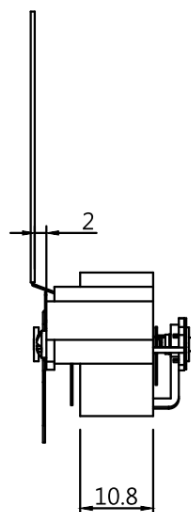
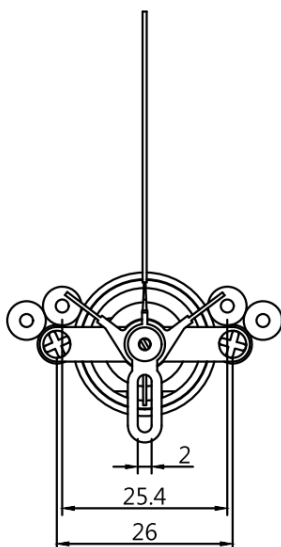
-Temperature Range: -25°C ~ +40°C

\*\*Custom specifications and design are available



Item Code	Frame Size	Measuring Range	Class(%)
<b>Direct Input DC Movement</b>			
MM-10096	DIN 96 / Customized	100uA ~ 5mA	± 1.5/2.5
MM-10072	DIN 72 / Customized	100uA ~ 5mA	± 1.5/2.5
MM-10048	DIN 48 / Customized	100uA ~ 5mA	± 1.5/2.5

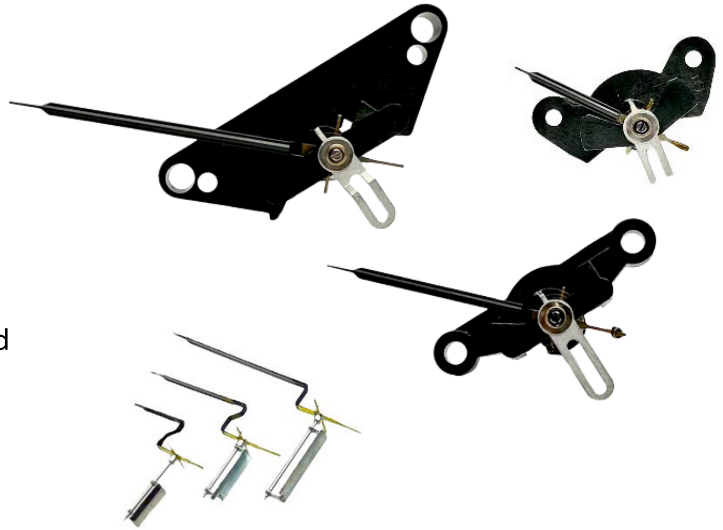
### Drawing.



## AC Moving Iron Movement

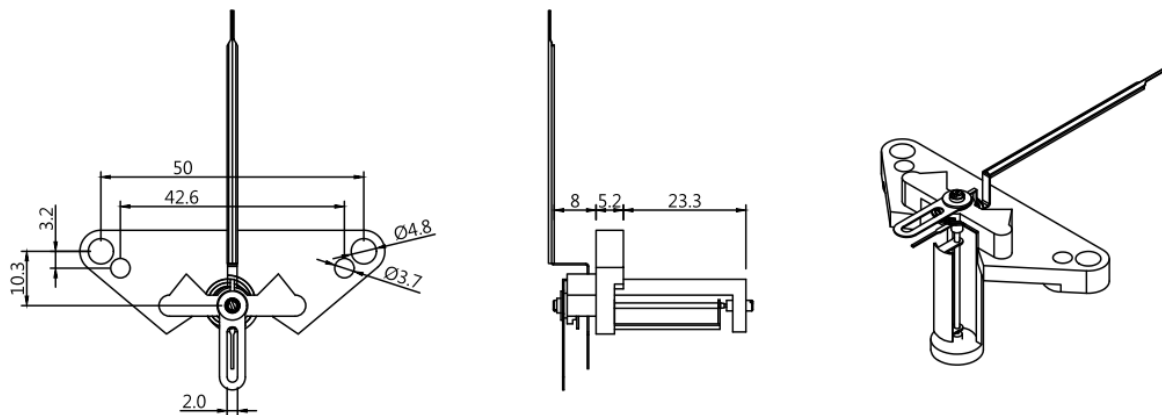
### Specification

- Moving Angle: 90°
- Pointer Shape: Tube/Lance/Knife-edge/Customized
- Pointer Length: DIN 48/72/96/Customized
- Pointer Color: Black / Red / White / Customized
- \*\*Custom specifications and design are available

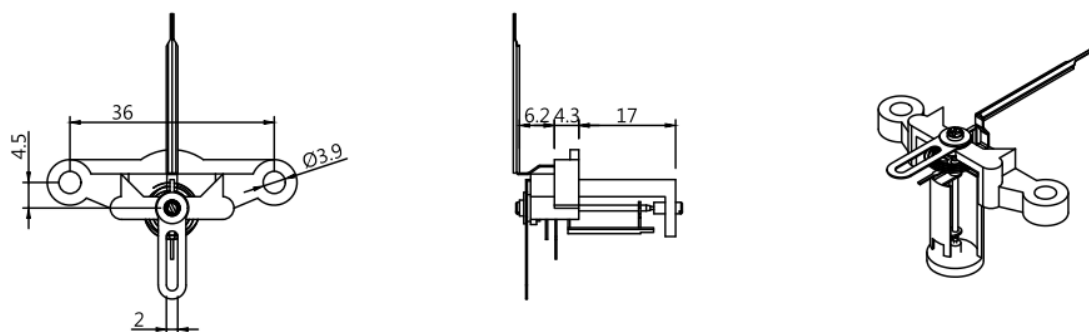


### Drawing.

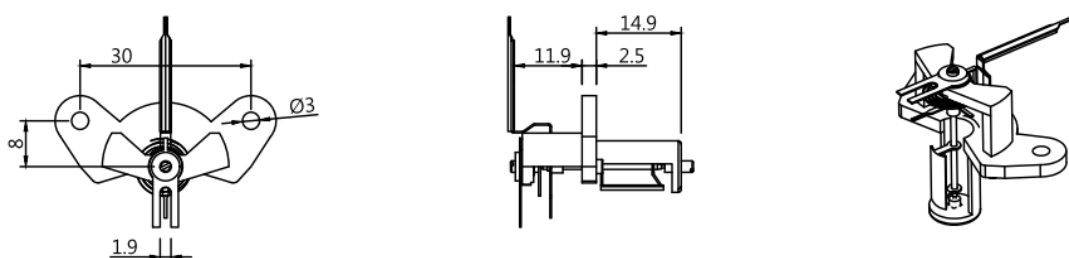
AC-96



AC-72



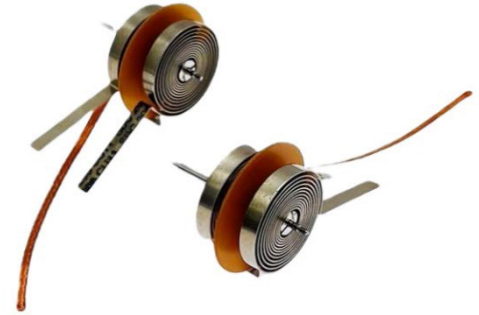
AC-48



## Bimetallic Movement

### Description

A bimetal coil consists of two layers different alloys firmly bonded together which having different coefficient of thermal expansion result: High expansion and low expansion. One layer consists of an alloy having a high coefficient of expansion while the other layer is one with a lower coefficient of expansion.



Bimetals have variety of applications as following description:

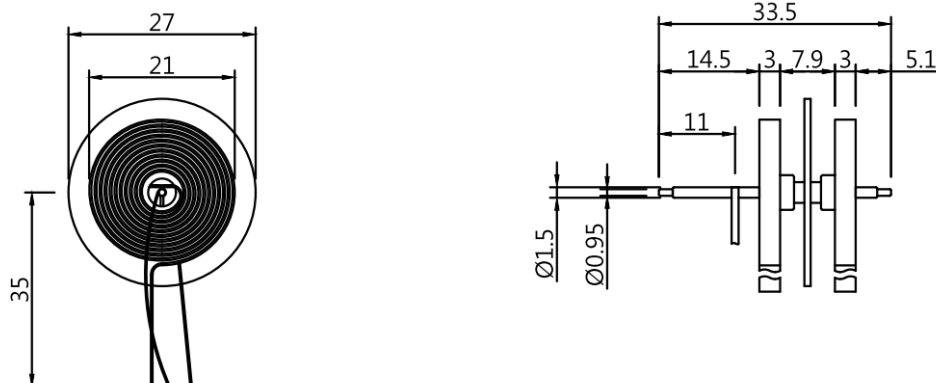
- Temperature indicator
- Control of parameter against temperature.
- Compensation.

### Specification

- 5A CT operated
- Bimetal movement class  $\pm 3\%$  combined with moving iron class  $\pm 1.5\%$
- 8 min 5A, 15min 5A
- 8 min 1A, 15min 1A (with internal current transformer)

Item Code	Frame Size	Measuring Range	Mode
<b>Direct Input DC Movement</b>			
MDM-96	DIN 96 / Customized	5A CT cooperate with	15 mins
MDM-72	DIN 72 / Customized	5A CT cooperate with	15 mins

### Drawing.



## Analog Meter Relay



### Description

This meter is applied to AC/DC field.

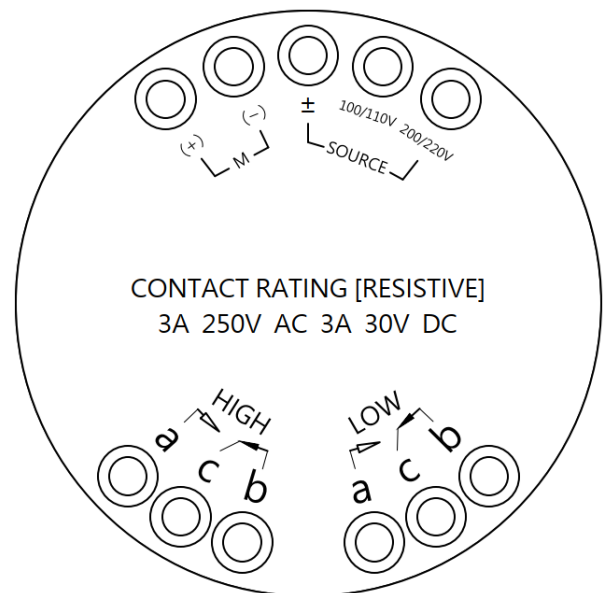
It can be acted as an indicator for AC/DC current of AC/DC voltage. Owing to it has the setting mechanism for the upper limit and lower limit. It also provides a ON/OFF switch for the system.

Beyond the setting condition, the warning light will go on and automatically turn off the power. It plays as a limit controller. For instance, if the AC/DC load is over the high limit or low limit, it may damage to the operating machine and affect to its normal function. Meanwhile, it may cause the machine breakdown.

To ensure the operation in normal condition, we recommend install this controller to precisely monitor the operating condition.

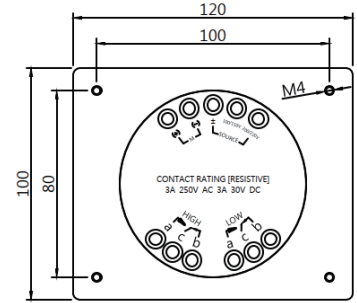
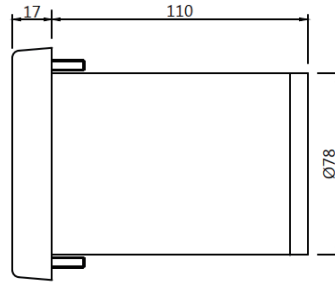
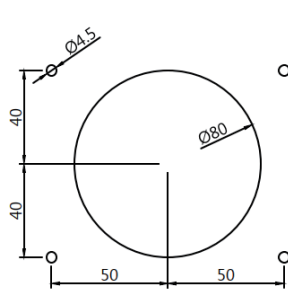
### Specification

<b>Standard Scale</b>	V: 0-100,0-200...0-1000V etc. A: 0-100/5A,0-200/5A...0-1000/5A etc.
<b>Input</b>	V: AC 110/220V
<b>Setting</b>	HL (high/low) / H (high)
<b>Control System</b>	ON-OFF ON-OFF Action
<b>Temperature Range</b>	0-60°C
<b>Power Consumption</b>	5W Approx.
<b>Consumption</b>	2.5VA or less
<b>Supply Voltage</b>	±15% Rated Voltage
<b>Net Weight</b>	720g / 920g

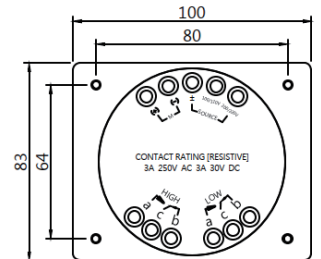
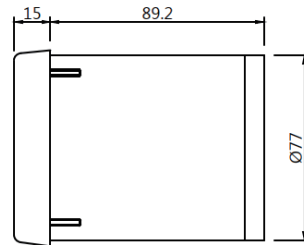
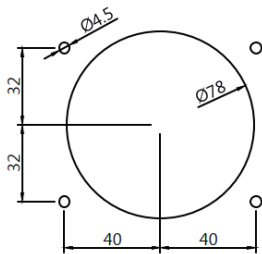


## Drawing.

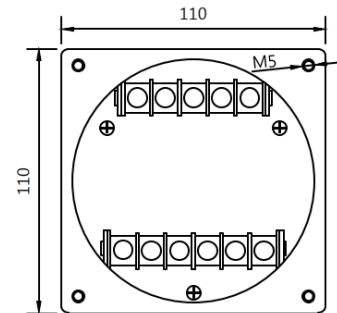
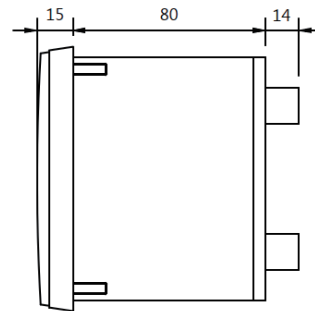
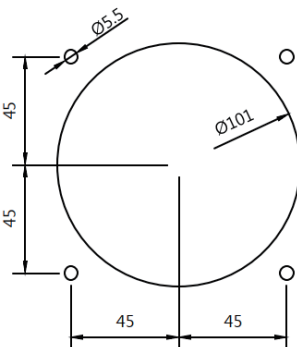
HL-120S (90°)



HL-100S (90°)



LS-110H (240°/250°)



Item Code	Frame Size	Measuring Range	Class(%)
<b>Taut Band Movement</b>			
HL-120S-TB	120 x 100	DC Ampere: 100uA,500uA,1mA,10mA-20A	± 1.0/1.5
HL-100S-TB	100 x 83	DC Voltage: 1V-1000V AC Ampere: 1-5A / 10-30A (CT)	
LS-110H-TB	110 x 110	AC Voltage: 1V-1000V	
<b>Pivot and Jewel Movement</b>			
HL-120S	120 x 100	DC Ampere: 100uA,500uA,1mA,10mA-20A	± 1.5/2.0
HL-100S	100 x 83	DC Voltage: 1V-1000V AC Ampere: 1-5A / 10-30A (CT)	
LS-110H	110 x 110	AC Voltage: 1V-1000V	

## Switch Board Meter



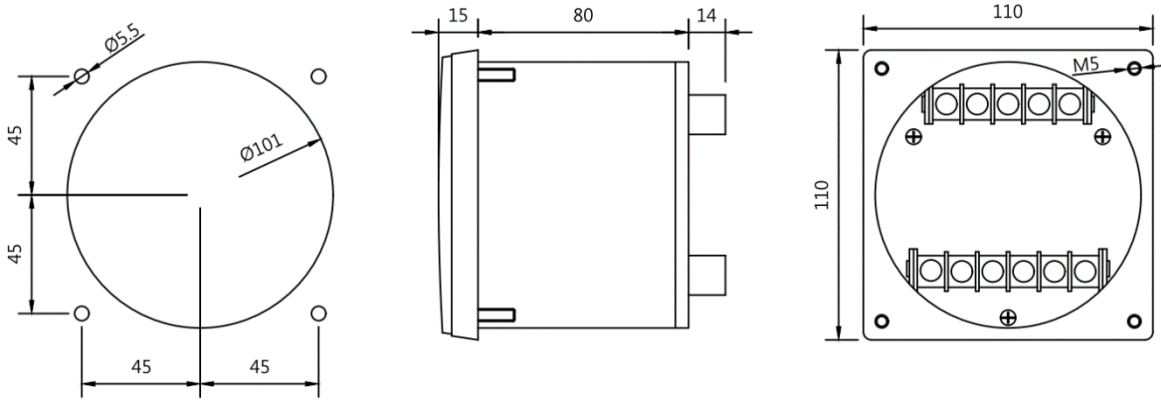
### Specification

- 1A / 5A CT operated
- Full scale deflection: 240° / 250°
- Ranges higher than 30A DC, use external shunt with 50mV DC Ammeter
- Ranges higher than 300V DC, use external Multiplier with a 1mA Voltmeter
- Ranges higher than 5A AC, use external Current Transformer with 5mA Ammeter
- Ranges higher than 600V AC, use external Potential Transformer with 150V AC Voltmeter

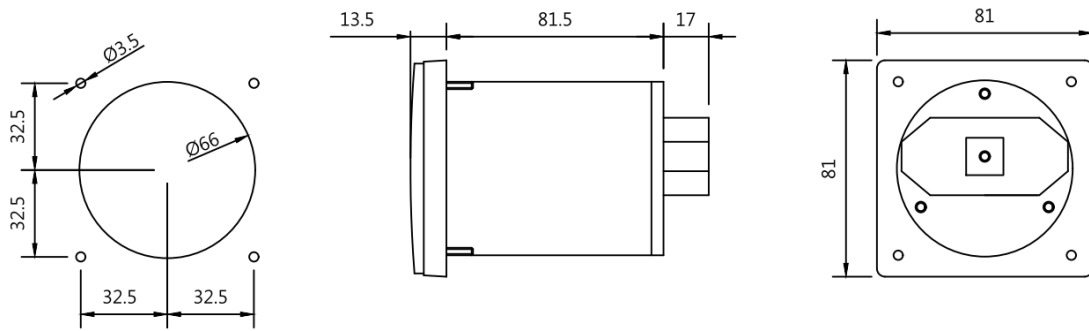
Item Code	Frame Size	Measuring Range	Input	Class(%)
<b>AC Ammeter</b>				
LS110-ACA	110 X 110	1 ~ 10000A	1A / 5A	± 1.0/1.5
LS80-ACA	81 X 81	1 ~ 10000A	1A / 5A	± 1.0/1.5
<b>AC Voltmeter</b>				
LS110-ACV	110 X 110	150 ~ 600V	10V ~ 600V	± 1.0/1.5
LS80-ACV	81 X 81	150 ~ 600V	10V ~ 600V	± 1.0/1.5
<b>DC Ammeter</b>				
LS110-DCA	110 X 110	1 ~ 10000A	100uA~5A / 50mV~200mV	± 1.0/1.5
LS80-DCA	81 X 81	1 ~ 10000A	100uA~5A / 50mV~200mV	± 1.0/1.5
<b>DC Voltmeter</b>				
LS110-DCV	110 X 110	150 ~ 600V	1V ~ 1000V	± 1.0/1.5
LS80-DCV	81 X 81	150 ~ 600V	1V ~ 1000V	± 1.0/1.5
<b>Signal meter</b>				
LS110-DCS	110 X 110	1 ~ 10000A	DC 4-20mA / DC 10V	±1.5
LS80-DCS	81 X 81	1 ~ 10000A	DC 4-20mA / DC 10V	±1.5
<b>Wattmeter (KW)</b>				
LS110-KW	110 X 110	As required	1P / 3P3W / 3P4W	± 1.0/1.5
LS80-KW	81 X 81	As required	1P / 3P3W / 3P4W	± 1.0/1.5
<b>Power Factor Meter (COSØ)</b>				
LS110-COS	110 X 110	0.5CAP-1-0.5IND	1P / 3P	±1.5
LS80-COS	81 X 81	0.5CAP-1-0.5IND	1P / 3P	±1.5
<b>Frequency Meter (HZ)</b>				
LS110-HZ	110 X 110	45-65HZ	45-65HZ / 45-55HZ / 55-65HZ	±1.5
LS80-HZ	81 X 81	45-65HZ	45-65HZ / 45-55HZ / 55-65HZ	±1.5

**Drawing.**

LS110

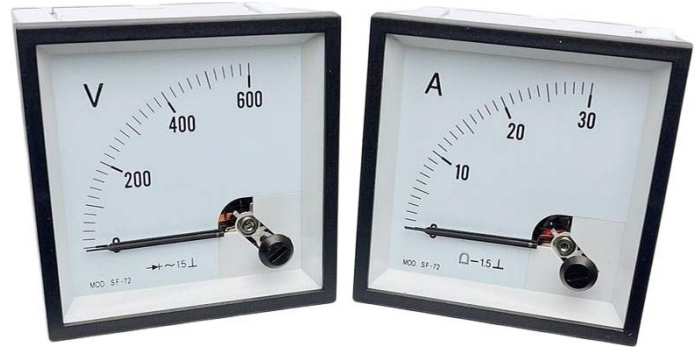


LS80



## Analog Panel Meter

DIN Series - Moving Coil



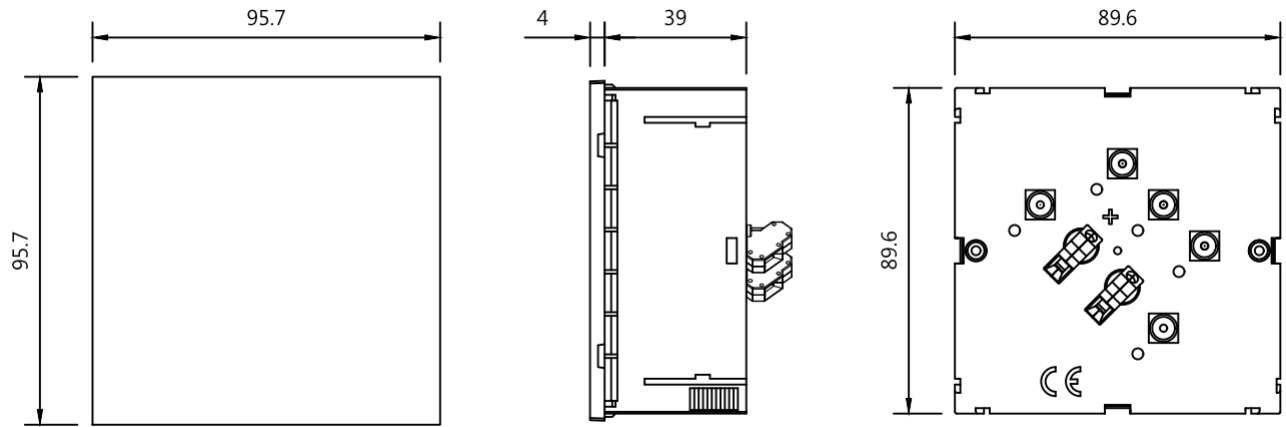
### Specification

- 50uA~50A direct connected
- 50mV~600V direct connected
- 50mV~300mV shunt operated
- AC Ampere Overload Scale: 200%, 300%, 600%

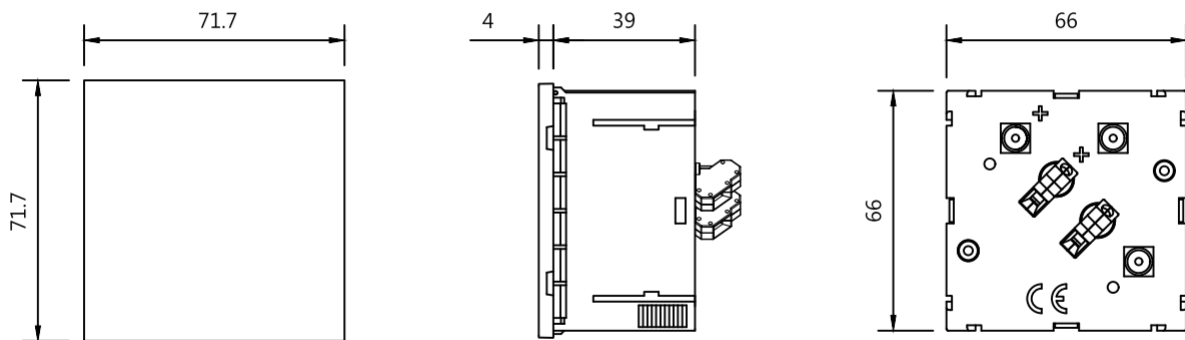
Item Code	Frame Size	Measuring Range	Input	Class(%)
<b>Direct Input DC Ammeter</b>				
MDCA-96	96 X 96	1 ~ 100A		±1.5
MDCA-72	72 X 72	1 ~ 100A		±1.5
MDCA-48	48 X 48	1 ~ 100A		±1.5
<b>With Shunt DC Ammeter</b>				
MDCA-96S	96 X 96	100A ~ 6000A	/ 5A	±1.5
MDCA-72S	72 X 72	100A ~ 6000A	/ 5A	±1.5
MDCA-48S	48 X 48	100A ~ 6000A	/ 5A	±1.5
<b>Direct Input DC Voltmeter</b>				
MDCV-96	96 X 96	100 ~ 600V	1V ~ 600V	±1.5
MDCV-72	72 X 72	100 ~ 600V	1V ~ 600V	±1.5
MDCV-48	48 X 48	100 ~ 600V	1V ~ 600V	±1.5

**Drawing.**

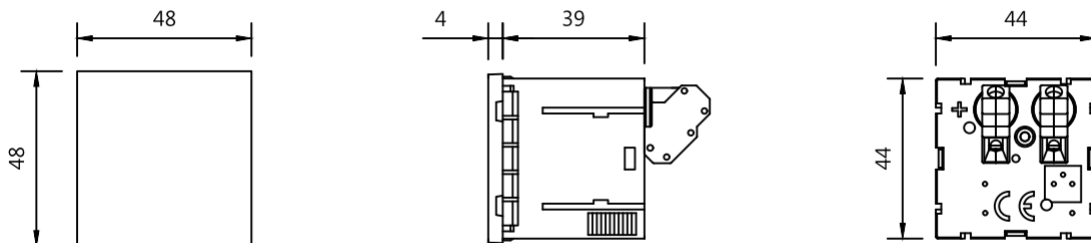
MDC 96



MDC 72



MDC 48



## Analog Panel Meter

DIN Series - Moving Iron



### Specification

-1A~50A direct connected

-1A / 5A CT operated

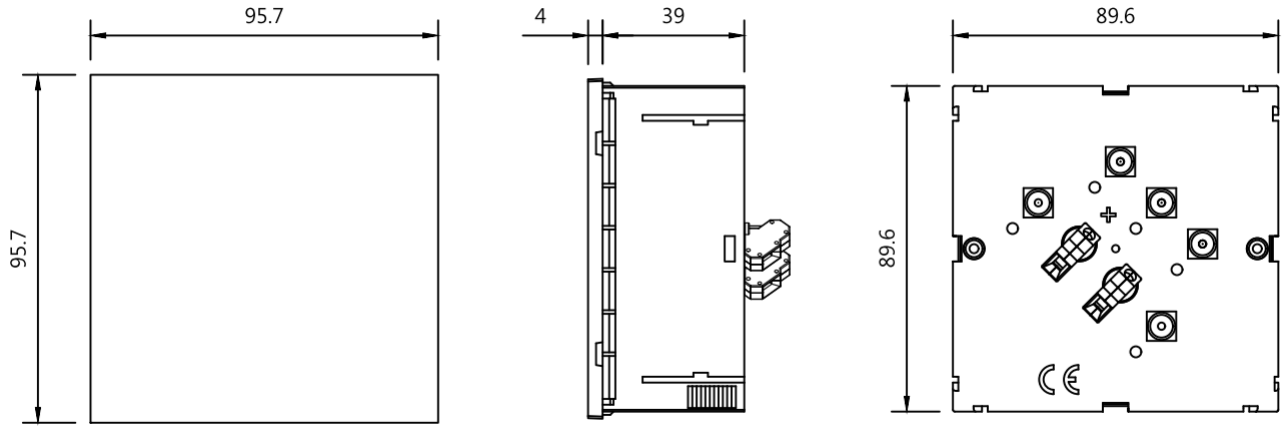
-100V~600V direct connected

-AC Ampere Overload Scale: 200%, 300%, 600%

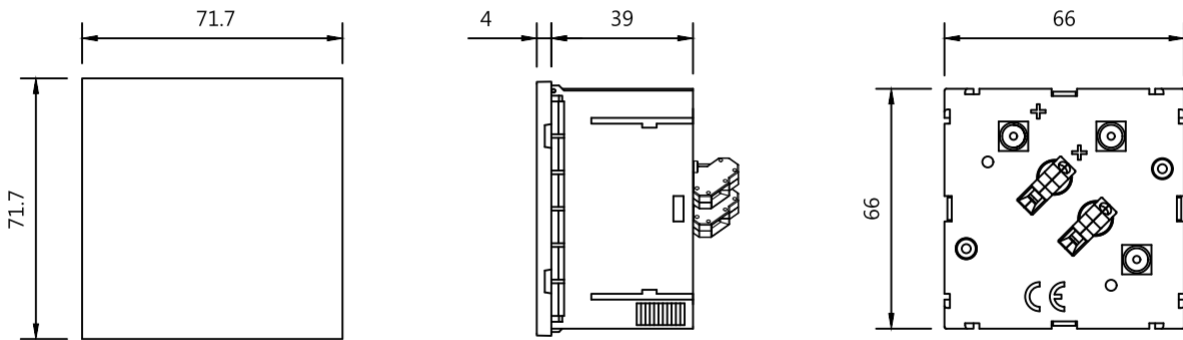
Item Code	Frame Size	Measuring Range	Input	Class(%)
<b>Direct Input AC Ammeter</b>				
MACA-96	96 X 96	1 ~ 100A		±1.5
MACA-72	72 X 72	1 ~ 100A		±1.5
MACA-48	48 X 48	1 ~ 100A		±1.5
<b>With CT AC Ammeter</b>				
MACA-96CT	96 X 96	100A ~ 6000A	/ 5A	±1.5
MACA-72CT	72 X 72	100A ~ 6000A	/ 5A	±1.5
MACA-48CT	48 X 48	100A ~ 6000A	/ 5A	±1.5
<b>Direct Input AC Voltmeter</b>				
MACV-96	96 X 96	100 ~ 600V	10V ~ 600V	±1.5
MACV-72	72 X 72	100 ~ 600V	10V ~ 600V	±1.5
MACV-48	48 X 48	100 ~ 600V	10V ~ 600V	±1.5
<b>With PT AC Voltmeter</b>				
MACV-96CT	96 X 96	0 ~ 45KV	/ 5A	±1.5
MACV-72CT	72 X 72	0 ~ 45KV	/ 5A	±1.5
MACV-48CT	48 X 48	0 ~ 45KV	/ 5A	±1.5

**Drawing.**

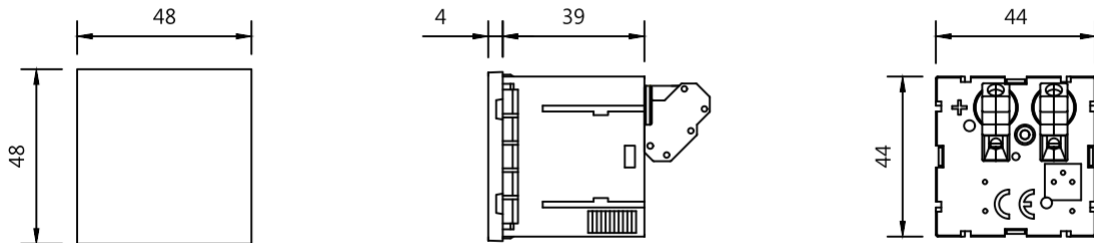
MAC 96



MAC 72



MAC 48



## Analog Panel Meter

DIN Series - Wide Angle



### Specification

-1A / 5A CT operated

-Full scale deflection: 240° / 250°

-Ranges higher than 30A DC, use external shunt with 50mV DC Ammeter

-Ranges higher than 300V DC, use external Multiplier with a 1mA Voltmeter

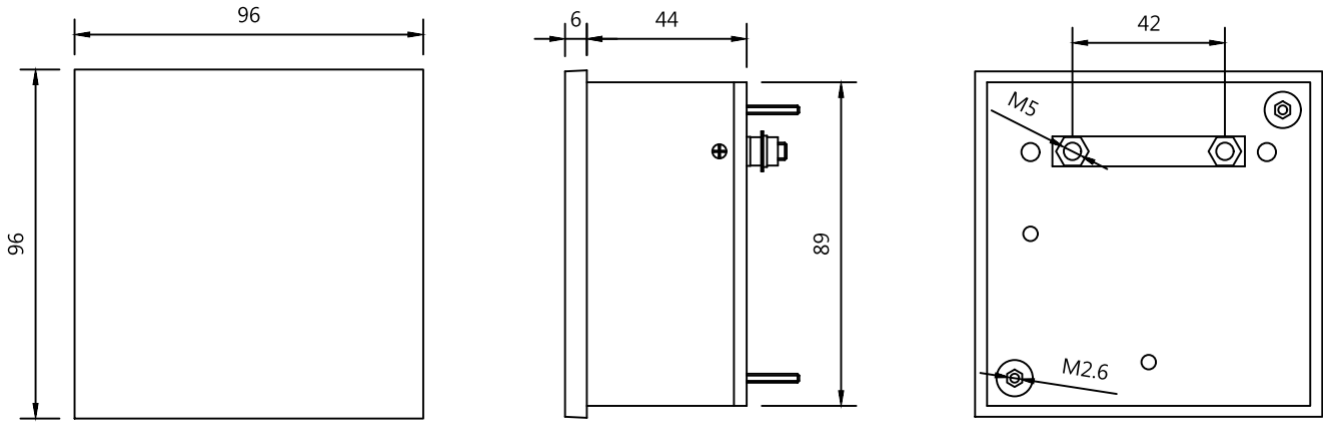
-Ranges higher than 5A AC, use external Current Transformer with 5mA Ammeter

-Ranges higher than 600V AC, use external Potential Transformer with 150V AC Voltmeter

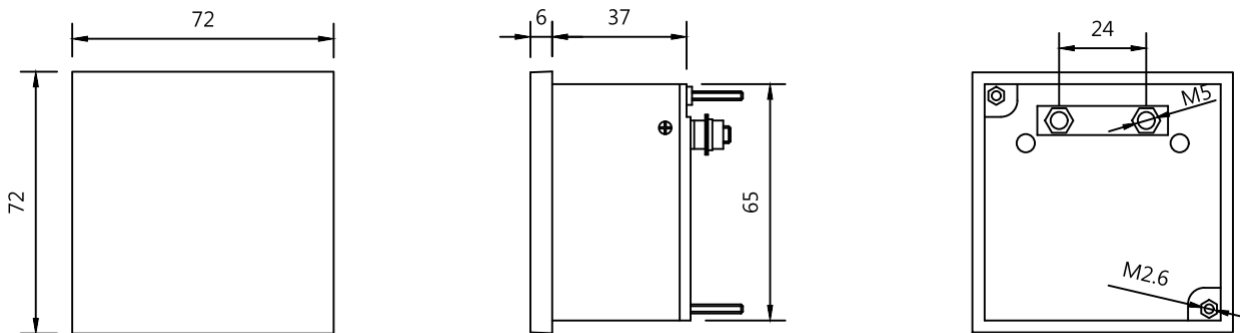
Item Code	Frame Size	Measuring Range	Input	Class(%)
<b>AC Ammeter</b>				
WMACA-96	96 X 96	1 ~ 10000A	1A / 5A	± 1.0/1.5
WMACA-72	72 X 72	1 ~ 10000A	1A / 5A	± 1.0/1.5
<b>AC Voltmeter</b>				
WMACV-96	96 X 96	150 ~ 600V	10V ~ 600V	± 1.0/1.5
WMACV-72	72 X 72	150 ~ 600V	10V ~ 600V	± 1.0/1.5
<b>DC Ammeter</b>				
WMDCA-96	96 X 96	1 ~ 10000A	100uA~5A / 50mV~200mV	± 1.0/1.5
WMDCA-72	72 X 72	1 ~ 10000A	100uA~5A / 50mV~200mV	± 1.0/1.5
<b>DC Voltmeter</b>				
WMDCV-96	96 X 96	150 ~ 600V	1V ~ 1000V	± 1.0/1.5
WMDCV-72	72 X 72	150 ~ 600V	1V ~ 1000V	± 1.0/1.5
<b>Signal meter</b>				
WMDCS-96	96 X 96	1 ~ 10000A	DC 4-20mA / DC 10V	±1.5
WMDCS-72	72 X 72	1 ~ 10000A	DC 4-20mA / DC 10V	±1.5
<b>Wattmeter (KW)</b>				
WMKW-96	96 X 96	As required	1P / 3P3W / 3P4W	± 1.0/1.5
WMKW-72	72 X 72	As required	1P / 3P3W / 3P4W	± 1.0/1.5
<b>Power Factor Meter (COSØ)</b>				
WMCOS-96	96 X 96	0.5CAP-1-0.5IND	1P / 3P	±1.5
WMCOS-72	72 X 72	0.5CAP-1-0.5IND	1P / 3P	±1.5
<b>Frequency Meter (HZ)</b>				
WMHZ-96	96 X 96	45-65HZ	45-65HZ / 45-55HZ / 55-65HZ	±1.5
WMHZ-72	72 X 72	45-65HZ	45-65HZ / 45-55HZ / 55-65HZ	±1.5

**Drawing.**

WM 96



WM 72



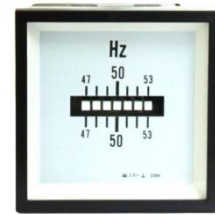
# Analog Panel Meter

DIN Series - Frequency



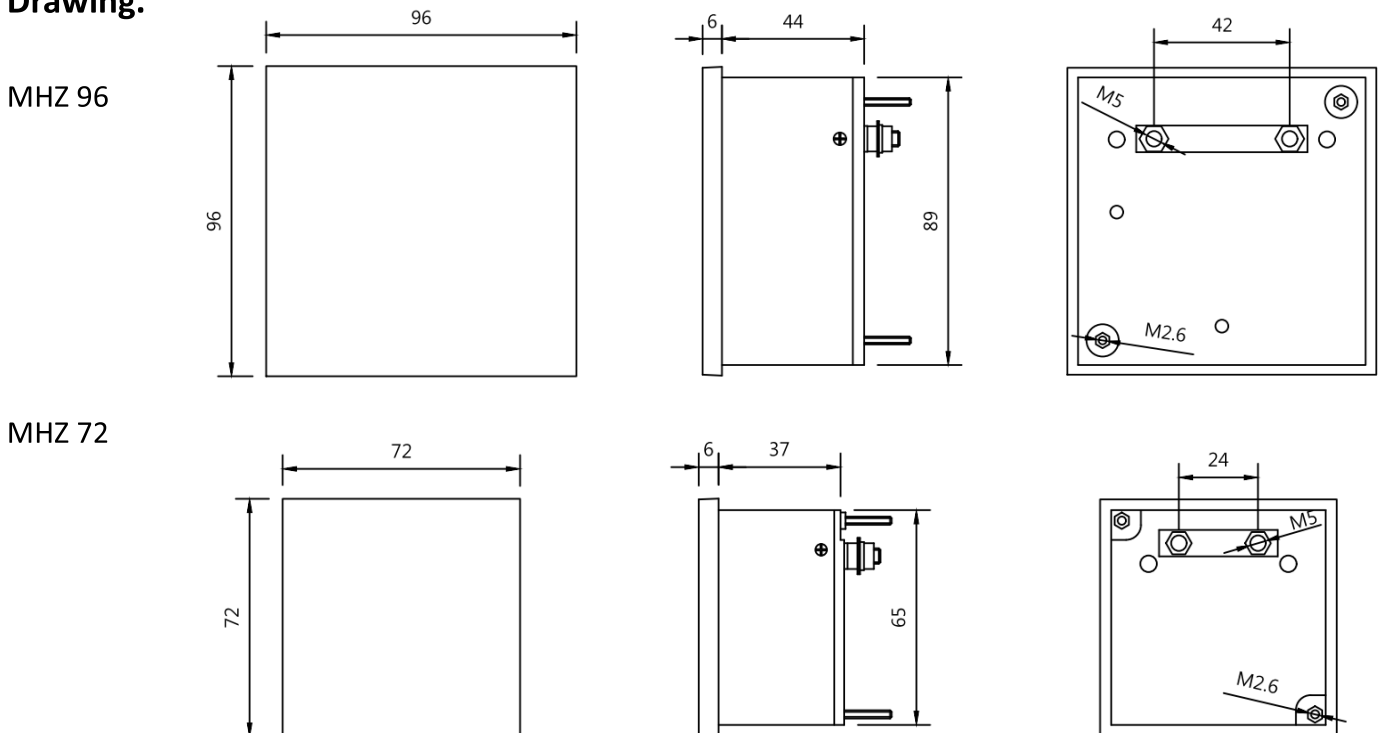
## Specification

- Full scale deflection: 90°
- Reeds type is formed by a number of vibrating reeds:7 or 11 reeds
- Rated Voltage: 110V,220V,380V,440V
- Measuring range from 45Hz~65Hz
- RPM scale are available



Item Code	Frame Size	Measuring Range	Input	Class(%)
<b>Pointer Hz Meter</b>				
MHZ-96P	96 X 96	45 ~ 65Hz	45-65HZ / 45-55HZ / 55-65HZ	± 1.5/2.5
MHZ-72P	72 X 72	45 ~ 65Hz	45-65HZ / 45-55HZ / 55-65HZ	± 1.5/2.5
<b>Reeds Frequency Meter</b>				
MHZ-96R	96 X 96	45 ~ 65Hz / 55 ~ 65 Hz	11reeds	± 1.5/2.5
MHZ-72R	72 X 72	45 ~ 65Hz / 55 ~ 65 Hz	7reeds	± 1.5/2.5

## Drawing.



# Analog Panel Meter

DIN Series – Power Factor



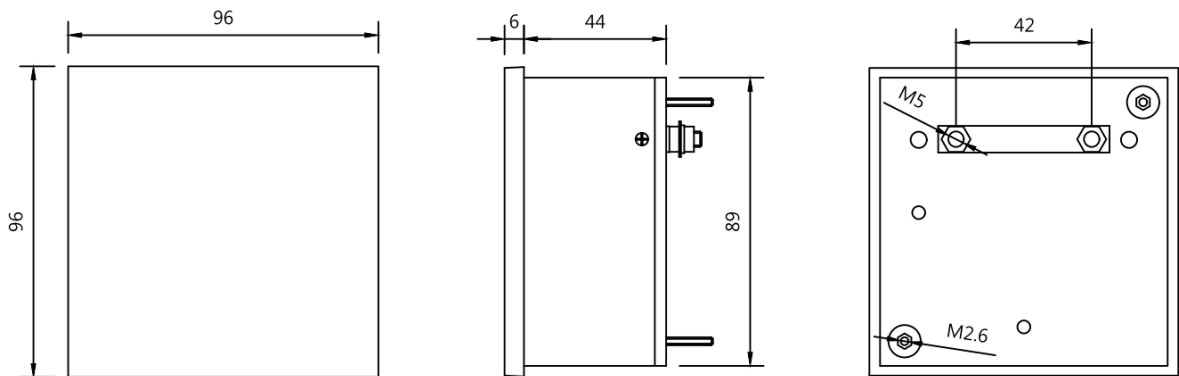
## Specification

- 1A / 5A CT operated
- Full scale deflection: 90°
- Ranges higher than 30A DC, use external shunt with 50mV DC Ammeter
- Ranges higher than 600V DC, use external Multiplier with a 1mA Voltmeter
- Ranges higher than 5A AC, use external Current Transformer with 5mA Ammeter
- Ranges higher than 600V AC, use external Potential Transformer with 150V AC Voltmeter

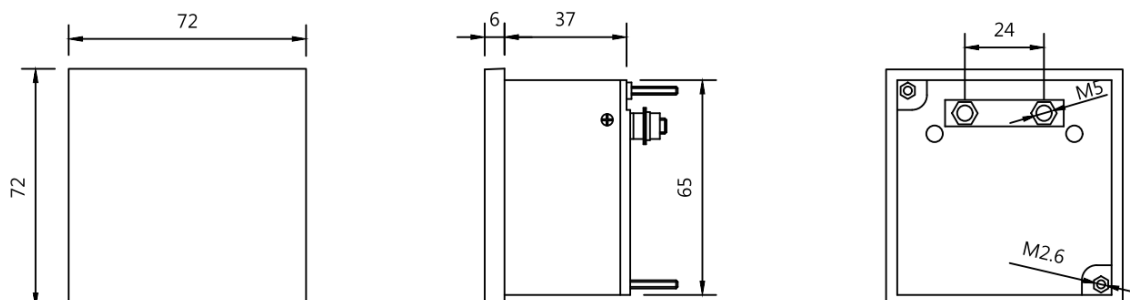
Item Code	Frame Size	Measuring Range	Input	Class(%)
MCOS-96	96 X 96	0.5CAP-1-0.5IND	1P / 3P	±1.5
MCOS-72	72 X 72	0.5CAP-1-0.5IND	1P / 3P	±1.5

## Drawing.

MCOS 96



MHZ 72



# Analog Panel Meter

DIN Series – Wattmeter



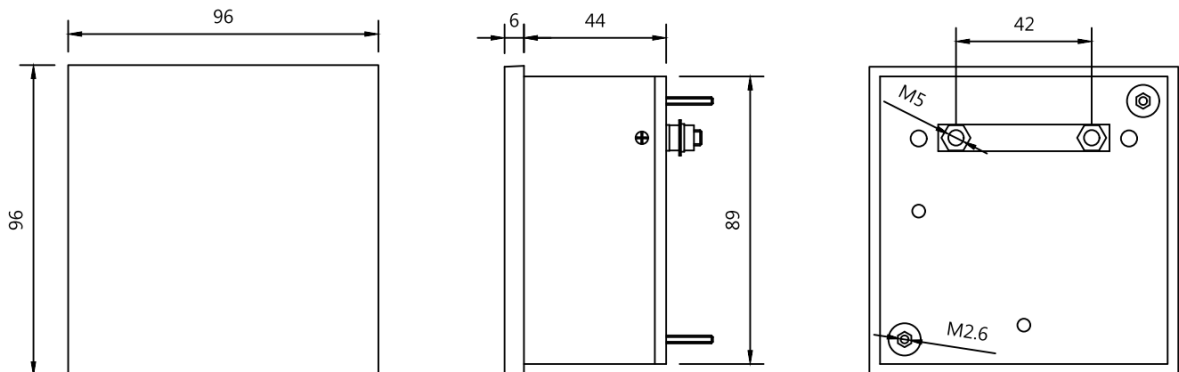
## Specification

- 1A / 5A CT operated
- Full scale deflection: 90°
- Ranges higher than 30A DC, use external shunt with 50mV DC Ammeter
- Ranges higher than 600V DC, use external Multiplier with a 1mA Voltmeter
- Ranges higher than 5A AC, use external Current Transformer with 5mA Ammeter
- Ranges higher than 600V AC, use external Potential Transformer with 150V AC Voltmeter

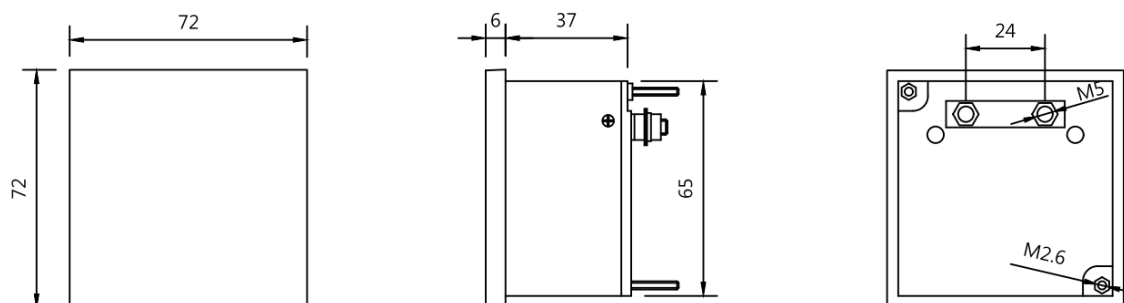
Item Code	Frame Size	Measuring Range	Input	Class(%)
MKW-96	96 X 96	As required	1P / 3P3W / 3P4W	± 1.0/1.5
MKW-72	72 X 72	As required	1P / 3P3W / 3P4W	± 1.0/1.5

## Drawing.

MHZ 96



MHZ 72



## Analog Panel Meter

Maximum Demand Indicator

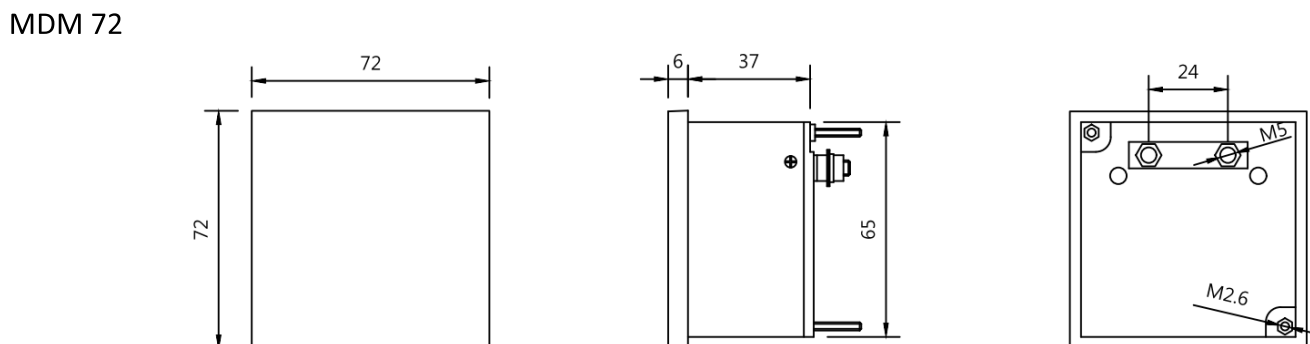
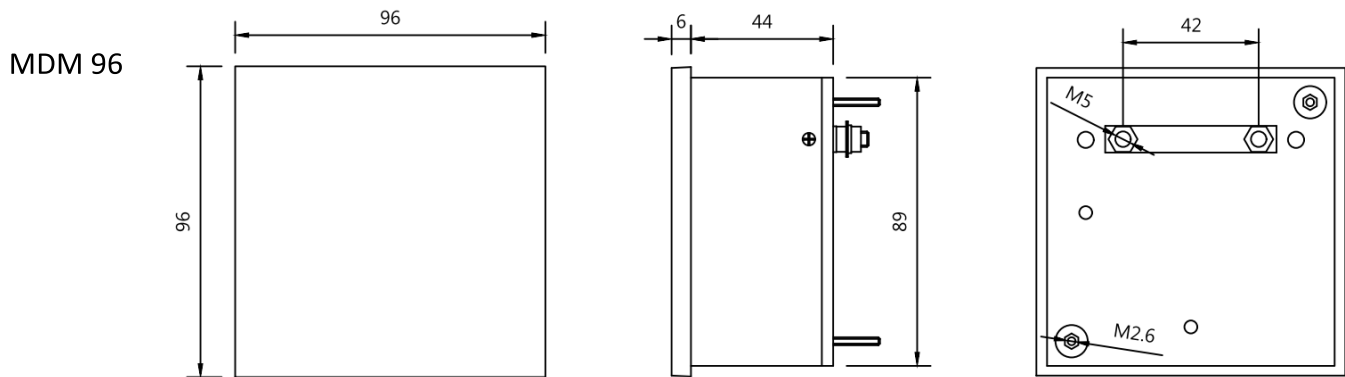


### Specification

- 5A CT operated
- Time lag 8min/15min
- 1A 8min/15min (with internal current transformer)

Item Code	Frame Size	Measuring Range	Input	Class(%)
<b>Two Pointers MD Meter</b>				
MDM-962	96 X 96	5 ~ 1000A	/ 5A	±3.0
MDM-722	72 X 72	5 ~ 1000A	/ 5A	±3.0
<b>Three Pointers MD Meter</b>				
MDM-963	96 X 96	5 ~ 1000A	/ 5A	±3.0
MDM-723	72 X 72	5 ~ 1000A	/ 5A	±3.0

### Drawing.



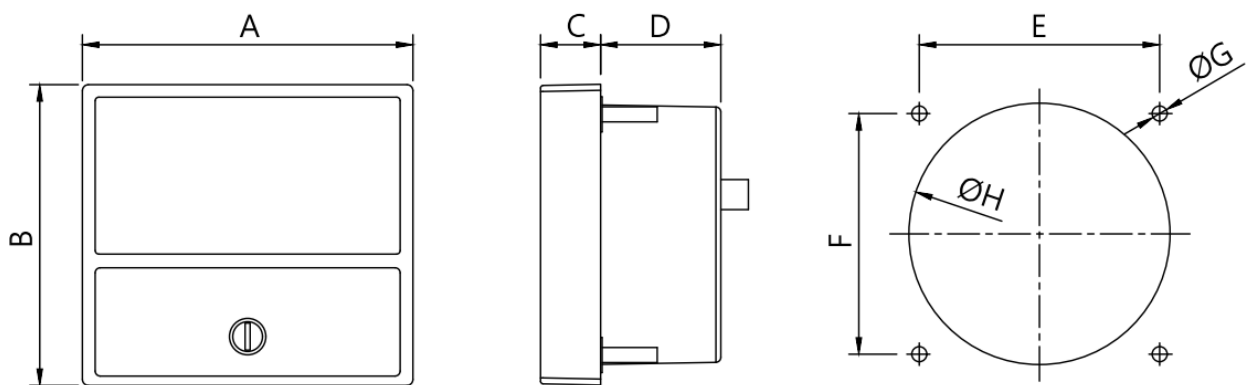
## Analog Panel Meter



### Specification

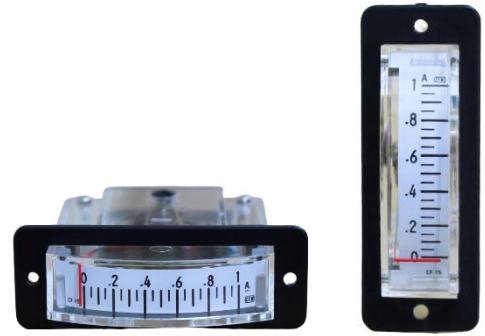
- Measuring Range
- Moving Coil Type: 50uA-10A DC/ 3V-1000V DC
- Moving Iron Type: 50mA-20A AC/ 150V-600V AC
- Rectifier Type: 3V-600V AC
- Accuracy: Class 2.5%

### Drawing.



Model	A	B	C	D	E	F	G	H
120	120	120	18	49	100	105	5.5	110
120S	120	100	14	23	103	82	4.5	70
100	101	101	14	25	80	80	3.5	84
100S	100	80	14	23	84	63	4.5	65
100Y	90	90	13	30	-	-	3.5	70
86	86	79	15	24	65	65	3.5	65
80	80	80	14	24	65	65	3.5	64
680	80	60	13	24	48	46	3.5	51
670	70	60	10	23	48	48	3.5	51
65	65	65	14	24	51	51	3.5	52
60	60	60	12	24	49	49	3.5	51
45	50	50	10	22	38	38	3.5	44
38	44	44	10	23	32	32	3.5	38

## Edgewise Panel Meter



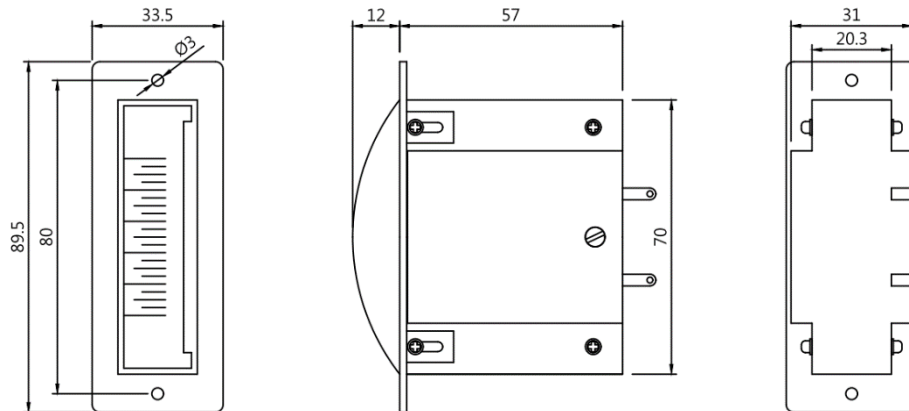
### Specification

- Pointer Shape: Lance/Knife-edge/Customized
- Pointer Color: Black / Red / White / Customized
- Temperature Range: -25°C ~ +40°C
- \*\*Custom specifications and design are available

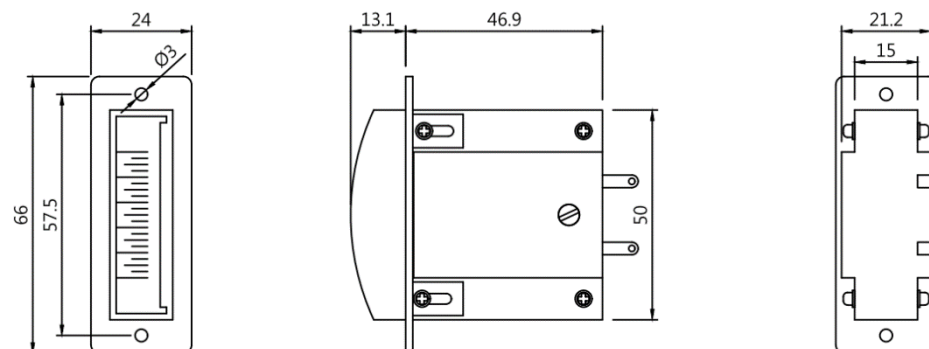
Item Code	Frame Size	Measuring Range	Class(%)
<b>Direct Input DC Movement</b>			
CF-20	89.5 X 33.5	50uA ~ 1mA	±1.5
CF-15	66 X 24	50uA ~ 1mA	±1.5

### Drawing.

CF-20



CF-15



## Shunt

DIN Series  
Type A / B / C



### Specification

- Type A: Current ranging from 1 A to 250 A with a voltage drop of 60 mV or 150 mV are available.
- Type B: Current ranging from 200 A to 2500 A with a voltage drop of 60 mV or 150 mV are available.
- Type C: Current ranging from 4000 A to 15000 A with a voltage drop of 60 mV or 150 mV are available.

### Description

#### Environmental Condition

- Operation temperature: -10 to +55 °C
- Storage temperature: -25 to +65 °C
- Relative humidity:  $\leq 75\%$  (no condensation)
- Climatic conditions: climatic class 3 according to VDE/VDI 3540

#### Applied Standard

- DIN EN 60051
- DIN 43703

Accuracy Class 0.5 (optional Class 0.2 or 0.1)

#### Material

- Resistor: Manganin
- Type A: Brass
- Type B: Brass/Copper
- Type C: copper

Voltage drop: 60mV; 100mV; 150mV; 300mV

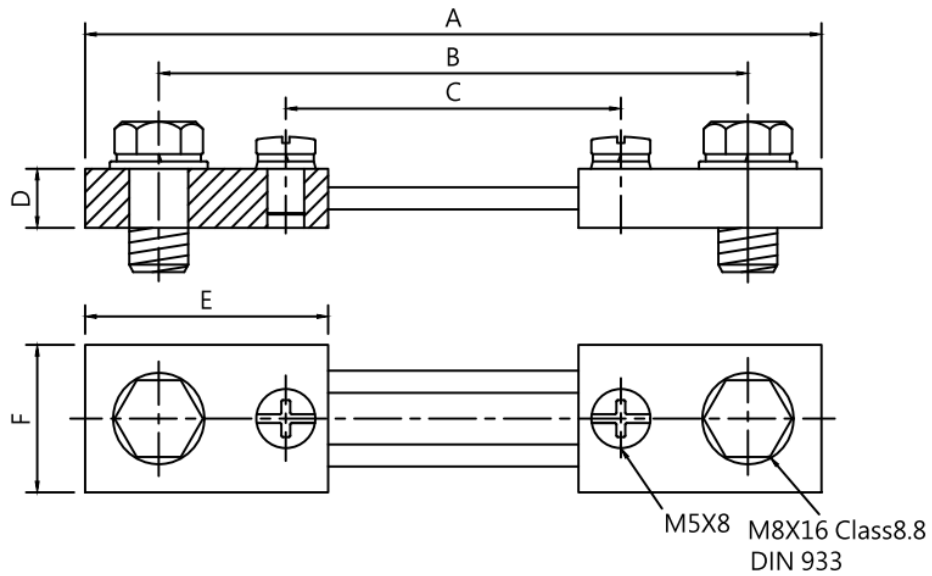
#### Overload range:

- Continuously: 1.2 times rated current
- 5 sec. max. ( $\leq 2,000A$ ): 5 times rated current
- 5 sec. max. ( $> 2,000A \dots 10,000A$ ): 2 times rated current



## Drawing.

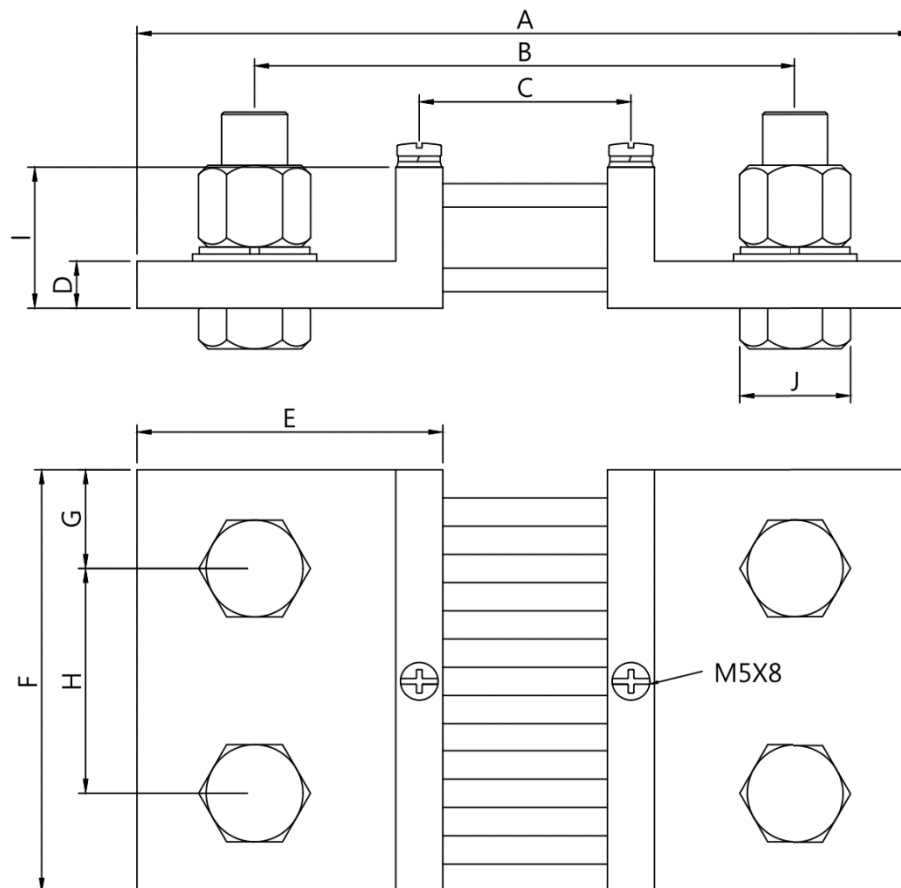
Type A



Voltage Drop	Range A	A	B	C	D	E	F
60mV	1A-25A	90	78	45.5	8	28	20
	30A-250A	100	80	45.5	8	33	20
	300A-400A	100	80	45.5	10	33	30
150mV	1A-25A	90	78	45.5	8	28	20
	30A-250A	225	205	170	8	33	25

## Drawing.

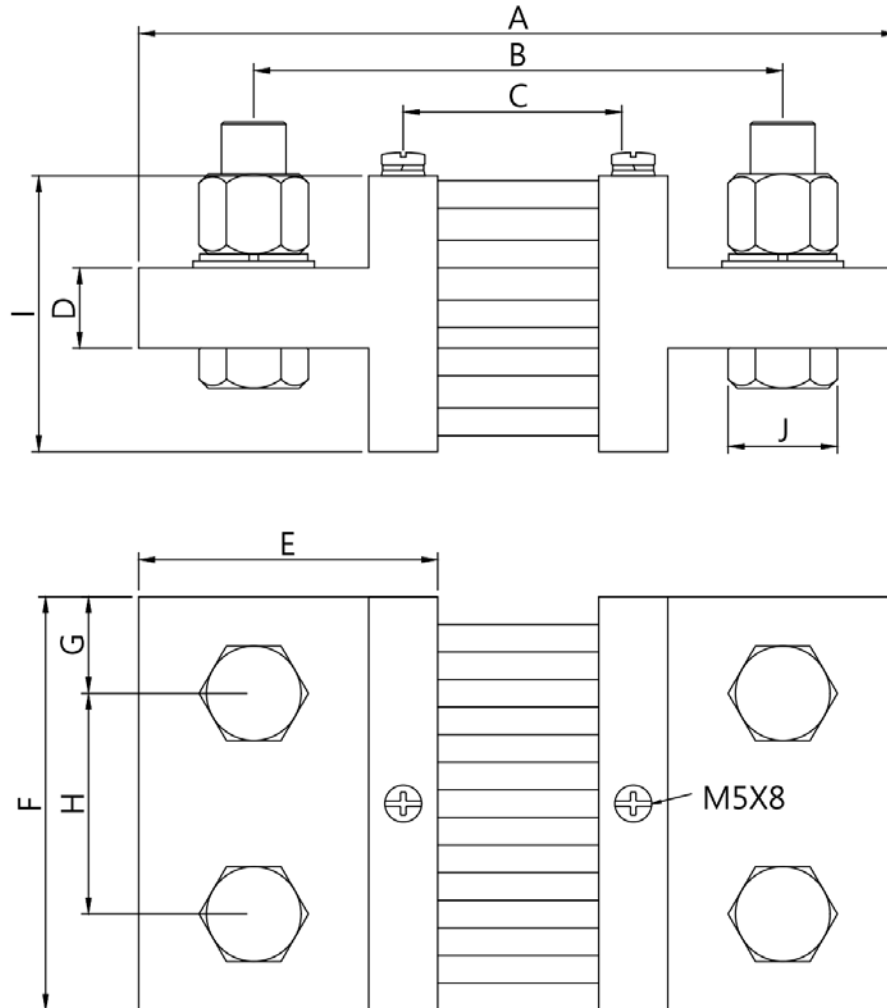
Type B



Voltage Drop	Range A	A	B	C	D	E	F	G	H	I	J
60mV	200A-300A	145	105	45	10	55	30	15	-	30	M12x40
	400A-600A	145	105	45	10	55	40	20	-	30	M16x45
	1000A-1200A	165	115	45	10	65	60	30	-	30	M20x50
	1500A-2000A	165	115	45	10	65	90	21	48	30	M16x45
	2500A	165	115	45	10	65	120	30	60	30	M20x50
150mV	200A-300A	270	230	45	10	55	30	15	-	50	M12x40
	400A-600A	270	230	45	10	55	40	20	-	50	M16x45
	1000A	290	240	45	10	65	70	35	-	60	M20x50

## Drawing.

Type C



Voltage Drop	Range A	A	B	C	D	E	F	G	H	I	J
60mV	4000A	165	115	50	15	65	120	30	60	60	M20x60
	6000A	175	125	50	25	70	154	25	52	130	M20x75
	10000A	185	135	50	30	75	206	25	52	170	M20x85
	15000A	185	135	50	30	75	310	25	52	170	M20x85
150mV	1500A-2000A	290	240	50	15	65	90	21	48	60	M16x45
	2500A	290	240	50	15	65	120	30	60	60	M20x50
	4000A	300	250	50	25	70	120	30	60	130	M20x60
	6000A	300	250	50	25	70	154	25	52	130	M20x75
	10000A	310	260	50	30	75	206	25	52	170	M20x85
	15000A	310	260	50	30	75	310	25	52	170	M20x85

## Shunt

### HL Type Shunt

HL Type A / B

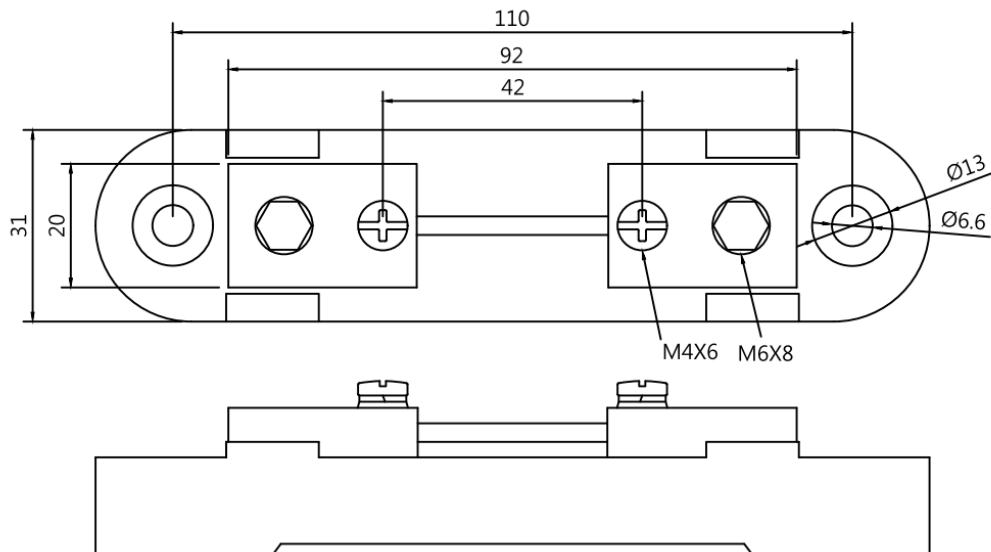


### Specification

- Input Current: 10A-6000A
- Voltage Drop: 50mV, 60mV, 75mV, 100mV solder are available
- Accuracy: 0.5 Class / 0.2 Class
- Tolerance on weight and thickness: 5%
- Temperature Range: -25°C~+65°C
- \*Custom dimension and specifications are also available

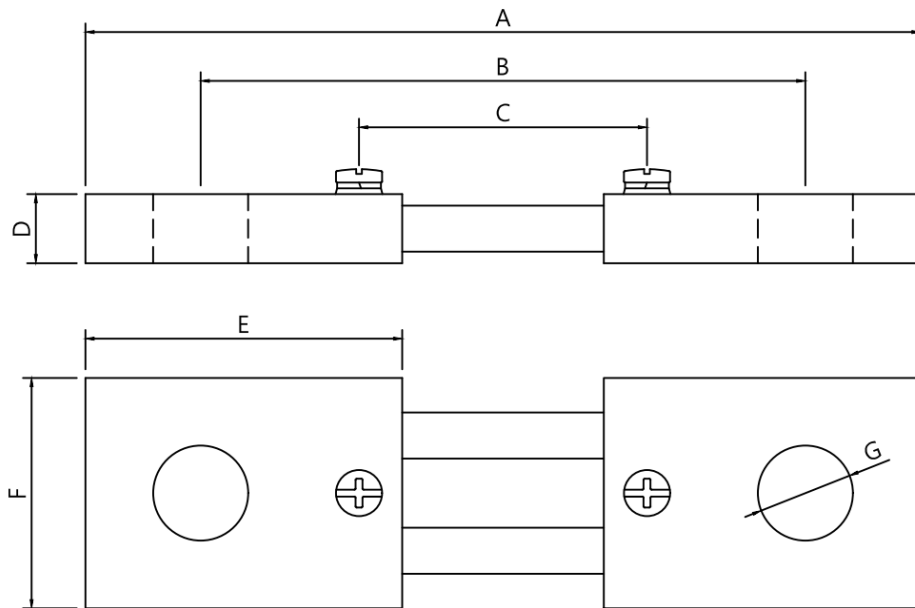
### Drawing.

HL Type A



## Drawing.

HL Type B



Voltage Drop	Range A	A	B	C	D	E	F	G
60mV	200A	100	80	50	8	33	30	8.5
	250A	100	80	50	8	35	30	8.5
	300A	145	105	50	8	55	30	12.5
	400A-600A	145	105	50	12	55	40	16.5
	700-800A	145	105	50	12	55	45	16.5
	1000A	145	105	50	12	55	60	16.5
100mV	200A	124	105	50	8	33	30	8.5
	250A	120	100	50	8	35	30	8.5
	300A	168	128	50	8	55	30	12.5
	400A-600A	168	128	50	12	55	40	16.5
	700-800A	168	128	50	12	55	45	16.5
	1000A	168	128	50	12	55	60	16.5

## Shunt

USA Series Shunt  
Type C / LA / LB / LC



### Description

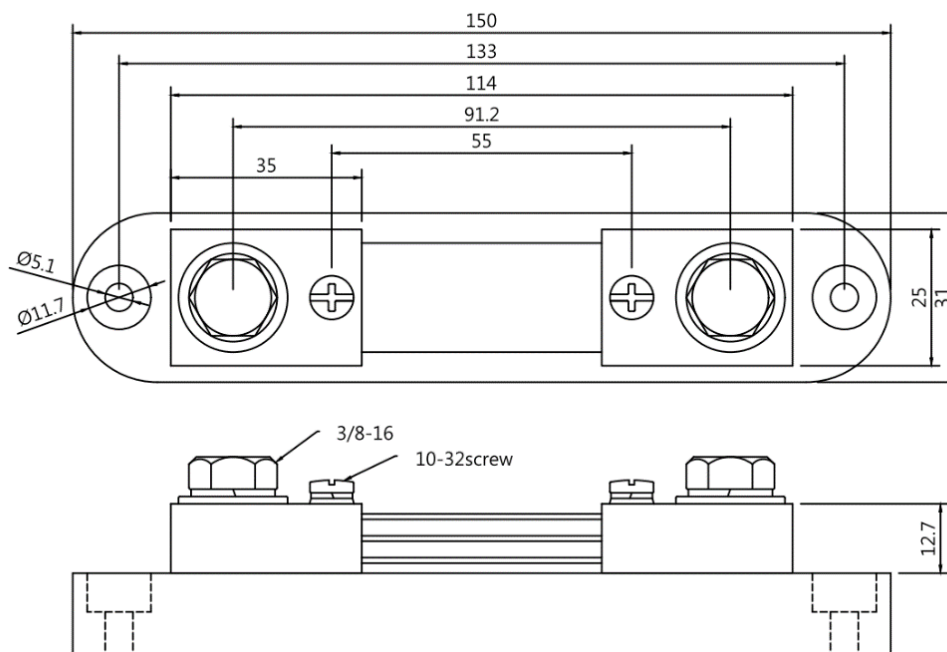
- Input Current: 1A-6000A
- Voltage Drop: 50mV, 60mV, 75mV, 100mV solder are available
- Accuracy: 1.0 Class / 0.5 Class / 0.2 Class
- Tolerance on weight and thickness: 5%
- Temperature Range: -25°C ~ +55°C
- \*Custom dimension and specifications are also available

### Specification

- Type C: Available in ratings from 1 through 500 amps in both 50 and 100mV outputs.
- Type LA: Available in ratings from 5 through 150 amps in both 50 and 100mV outputs.
- Type LB: Available in ratings from 170 through 600 amps in both 50 and 100mV outputs.
- Type LC: Available in ratings from 800 through 1200 amps in both 50 and 100mV outputs.

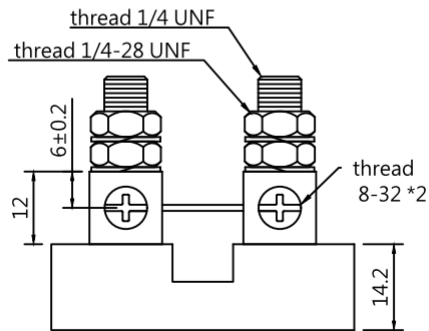
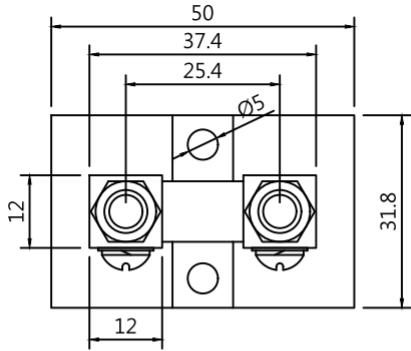
### Drawing.

Type C

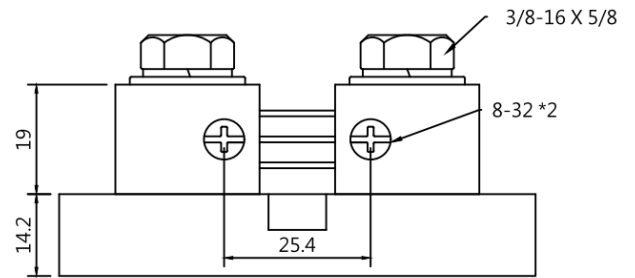
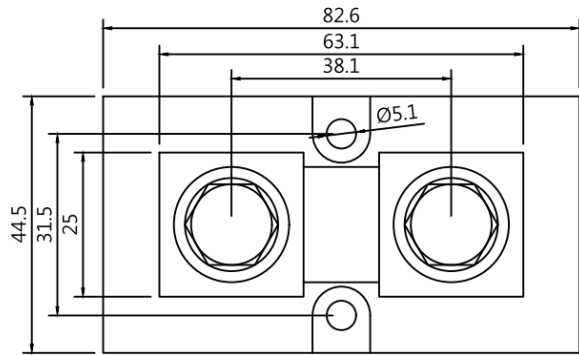


**Drawing.**

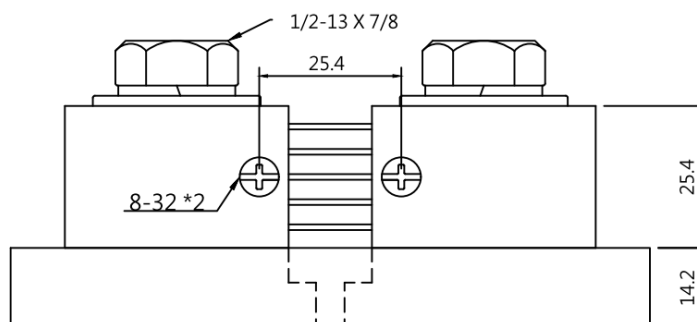
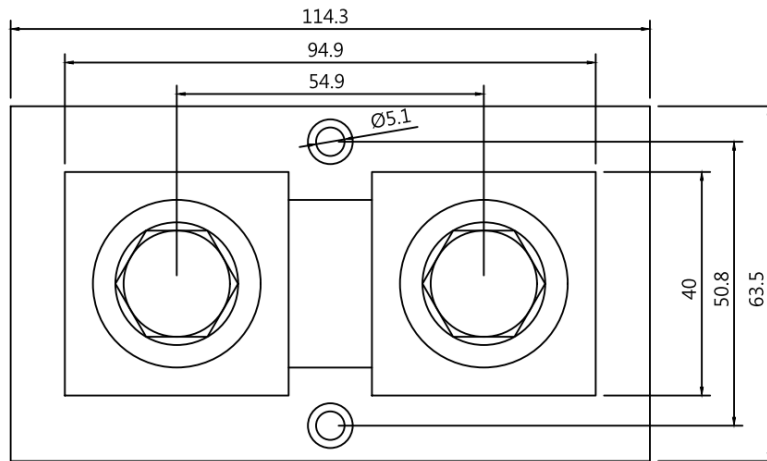
Type LA



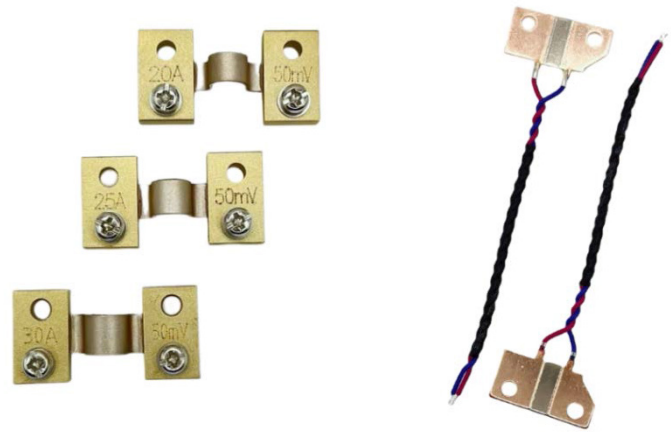
Type LB



Type LC

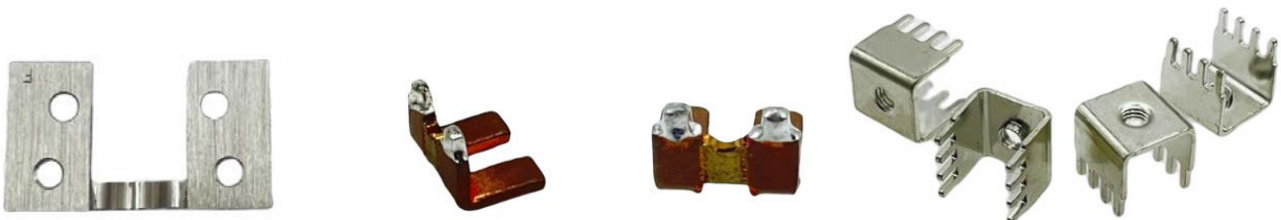
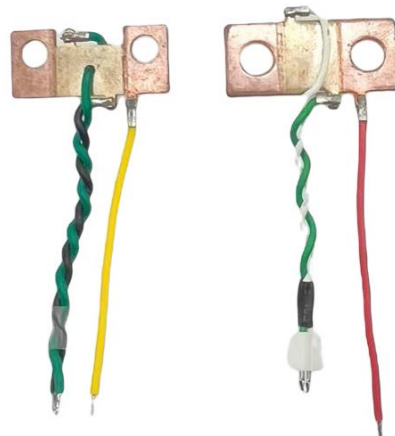
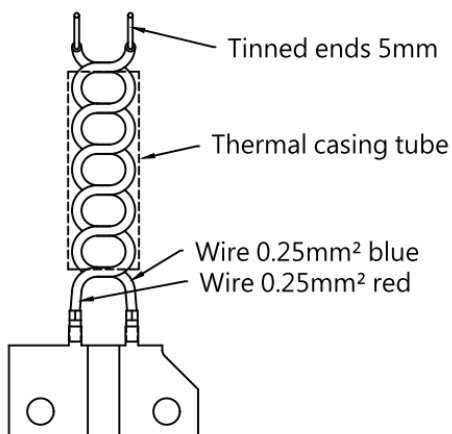


## Customize / PCB Shunt



### Specification

- Input Current: 1A-6000A
- Voltage Drop: 50mV, 60mV, 75mV, 100mV solder are available
- Accuracy: 5.0 Class / 1.0 Class / 0.5 Class
- Tolerance on weight and thickness: 5%
- Temperature Range: -25°C ~ +55°C
- \*Custom dimension and specifications are also available



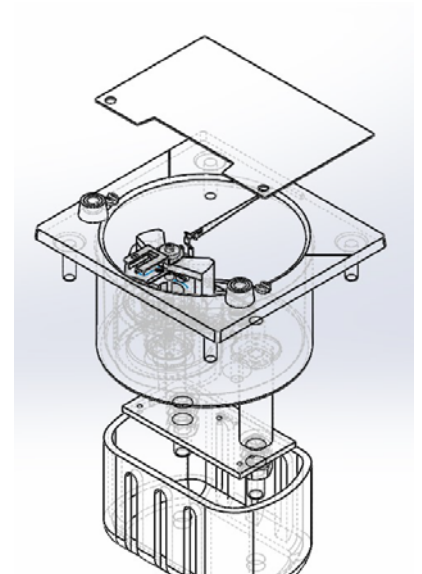
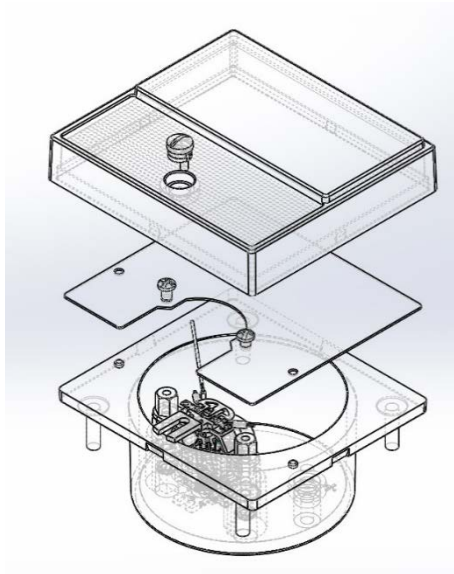
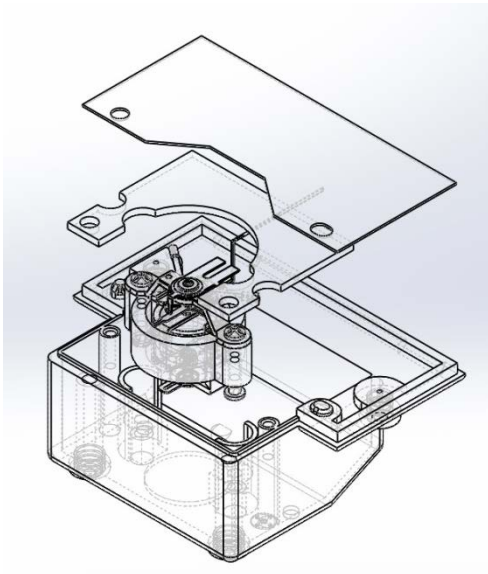
## Customize Project

OEM / ODM



### Specification

- Reversed Engineering
- 2D/3D drawings for developing
- Design and establish inspection device
- Capability to propose unique and flexible team works
- Competitive pricing



# Current Transformer

SCT Series



## Description

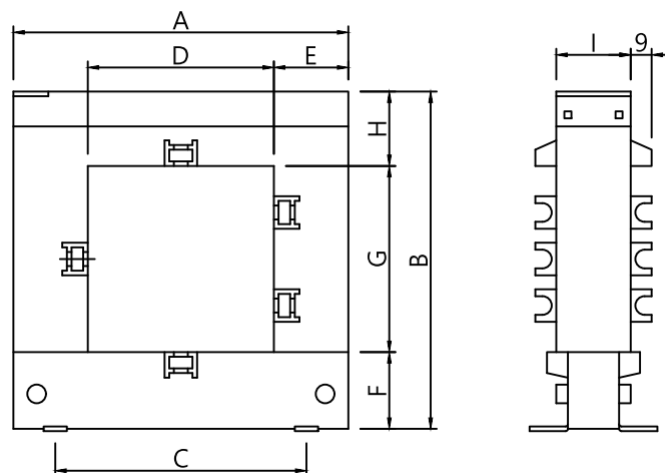
Split core current transformer is a widely used power measurement sensor in power systems, which is used to measure the current in high voltage (AC) circuits. Its main function is to convert a large current into a small current to facilitate measurement and protection of the circuit. It can provide the function of isolating and protecting the circuit.

## Specification

- Primary current from 100A to 5000A
- Secondary current: 5A/1A
- Frequency: Linear 50/65 Hz
- Rated system voltage: 0.72 / 3kv
- Short time thermal current: 60In

- Dynamic current: 2.5xIth
- Continuous overload: 1.2/n
- Ambient temperature: -10°C to 50°C
- Class: 0.5 / 1.0
- \*Custom specifications are available

## Drawing.



Model	A	B	C	D	E	F	G	H	I
SCT-23	89	111	51	20	34	32	30	47	32
SCT-58	114	145	78	50	32	33	80	32	33
SCT-88	144	145	108	80	32	33	80	32	33
SCT-812	144	185	108	80	32	33	120	32	33
SCT-816	184	245	120	80	52	38	160	52	38

## SCT Series

Item Code	Ratio (A)	Class0.5 (VA)	Class1.0 (VA)
SCT-23	100	-	-
SCT-23	250	-	2
SCT-23	300	1.5	4
SCT-23	400	2.5	6
SCT-58	250	1.5	2
SCT-58	300	1.5	3
SCT-58	400	2.5	3
SCT-58	500	2.5	5
SCT-58	600	2.5	5
SCT-58	750	2.5	6
SCT-58	800	2.5	7
SCT-58	1000	5	10
SCT-88	250	1.5	2
SCT-88	300	1.5	3
SCT-88	400	1.5	3
SCT-88	500	2.5	5
SCT-88	600	2.5	5
SCT-88	750	2.5	6
SCT-88	800	2.5	7
SCT-88	1000	5	10
SCT-812	500	2.5	4
SCT-812	600	2.5	5
SCT-812	750	2.5	6
SCT-812	800	2.5	7
SCT-812	1000	5	9
SCT-812	1200	6	11
SCT-812	1250	7.5	15
SCT-812	1500	7.5	17
SCT-816	1000	10	15
SCT-816	1500	15	20
SCT-816	2000	15	20
SCT-816	2500	15	20
SCT-816	3000	20	25
SCT-816	4000	20	25
SCT-816	5000	20	25

# Current Transformer

MFO Series



## Description

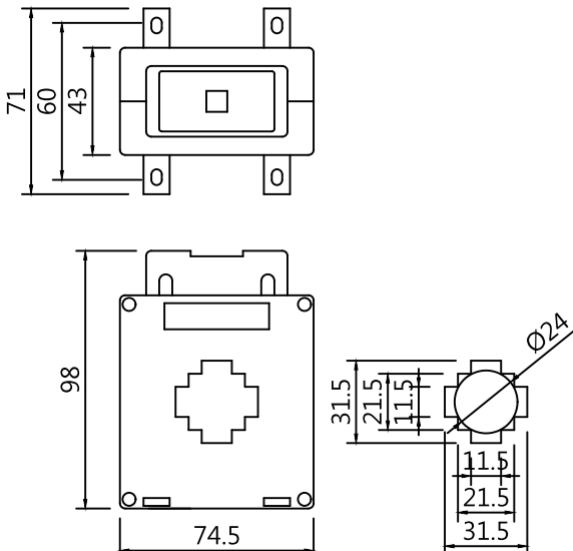
Current transformer (CT) is a widely used power measurement sensor in power systems, which is used to measure the current in high voltage (AC) circuits. Its main function is to convert a large current into a small current to facilitate measurement and protection of the circuit. It can provide the function of isolating and protecting the circuit.

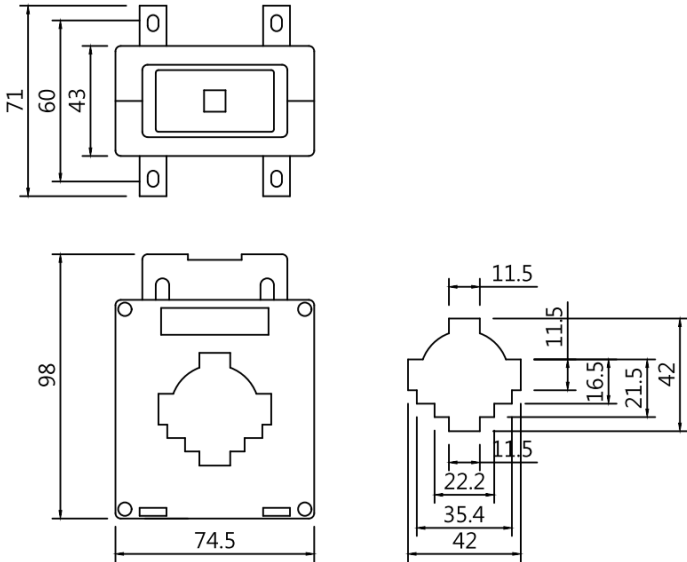
## Specification

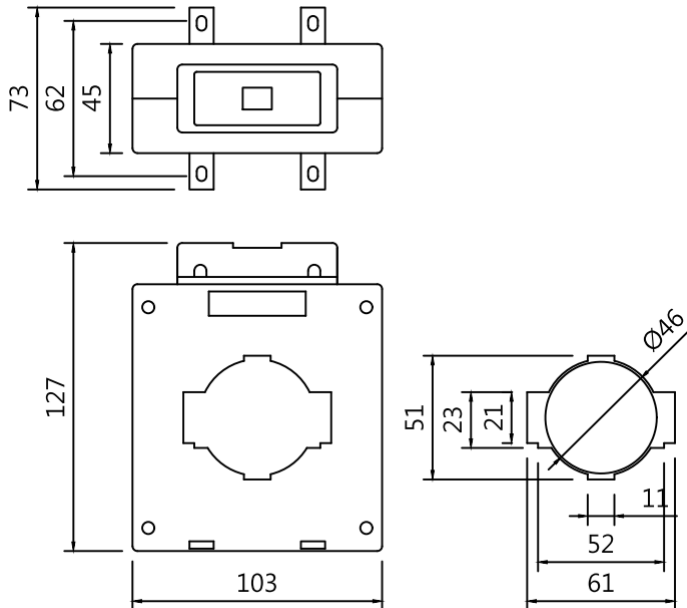
- Primary current from 30A to 3000A
- Secondary current: 5A/1A
- Frequency: Linear 50/65 Hz
- Rated system voltage: 0.72 / 3kv
- Short time thermal current: 60In

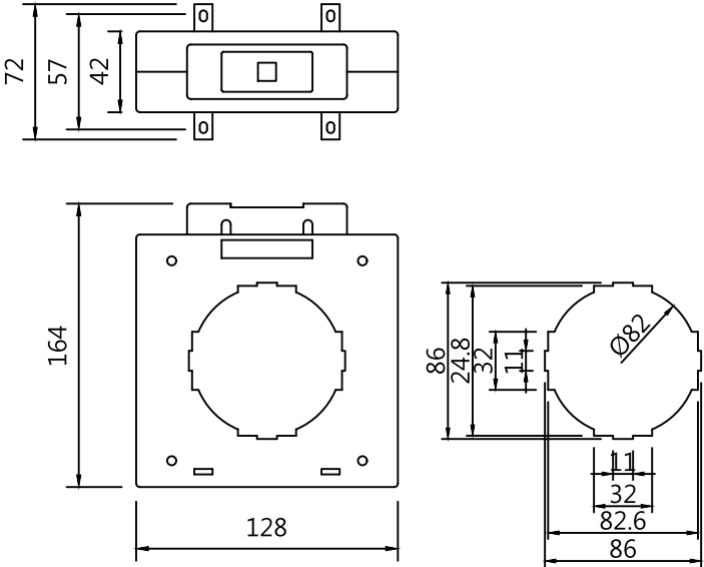
- Dynamic current: 2.5xIth
- Continuous overload: 1.2/n
- Ambient temperature: -10°C to 50°C
- Class: 0.5 / 1.0
- \*Custom specifications are available

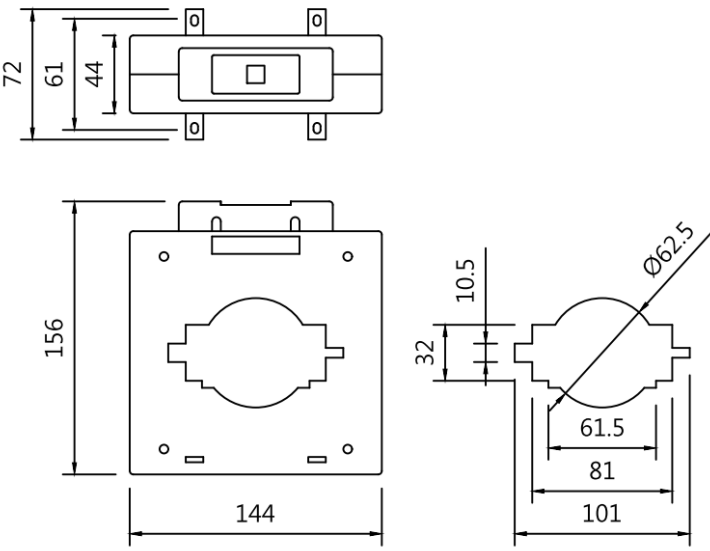
MFO Series

<b>MFO-30</b>			
<b>Drawing</b>	<b>Ratio (A)</b>	<b>Class0.5 (VA)</b>	<b>Class1.0 (VA)</b>
	30/5A	-	1.5(2T)
	40/5A	-	1.5(2T)
	50/5A	-	2.5(2T)
	60/5A	-	2.5(2T)
	75/5A	-	1.5
	80/5A	-	1.5
	100/5A	-	2.5
	150/5A	-	3.75
	200/5A	5	5
	250/5A	5	7.5
	300/5A	5	10
	30-300/1A	5	10

<b>MFO-40</b>			
Drawing	Ratio (A)	Class0.5 (VA)	Class1.0 (VA)
	100/5A	1.5	1.5
	150/5A	1.5	2.5
	200/5A	2.5	5
	250/5A	5	5
	300/5A	5	5
	400/5A	5	10
	500/5A	5	10
	100/1A	1.5	1.5
	200/1A	2.5	5
	300/1A	5	5
	400/1A	5	10
	500/1A	5	10

<b>MFO-60</b>			
Drawing	Ratio (A)	Class0.5 (VA)	Class1.0 (VA)
	250/5A	1.5	2.5
	300/5A	2.5	5
	400/5A	5	10
	500/5A	5	10
	600/5A	5	10
	750/5A	5	10
	800/5A	7.5	10
	1000/5A	10	15
	1200/5A	10	15
	1500/5A	15	15
	1600/5A	15	15
	250~1600/1A	15	15

<b>MFO-85</b>			
Drawing	Ratio (A)	Class0.5 (VA)	Class1.0 (VA)
	800/5A	7.5	10
	1000/5A	10	10
	1200/5A	10	15
	1500/5A	15	15
	1600/5A	15	15
	2000/5A	15	15
	800/1A	7.5	10
	1000/1A	10	10
	1200/1A	10	15
	1500/1A	15	15
	1600/1A	15	15
	2000/1A	15	15

<b>MFO-100</b>			
Drawing	Ratio (A)	Class0.5 (VA)	Class1.0 (VA)
	1000/5A	10	10
	1200/5A	10	15
	1500/5A	15	15
	1600/5A	15	15
	2000/5A	15	15
	2500/5A	15	15
	3000/5A	15	15
	1000/1A	10	10
	1500/1A	15	20
	2000/1A	15	30
	2500/1A	15	30
	3000/1A	15	30

# Current Transformer

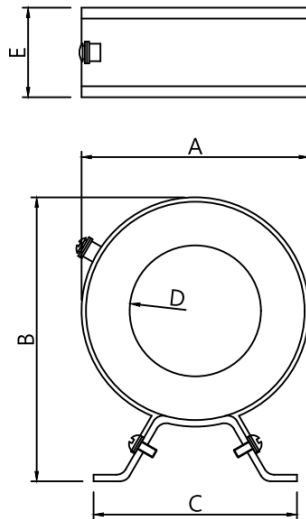
RCT Series

## Specification

- Primary current from 30A to 3000A
- Secondary current: 5A
- Frequency: Linear 50/65 Hz
- Rated system voltage: 0.72 / 3kv
- Short time thermal current: 60In
- Dynamic current: 2.5xIth
- Continuous overload: 1.2/n
- Ambient temperature: -10°C to 50°C
- Class: 1.5
- \*Custom specifications are available



## Drawing.



Model	A	B	C	D	E
RCT-35	78	120	93	35	55
RCT-60	104	146	93	60	41
RCT-90	136	178	93	90	41
RCT-120	157	199	102	110	52

RCT Series

Item Code	Ratio (A)	Class1.5 (VA)	Power Strength	Item Code	Ratio (A)	Class1.5 (VA)	Power Strength
RCT-35	30/5	-	40	RCT-60	400/5	5	40
RCT-35	50/5	2.5	40	RCT-60	500/5	7.5	40
RCT-35	60/5	2.5	40	RCT-60	600/5	7.5	40
RCT-35	80/5	1.5	40	RCT-90	800/5	10	40
RCT-35	100/5	2.5	40	RCT-90	1000/5	15	40
RCT-35	150/5	3.75	40	RCT-90	1200/5	15	40
RCT-35	200/5	5	40	RCT-120	1600/5	20	40
RCT-35	300/5	10	40	RCT-120	2000-3000/5	20	40

## Meter Accessories



### Description

We have 40 years experienced background in mold, pressing, mechanical design and R&D. We are the only one who can produce meter parts and taut band movement to meter assembly in Taiwan

All products specification, exceptional design, even to color can be discussed with our engineer team.

We also offer service for develop press mold, plastic mold, pressing parts, electrical components, CNC parts.



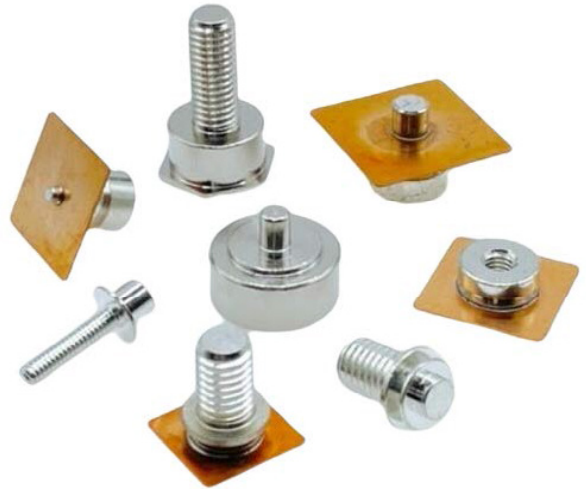
### Specification

Item Code	Size	Specification	Mode	Accuracy
<b>Pivot</b>				
	0.5 X 2.3	0.01R	Normal / HS	0.005
	0.5 X 2.5	0.01R	Normal / HS	0.005
	0.5 X 3.0	0.01R	Normal / HS	0.005
<b>Jewel Screw</b>				
	M2 X 2.5		Normal / Spring	0.05
	M2 X 3.5		Normal / Spring	0.05
	M2 X 4		Normal / Spring	0.05
	M2 X 5		Normal / Spring	0.05
<b>Pointer</b>				
	As required	0.05mm ~ 0.5mm		0.05
<b>Coil Frame</b>				
	As required	0.15mm ~ 0.3mm		0.05
<b>Spindle / Shaft</b>				
	As required	As requirement		0.05

## CNC Turning and Milling Parts

### Application

- Current transformer
- Capacitor
- Plastic injection
- Industrial equipment
- Customize design
- Medical industry



### Description

- Reversed Engineering
- 2D/3D drawings for parts
- Design and establish inspection device
- Capability to propose unique and flexible team works
- Fast lead time and competitive pricing
- \*Custom dimension and specifications are also available

### Specification

Material: Stainless, Carbon Steel, Alloy Steel, Brass, Copper, Aluminum and Plastic.

Diameter range: 0.50mm to 250.00mm

Length: 0.5mm to 800.00mm

Heat treatment: Carburization, Nitration, Refining, Induction hardening Quenching, tempering, Annealing

Plating: Zinc, Nickel, Chrome, Tin Plating, Black, Anodize, Hard Anodize.





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