

SINCE 1996



温州赛发电气有限公司
WENZHOU SAIFA ELECTRIC CO., LTD

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2015.01



温州赛发电气有限公司
WENZHOU SAIFA ELECTRIC CO., LTD

DIGITAL METER

TRANSDUCER

PANEL METER

CURRENT TRANSFORMERS

SHUNT

GENERAL CHANGEOVER SWITCH

CE CB  ISO9001 Exe II

Company Profile

Wenzhou Saifa Electric Co.,Ltd., established in May, 1996, covers an area of 8000m² and has 200 employees. With 30 excellent professional engineers, we own a powerful researching and developing ability. We have the certificate of ISO9001-2008. Our products have also got the CE, CB certificates approved by Germany TUV company. The panel meters are strictly produced under the International Standard IEC60051, IEC 61010 and National Standard GB/T7676-1998. The digital meters are strictly produced under the International Standard IEC1010 and National Standard GB/T13978-2008. The current transformers are strictly produced under the International Standard IEC60044-1(2003) and National Standard GB1208-2006. Our management philosophy is: Service our customers with high quality products; Build the products image as "Stable, Accurate, Exquisite". Our principal: To be honest, satisfy all our customers!

Products Certificates



General Technical Index

| Technical parameters | | | Index |
|-----------------------|-----------------------|------------------|---|
| Input | Voltage | Rated value | AC 0~600V |
| | | Over load | Consistent: 1.2 times instantaneous: 2 times /30s |
| | | Consumption | <0.5VA (each phase) |
| | Current | Rated value | AC 1A, 5A |
| | | Over load | Consistent: 1.2 times instantaneous: 2 times /1s |
| | | Impedance | <2mΩ |
| Frequency | | 45~65Hz | |
| Measuring accuracy | Voltage, current | | ±(0.5%FS+one digit) |
| | Active reactive power | | ±(0.5%FS+one digit) |
| | Frequency | | ±0.1Hz |
| | Harmonic | | The three-phase voltage/current 21 total harmonic content |
| | Power factor | | ±0.01PF |
| | Active energy | | ±0.5% (only for reference, not for meterage) |
| Power | Reactive energy | | ±1.0% (only for reference, not for meterage) |
| | Scope | AC 220V, 50/60Hz | AC/DC 85~265V |
| Safety | Consumption | | <5VA |
| | Withstand voltage | Input and power | >2kv50Hz/1min |
| Input and output | | >1kv50Hz/1min | |
| Output and power | | >2kv50Hz/1min | |
| Insulating resistance | | | Any two of input, output, power, casing >20MΩ |
| Environment | Temperature | | Operation: -10~50°C Storage: -25~70°C |
| | Humidity | | ≤85%RH. free of wet and corrosive gas |
| | Elevation | | ≤3000m |

Type and designation

SFN-□□□-□□+□

- Additional functions**
 - nDO: switch value output (n=1,2,3,4 channels)
 - nDI: switch value input (n=1,2,3,4 channels)
 - nAO: analog quantity output (n=1,2,3,4 channels)
 - H: harmonic
- Measurement parameters** (can combine several parameters)
 - U: voltage I: current F: frequency H: power factor P: active power
 - Q: reactive power R: revolutions per minute E: multifunction power meter
- Phase**
 - Omit: single-phase or DC
 - 3: three-phase
- Display mode**
 - 1: one-row nixietube display
 - 2: two-row nixietube display
 - 3: three-row nixietube display
 - 4: four-row nixietube display
 - 5: five-row nixietube display
 - Y: LCD display
- Function code**
 - K: programmable meter without RS485 communication
 - S: programmable meter with RS485 communication
- Shape code**
 - 2: 120×120
 - 4: 48×48
 - 5: 96×48
 - 7: 72×72
 - 8: 80×80
 - 9: 96×96
 - G: modular type

DIGITAL AC/DC AMMETER


| Model | Panel dimension | Cutout hole dimension |
|-----------|-----------------|-----------------------|
| SFN-2K1-I | 120×120 | 112×112 |
| SFN-9K1-I | 96×96 | 92×92 |
| SFN-8K1-I | 80×80 | 76×76 |
| SFN-7K1-I | 72×72 | 68×68 |
| SFN-4K1-I | 48×48 | 45×45 |
| SFN-5K1-I | 96×48 | 92×45 |

Input: AC 5A; DC 5A, 75mV, 0/4-20mA, 0-5/10V
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S1-I)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

DIGITAL AC/DC VOLTMETER


| Model | Panel dimension | Cutout hole dimension |
|-----------|-----------------|-----------------------|
| SFN-2K1-U | 120×120 | 112×112 |
| SFN-9K1-U | 96×96 | 92×92 |
| SFN-8K1-U | 80×80 | 76×76 |
| SFN-7K1-U | 72×72 | 68×68 |
| SFN-4K1-U | 48×48 | 45×45 |
| SFN-5K1-U | 96×48 | 92×45 |

Input: AC 0~600V; DC 0~600V, 0/4-20mA, 0-5/10V
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S1-U)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

DIGITAL FREQUENCY METER


| Model | Panel dimension | Cutout hole dimension |
|-----------|-----------------|-----------------------|
| SFN-2K1-F | 120×120 | 112×112 |
| SFN-9K1-F | 96×96 | 92×92 |
| SFN-8K1-F | 80×80 | 76×76 |
| SFN-7K1-F | 72×72 | 68×68 |
| SFN-4K1-F | 48×48 | 45×45 |
| SFN-5K1-F | 96×48 | 92×45 |

Input: 30~99Hz(AC 30~500V); DC 0/4-20mA, 0-5/10V
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S1-F)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

SINGLE/THREE-PHASE DIGITAL ACTIVE POWER METER


| Model | Panel dimension | Cutout hole dimension |
|--------------|-----------------|-----------------------|
| SFN-2K1-P/3P | 120×120 | 112×112 |
| SFN-9K1-P/3P | 96×96 | 92×92 |
| SFN-8K1-P/3P | 80×80 | 76×76 |
| SFN-7K1-P/3P | 72×72 | 68×68 |
| SFN-4K1-P/3P | 48×48 | 45×45 |
| SFN-5K1-P/3P | 96×48 | 92×45 |

Input: AC 0~500V, 5A
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S1-P/3P)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

SINGLE/THREE-PHASE DIGITAL POWER FACTOR METER


| Model | Panel dimension | Cutout hole dimension |
|--------------|-----------------|-----------------------|
| SFN-2K1-H/3H | 120×120 | 112×112 |
| SFN-9K1-H/3H | 96×96 | 92×92 |
| SFN-8K1-H/3H | 80×80 | 76×76 |
| SFN-7K1-H/3H | 72×72 | 68×68 |
| SFN-4K1-H/3H | 48×48 | 45×45 |
| SFN-5K1-H/3H | 96×48 | 92×45 |

Input: AC 0~500V, 5A
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S1-H/3H)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

THREE-PHASE DIGITAL AMMETER


| Model | Panel dimension | Cutout hole dimension |
|------------|-----------------|-----------------------|
| SFN-2K3-3I | 120×120 | 112×112 |
| SFN-9K3-3I | 96×96 | 92×92 |
| SFN-8K3-3I | 80×80 | 76×76 |
| SFN-7K3-3I | 72×72 | 68×68 |
| SFN-4K3-3I | 48×48 | 45×45 |

Input: AC 5A, 1A;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S3-3I)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

THREE-PHASE DIGITAL VOLTMETER


| Model | Panel dimension | Cutout hole dimension |
|------------|-----------------|-----------------------|
| SFN-2K3-3U | 120×120 | 112×112 |
| SFN-9K3-3U | 96×96 | 92×92 |
| SFN-8K3-3U | 80×80 | 76×76 |
| SFN-7K3-3U | 72×72 | 68×68 |
| SFN-4K3-3U | 48×48 | 45×45 |

Input: AC 0~600V;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S3-3U)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

SINGLE-PHASE DIGITAL COMBINED METER


| Model | Panel dimension | Cutout hole dimension |
|-------------|-----------------|-----------------------|
| SFN-2K3-UIF | 120×120 | 112×112 |
| SFN-9K3-UIF | 96×96 | 92×92 |
| SFN-8K3-UIF | 80×80 | 76×76 |
| SFN-7K3-UIF | 72×72 | 68×68 |
| SFN-4K3-UIF | 48×48 | 45×45 |

Input: AC 0~500V, 5A;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S3-UIF)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

SINGLE-PHASE DIGITAL COMBINED METER


| Model | Panel dimension | Cutout hole dimension |
|-------------|-----------------|-----------------------|
| SFN-2K3-UIP | 120×120 | 112×112 |
| SFN-9K3-UIP | 96×96 | 92×92 |
| SFN-8K3-UIP | 80×80 | 76×76 |
| SFN-7K3-UIP | 72×72 | 68×68 |
| SFN-4K3-UIP | 48×48 | 45×45 |

Input: AC 0~500V, 5A;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S3-UIP)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

SINGLE-PHASE DIGITAL COMBINED METER


| Model | Panel dimension | Cutout hole dimension |
|-------------|-----------------|-----------------------|
| SFN-2K3-UIH | 120×120 | 112×112 |
| SFN-9K3-UIH | 96×96 | 92×92 |
| SFN-8K3-UIH | 80×80 | 76×76 |
| SFN-7K3-UIH | 72×72 | 68×68 |
| SFN-4K3-UIH | 48×48 | 45×45 |

Input: AC 0~500V, 5A;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□S3-UIH)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

**THREE-PHASE
DIGITAL COMBINED METER**



| Model | Panel dimension | Cutout hole dimension |
|--------------|-----------------|-----------------------|
| SFN-9K5-3UIF | 96×96 | 92×92 |

Can choose several Additional Functions
For example: **SFN-9K5-3UIF+4DO4DI4AO**
SFN-9S5-3UIF+4DO4DI4AO

Input: AC 0~500V, 5A;
Net work: 3P4W or 3P3W
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-9S5-3UIF)
- ▲ 4-channels switch value output(model+4DO)
- ▲ 4-channels switch value input(model+4DI)
- ▲ 4-channels analog quantity output(model+4AO)

**THREE-PHASE
DIGITAL COMBINED METER**



| Model | Panel dimension | Cutout hole dimension |
|--------------|-----------------|-----------------------|
| SFN-9K5-3UIP | 96×96 | 92×92 |

Can choose several Additional Functions
For example: **SFN-9K5-3UIP+4DO4DI4AO**
SFN-9S5-3UIP+4DO4DI4AO

Input: AC 0~500V, 5A;
Net work: 3P4W or 3P3W
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-9S5-3UIP)
- ▲ 4-channels switch value output(model+4DO)
- ▲ 4-channels switch value input(model+4DI)
- ▲ 4-channels analog quantity output(model+4AO)

**THREE-PHASE
DIGITAL COMBINED METER**



| Model | Panel dimension | Cutout hole dimension |
|---------------|-----------------|-----------------------|
| SFN-9K5-3UIHF | 96×96 | 92×92 |

Can choose several Additional Functions
For example: **SFN-9K5-3UIHF+4DO4DI4AO**
SFN-9S5-3UIHF+4DO4DI4AO

Input: AC 0~500V, 5A;
Net work: 3P4W or 3P3W
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-9S5-3UIHF)
- ▲ 4-channels switch value output(model+4DO)
- ▲ 4-channels switch value input(model+4DI)
- ▲ 4-channels analog quantity output(model+4AO)

**MULTIFUNCTIONAL
POWER INSTRUMENT**



| Model | Panel dimension | Cutout hole dimension |
|------------|-----------------|-----------------------|
| SFN-2S3-3E | 120×120 | 112×112 |
| SFN-9S3-3E | 96×96 | 92×92 |
| SFN-8S3-3E | 80×80 | 76×76 |
| SFN-7S3-3E | 72×72 | 68×68 |

Can choose several Additional Functions
For example: **SFN-9S3-3E+4DO4DI4AOH**

Input: AC 0~500V, 5A;
Net work: 3P4W or 3P3W
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz
Communication interface: RS485

Additional functions

- ▲ 4-channels switch value output(model+4DO)
- ▲ 4-channels switch value input(model+4DI)
- ▲ 4-channels analog quantity output(model+4AO)
- ▲ harmonic(model+H)

**MULTIFUNCTIONAL
POWER INSTRUMENT**



| Model | Panel dimension | Cutout hole dimension |
|------------|-----------------|-----------------------|
| SFN-2SY-3E | 120×120 | 112×112 |
| SFN-9SY-3E | 96×96 | 92×92 |
| SFN-8SY-3E | 80×80 | 76×76 |
| SFN-7SY-3E | 72×72 | 68×68 |

Can choose several Additional Functions
For example: **SFN-9SY-3E+4DO4DI4AOH**

Input: AC 0~500V, 5A;
Net work: 3P4W or 3P3W
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz
Communication interface: RS485

Additional functions

- ▲ 4-channels switch value output(model+4DO)
- ▲ 4-channels switch value input(model+4DI)
- ▲ 4-channels analog quantity output(model+4AO)
- ▲ harmonic(model+H)

DIGITAL AC/DC AMMETER



| Model | Panel dimension | Cutout hole dimension |
|-----------|-----------------|-----------------------|
| SFN-2KY-I | 120×120 | 112×112 |
| SFN-9KY-I | 96×96 | 92×92 |
| SFN-8KY-I | 80×80 | 76×76 |
| SFN-7KY-I | 72×72 | 68×68 |

Input: AC 5A; DC 5A, 75mV, 0/4-20mA, 0-5/10V
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□SY-I)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

DIGITAL AC/DC VOLTMETER



| Model | Panel dimension | Cutout hole dimension |
|-----------|-----------------|-----------------------|
| SFN-2KY-U | 120×120 | 112×112 |
| SFN-9KY-U | 96×96 | 92×92 |
| SFN-8KY-U | 80×80 | 76×76 |
| SFN-7KY-U | 72×72 | 68×68 |

Input: AC 0~600V; DC 0~600V, 0/4-20mA, 0-5/10V
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□SY-U)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

DIGITAL FREQUENCY METER



| Model | Panel dimension | Cutout hole dimension |
|-----------|-----------------|-----------------------|
| SFN-2KY-F | 120×120 | 112×112 |
| SFN-9KY-F | 96×96 | 92×92 |
| SFN-8KY-F | 80×80 | 76×76 |
| SFN-7KY-F | 72×72 | 68×68 |

Input: 30~99Hz(AC 30~500V); DC 0/4-20mA, 0-5/10V
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□SY-F)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

**SINGLE/THREE-PHASE
DIGITAL ACTIVE POWER METER**



| Model | Panel dimension | Cutout hole dimension |
|--------------|-----------------|-----------------------|
| SFN-2KY-P/3P | 120×120 | 112×112 |
| SFN-9KY-P/3P | 96×96 | 92×92 |
| SFN-8KY-P/3P | 80×80 | 76×76 |
| SFN-7KY-P/3P | 72×72 | 68×68 |

Input: AC 0~500V, 5A
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□SY-P/3P)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

**SINGLE/THREE-PHASE
DIGITAL POWER FACTOR METER**



| Model | Panel dimension | Cutout hole dimension |
|--------------|-----------------|-----------------------|
| SFN-2KY-H/3H | 120×120 | 112×112 |
| SFN-9KY-H/3H | 96×96 | 92×92 |
| SFN-8KY-H/3H | 80×80 | 76×76 |
| SFN-7KY-H/3H | 72×72 | 68×68 |

Input: AC 0~500V, 5A
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions

- ▲ Communication interface: RS485(SFN-□SY-H/3H)
- ▲ 2-channels switch value output(model+2DO)
- ▲ 1-channels analog quantity output(model+1AO)

**THREE-PHASE
DIGITAL AMMETER**



| Model | Panel dimension | Cutout hole dimension |
|------------|-----------------|-----------------------|
| SFN-2KY-3I | 120×120 | 112×112 |
| SFN-9KY-3I | 96×96 | 92×92 |
| SFN-8KY-3I | 80×80 | 76×76 |
| SFN-7KY-3I | 72×72 | 68×68 |

Input: AC 5A, 1A;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions
▲Communication interface: RS485(SFN-□SY-3I)
▲2-channels switch value output(model+2DO)
▲1-channels analog quantity output(model+1AO)

**THREE-PHASE
DIGITAL VOLTMETER**



| Model | Panel dimension | Cutout hole dimension |
|------------|-----------------|-----------------------|
| SFN-2KY-3U | 120×120 | 112×112 |
| SFN-9KY-3U | 96×96 | 92×92 |
| SFN-8KY-3U | 80×80 | 76×76 |
| SFN-7KY-3U | 72×72 | 68×68 |

Input: AC 0~600V;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions
▲Communication interface: RS485(SFN-□SY-3U)
▲2-channels switch value output(model+2DO)
▲1-channels analog quantity output(model+1AO)

**SINGLE-PHASE
DIGITAL COMBINED METER**



| Model | Panel dimension | Cutout hole dimension |
|-------------|-----------------|-----------------------|
| SFN-2KY-UIF | 120×120 | 112×112 |
| SFN-9KY-UIF | 96×96 | 92×92 |
| SFN-8KY-UIF | 80×80 | 76×76 |
| SFN-7KY-UIF | 72×72 | 68×68 |

Input: AC 0~500V, 5A;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions
▲Communication interface: RS485(SFN-□SY-UIF)
▲2-channels switch value output(model+2DO)
▲1-channels analog quantity output(model+1AO)

**SINGLE-PHASE
DIGITAL COMBINED METER**



| Model | Panel dimension | Cutout hole dimension |
|-------------|-----------------|-----------------------|
| SFN-2KY-UIP | 120×120 | 112×112 |
| SFN-9KY-UIP | 96×96 | 92×92 |
| SFN-8KY-UIP | 80×80 | 76×76 |
| SFN-7KY-UIP | 72×72 | 68×68 |

Input: AC 0~500V, 5A;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions
▲Communication interface: RS485(SFN-□SY-UIP)
▲2-channels switch value output(model+2DO)
▲1-channels analog quantity output(model+1AO)

**SINGLE-PHASE
DIGITAL COMBINED METER**



| Model | Panel dimension | Cutout hole dimension |
|-------------|-----------------|-----------------------|
| SFN-2KY-UIH | 120×120 | 112×112 |
| SFN-9KY-UIH | 96×96 | 92×92 |
| SFN-8KY-UIH | 80×80 | 76×76 |
| SFN-7KY-UIH | 72×72 | 68×68 |

Input: AC 0~500V, 5A;
Accuracy class: 0.5
Auxiliary: AC 220V, 50/60Hz

Additional functions
▲Communication interface: RS485(SFN-□SY-UIH)
▲2-channels switch value output(model+2DO)
▲1-channels analog quantity output(model+1AO)

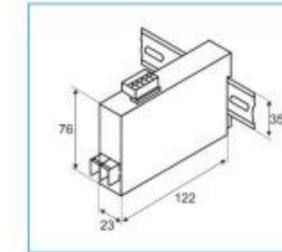
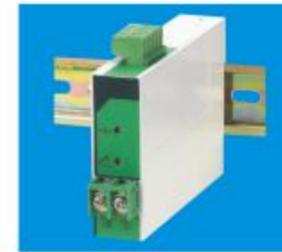
General Technical Index

| Parameters | Index |
|---------------|--|
| Accuracy | ±(0.5%FS+one digit) |
| Input | Current: 1mA, 10mA, 100mA, 1A, 5A, 10A |
| | Voltage: 1V, 10V, 100V, 220V, 450V |
| Over load | Instantaneous: current: 10 times /s, voltage: 2 times /s |
| Frequency | 45~65Hz |
| Communication | RS485, MODBUS_RTU |

| Parameters | Index |
|-------------|--|
| Power | AC/DC 85~265V |
| Consumption | <4VA |
| Operation | -5~55°C |
| Working | ≥50000h |
| Environment | ≤85%RH, free of wet and corrosive gas ≤85%RH |
| Output | DC4~20mA, DC0~20mA, DC0~10V, DC0~5V |

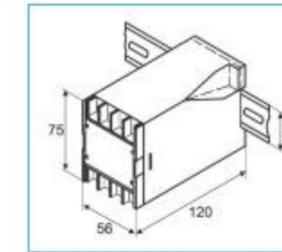
Model and Specification

ECONOMIC TRANSDUCER



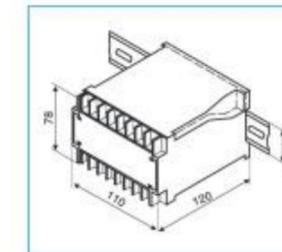
| NAME | MODEL |
|-----------------------|----------|
| AC Current Transducer | SFN-BS4I |
| AC Voltage Transducer | SFN-BS4U |
| Frequency Transducer | SFN-BS4F |
| DC Current Transducer | SFN-BS5I |
| DC Voltage Transducer | SFN-BS5U |

SINGLE-PHASE TRANSDUCER



| NAME | MODEL |
|--|-----------|
| Single-phase Current Transducer | SFN-BS4ID |
| Single-phase Voltage Transducer | SFN-BS4UD |
| Frequency Transducer | SFN-BS4FD |
| Single-phase Active power Transducer | SFN-BS4PD |
| Single-phase Reactive power Transducer | SFN-BS4QD |
| Single-phase Power Factor Transducer | SFN-BS4HD |

THREE-PHASE TRANSDUCER



| NAME | MODEL |
|--|------------|
| Three-phase Current Transducer | SFN-3BS4ID |
| Three-phase Voltage Transducer | SFN-3BS4UD |
| Three-phase Active power Transducer | SFN-3BS4PD |
| Three-phase Rective power Transducer | SFN-3BS4QD |
| Three-phase Power Factor Transducer | SFN-3BS4HD |
| Three-phase Multifunctional Transducer | SFN-3BS4ED |



Model and Specification

| Function shape | Measuring functions | | | | | | | | | | Shape code | | | | | |
|----------------|---------------------|---------------|---------------------|---------------------|-----------|---------------------------|--------------------------|---------------------------|--------------------------|-----------------------------|----------------------------|-------|-------|-------|-------|-------|
| | AC/DC voltage | AC/DC current | Three-phase voltage | Three-phase current | Frequency | Single-phase power factor | Three-phase power factor | Single-phase active power | Three-phase active power | Single-phase reactive power | Three-phase reactive power | 2 | 9 | 8 | 7 | 5 |
| Model | | | | | | | | | | | 120x120 | 96x96 | 80x80 | 72x72 | 96x48 | 48x48 |
| SFD-□K1-U | • | | | | | | | | | | √ | √ | √ | √ | √ | √ |
| SFD-□K1-I | | • | | | | | | | | | √ | √ | √ | √ | √ | √ |
| SFD-□K1-F | | | | | • | | | | | | √ | √ | √ | √ | √ | √ |
| SFD-□K1-H | | | | | | • | | | | | √ | √ | √ | √ | √ | √ |
| SFD-□K1-3H | | | | | | | • | | | | √ | √ | √ | √ | √ | √ |
| SFD-□K1-P | | | | | | | | • | | | √ | √ | √ | √ | √ | √ |
| SFD-□K1-3P | | | | | | | | | • | | √ | √ | √ | √ | √ | √ |
| SFD-□K1-Q | | | | | | | | | | • | √ | √ | √ | √ | √ | √ |
| SFD-□K1-3Q | | | | | | | | | | | • | √ | √ | √ | √ | √ |
| SFD-□K2-UI | • | • | | | | | | | | | | √ | | | | |
| SFD-□K2-3PQ | | | | | | | | | | | | • | √ | | | |
| SFD-□K3-3U | | | • | | | | | | | | √ | √ | √ | √ | | √ |
| SFD-□K3-3I | | | | • | | | | | | | √ | √ | √ | √ | | √ |
| SFD-□K3-UIF | • | • | | | • | | | | | | √ | √ | √ | √ | | |
| SFD-□K3-UIH | • | • | | | | • | | | | | √ | | √ | | | |
| SFD-□K3-UIP | • | • | | | | | • | | | | √ | | √ | | | |
| SFD-□K4-3UI | | | • | • | | | | | | | √ | | | | | |
| SFD-□K5-3UIF | | | • | • | • | | | | | | √ | | | | | |
| SFD-□K5-3UIP | | | • | • | | | | • | | | √ | | | | | |
| SFD-□K5-3UIHF | | | • | • | • | | | | | | √ | | | | | |

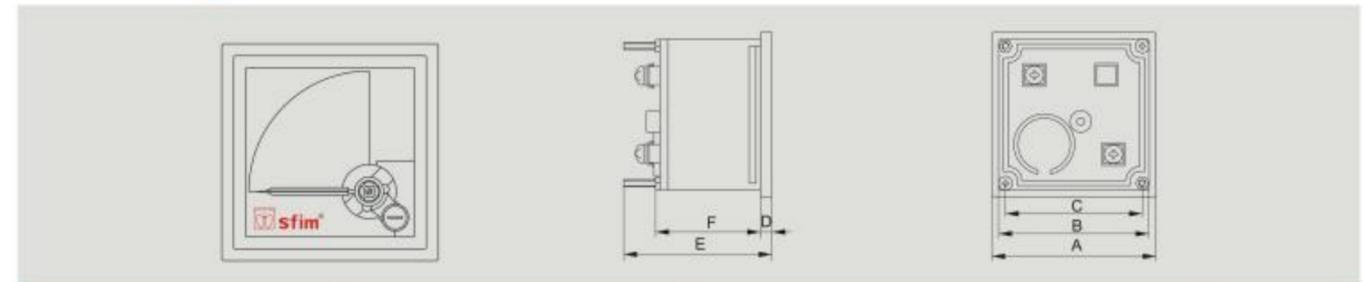
All the technical parameters of SFD series meter refer to the SFN series

Ammeter/Voltmeter



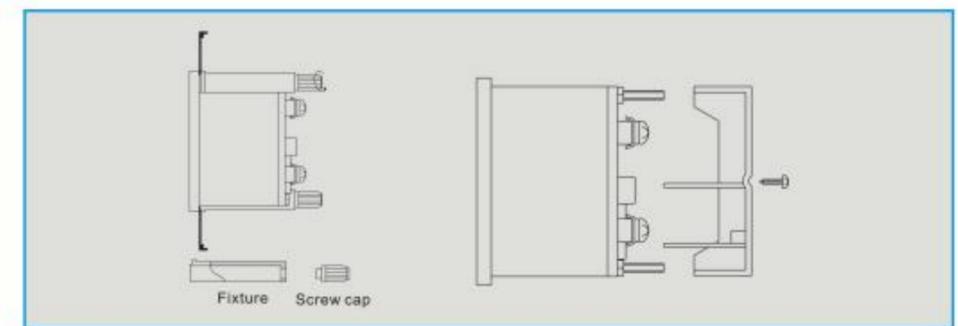
| | |
|-------|---|
| Type | SF-96 (80, 72, 48) -3 |
| Range | AC 0-100A (48-3 MAX AC 30A) |
| | AC 0-750V, 110V/PT |
| | DC 0-100UA, DC 0-500MA, DC 0-50 (60, 75) MV |
| | DC 0-2000V |

Outline drawing (unit:mm)

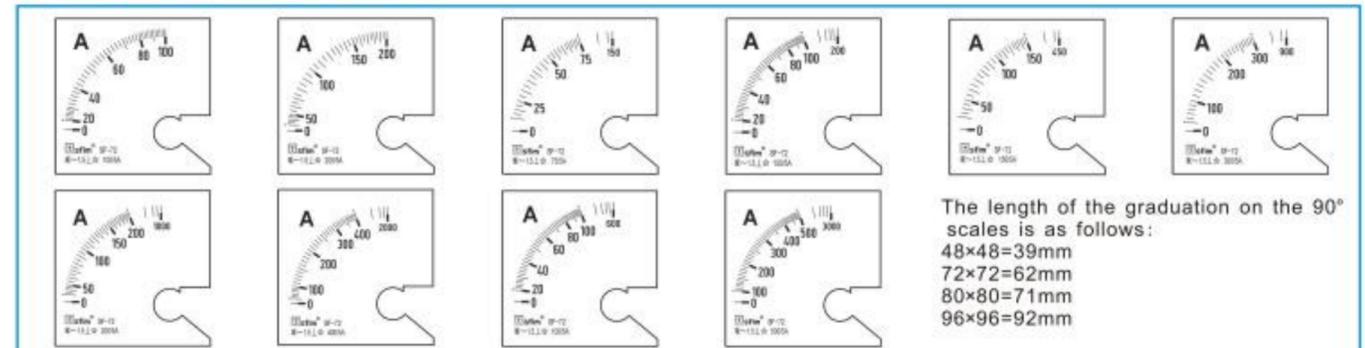


| Type 型号 | A | B | C | D | E | F | Hole |
|----------|----|----|----|-----|----|----|-------|
| SF-96-3# | 96 | 91 | 90 | 5.5 | 65 | 43 | 92x92 |
| SF-80-3# | 80 | 75 | 72 | 5.5 | 65 | 43 | 76x76 |
| SF-72-3# | 72 | 67 | 66 | 5.5 | 65 | 43 | 68x68 |
| SF-48-3# | 48 | 43 | 42 | 5.5 | 65 | 43 | 45x45 |

Flush Mounting With Fixture



The standard scale plates :
90° Scale plates with 1In 2In 3In 5In 6In



SF-96(72)-1 Panel meter



| | |
|-------|---|
| Type | SF-96 (72) -1 |
| Range | AC 0-100A |
| | AC 0-750V, 110V/PT |
| | DC 0-100UA, DC 0-500MA, DC 0-50 (60, 75) MV |
| | DC 0-2000V |

Outline drawing (unit:mm)



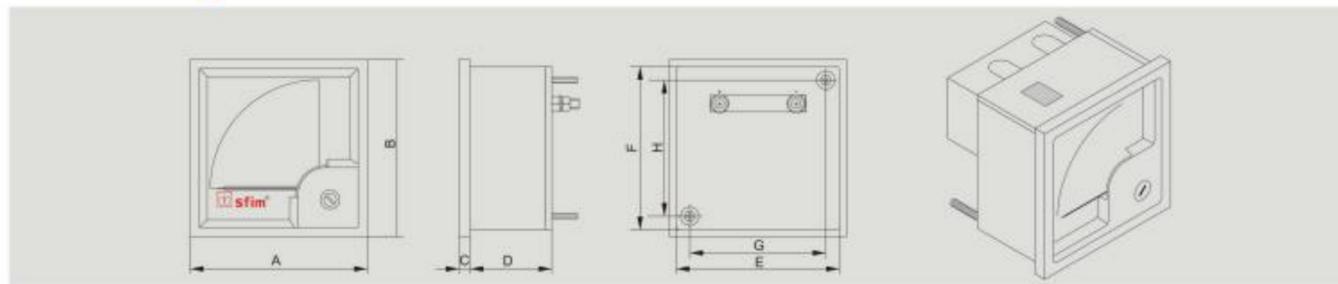
| Type | A | B | C | D | E | F |
|----------|----|----|---|----|----|----|
| SF-96-1# | 96 | 96 | 6 | 50 | 89 | 89 |
| SF-72-1# | 72 | 72 | 6 | 45 | 66 | 66 |

SF-96(72, 48)-6 Panel Meter



| | |
|-------|---|
| Type | SF-96 (72, 48) -6 |
| Range | AC 0-100A (48-3 MAX AC 30A) |
| | AC 0-750V, 110V/PT |
| | DC 0-100UA, DC 0-500MA, DC 0-50 (60, 75) MV |
| | DC 0-2000V |

Outline drawing (unit:mm)



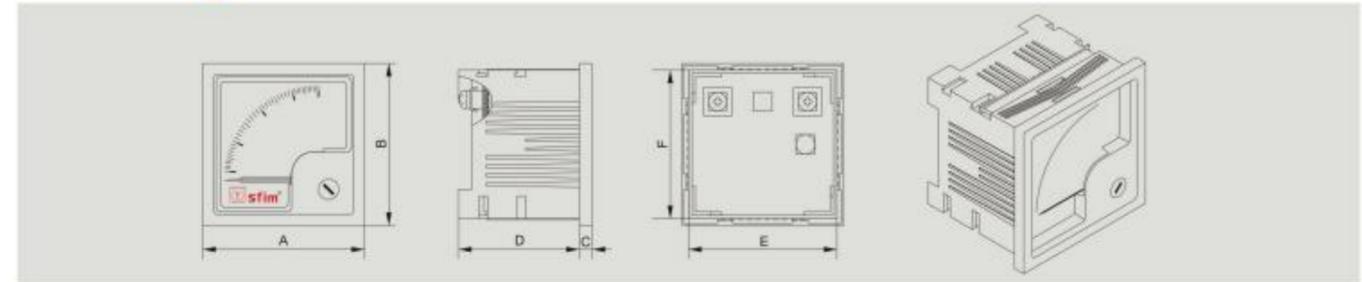
| Type | A | B | C | D | E | F | G | H |
|----------|----|----|---|----|----|----|----|----|
| SF-96-6# | 96 | 96 | 5 | 44 | 90 | 90 | 84 | 84 |
| SF-72-6# | 72 | 72 | 5 | 44 | 66 | 66 | 60 | 60 |
| SF-48-6# | 48 | 48 | 5 | 44 | 44 | 44 | 38 | 38 |

SF-96(72, 48)-8 Panel meter



| | |
|-------|---|
| Type | SF-96 (72, 48) -8 |
| Range | AC 0-100A (48 MAX AC 30A) |
| | AC 0-750V, 110V/PT |
| | DC 0-100UA, DC 0-500MA, DC 0-50 (60, 75) MV |
| | DC 0-2000V |

Outline drawing (unit:mm)



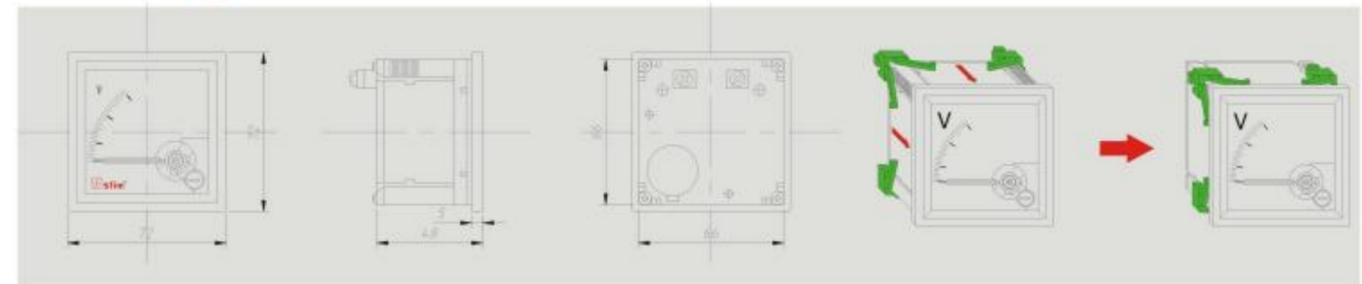
| Type | A | B | C | D | E | F |
|----------|----|----|---|----|----|----|
| SF-96-8# | 96 | 96 | 5 | 54 | 90 | 90 |
| SF-72-8# | 72 | 72 | 5 | 54 | 66 | 66 |
| SF-48-8# | 48 | 48 | 5 | 44 | 44 | 44 |

SF-96(72, 48)-9 Panel Meter



| | |
|-------|---|
| Type | SF-96 (72, 48) -9 |
| Range | AC 0-100A (48-3 MAX AC 30A) |
| | AC 0-750V, 110V/PT |
| | DC 0-100UA, DC 0-500MA, DC 0-50 (60, 75) MV |
| | DC 0-2000V |

Outline drawing (unit:mm)

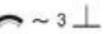


| Type | A | B | C | D | E | F | G | H |
|----------|----|----|---|----|----|----|----|----|
| SF-96-9# | 96 | 96 | 5 | 44 | 90 | 90 | 84 | 84 |
| SF-72-9# | 72 | 72 | 5 | 44 | 66 | 66 | 60 | 60 |
| SF-48-9# | 48 | 48 | 5 | 44 | 44 | 44 | 38 | 38 |

AC Ammeter and Voltmeter with Selector Switch

| Picture | Product Structure | Type | Specification | Overload ration | Accuracy | Standard Mounting |
|--|--|----------------------|----------------|---|----------|-----------------------------|
|  | AC Ammeter with selector switch 3-Position | SF-96-3# SF-72-3# | ××/1A ××/5A | 1 or 2 times customized 3, 5, 6times | 1.5 | Flush mounting with bracket |
|  | AC Voltmeter with selector switch 3-Position | SF-96-3# SF-72-3# | 10V-500V | / | 1.5 | Flush mounting with bracket |
| | AC Voltmeter with selector switch 6-Position | SF-96-3# SF-72-3# | 10V-500V | / | 1.5 | Flush mounting with bracket |

Maximum Demand Ammeter

| Picture | Product Structure | Symbols | Type | Specification | Response Time | Accuracy | Standard Mounting | Remark |
|--|------------------------------|---|----------------------|---|---------------|----------|-----------------------------|--------|
|  | Maximum Demand Ammeter |  | SF-96-3# SF-72-3# | 5A 50/5A 60/5A 75/5A 100/5A 200/5A ... 5000/5A | 15min | 3.0 | Flush mounting with bracket | |
|  | MDI with Moving Iron Ammeter |  | SF-96-3# | 5A 50/5A 60/5A 75/5A 100/5A 200/5A ... 5000/5A | 15min | 3.0 | Flush mounting with bracket | |

Double Meter

| Picture | Product Structure | Type | Specification | Accuracy | Standard Mounting | Remark |
|--|--|----------|---|----------|-----------------------------|--------|
|  | Double AC Ammeter Double AC Voltmeter | SF-96-3# | 100mA-5A 10V-500V | 1.5 | Flush mounting with bracket | |
| | Double DC Ammeter Double DC Voltmeter | | 50mV-600V | | Flush mounting with bracket | |
|  | Double Frequency Meter | SF-96-3# | 45-55Hz 45-65Hz 55-65Hz 100V 220V 380V 440V | 1.5 | Flush mounting with bracket | |

Marine Meter 船用仪表



| Product Structure | Type | Specification | Accuracy | Instruction Angle | Remark |
|--|---------------------------------------|---------------------------|----------|-------------------|--|
| AC Ammeter | SF-110# SF-96# SF-80# SF-72# | 50mA-1000mA ×/1A, ×/5A | 1.5 | 240° | 1A, 5A the scales plate is changable |
| AC Voltmeter | | 0-600V | | | Connecting to PT /110V |
| DC Ammeter | | 50uA-800uA | | | 75mV, 60mV, 50mV the scales plate is changable |
| | | 1mA-20A | | | |
| DC Voltmeter | | 0-2000V | | | / |
| Frequency Meter | | 45-55Hz 45-65Hz | | | / |
| | | 110V 220V 380V 440V | | | |
| Power Factor | | 1A | | | cosφ meter should be connected with external convertor |
| | | 5A | | | |
| Power Meter 1P1W KW 3P3W KW 3P4W KW | | 1A | | | KW Meter should be connected with external convertor |
| | 5A | | | | |

Synchroscope

| Picture | Product Structure | Type | Specification | Accuracy | Standard Mounting | Remark |
|---|-------------------|----------------------|---|----------|-----------------------------|--------|
|  | Synchroscope | SF-96-3# SF-72-3# | AC 57V AC 100V AC 220V AC 380V | 2.5 | Flush mounting with bracket | |

Analogue Frequency Meter

| Picture | Product Structure | Symbols | Type | Specification | Operating Voltage | Accuracy | Standard Mounting | Instruction Angle | Remark |
|--|-------------------|------------------|----------|---------------|-------------------|----------|-----------------------------|-------------------|--------|
|  | Frequency Meter | $\sim 1.0 \perp$ | SF-96-3# | 45-55Hz | 100V | 0.5 | Flush mounting with bracket | 90° | |
| | | | SF-80-3# | 45-65Hz | 220V | 1.0 | | | |
| | | | SF-72-3# | 47-63Hz | 380V | 1.5 | | | |
| | | | SF-48-3# | 55-65Hz | 415V | | | | |
| | | | SF-48-3# | 57-63Hz | 440V | | | | |

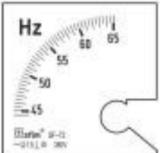
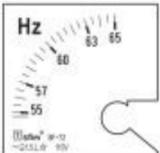
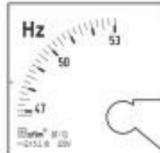
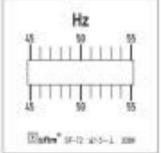
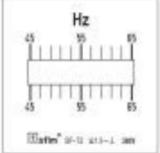
Reeds Frequency Meter

| Picture | Product Structure | Symbols | Type | Specification | Operating Voltage | Accuracy | Standard Mounting | Characteristics | Remark |
|---|-----------------------|-------------------------|----------------------|---|--------------------------------------|----------|-----------------------------|----------------------------|--------|
|  | Reeds Frequency Meter | $\nabla \sim 1.5 \perp$ | SF-96-3# SF-72-3# | 45-55Hz 45-65Hz 47-63Hz 55-65Hz 57-63Hz | 100V 220V 380V 415V 440V | 0.5 | Flush mounting with bracket | Single row vibrating reed | |
|  | Reeds Frequency Meter | $\nabla \sim 1.5 \perp$ | SF-96-3# | 45-55Hz 45-65Hz 47-63Hz 55-65Hz 57-63Hz | 100V 220V 380V 415V 440V | 0.5 | Flush mounting with bracket | Double row vibrating reeds | |

LED Frequency Meter

| Picture | Product Structure | Symbols | Type | Specification | Operating Voltage | Accuracy | Standard Mounting | Characteristics | Remark |
|--|---------------------|------------------|----------------------|-------------------------------|--------------------------------------|----------|-----------------------------|-----------------|--------|
|  | LED Frequency Meter | $1.5 \sim \perp$ | SF-96-3# SF-72-3# | 45-55Hz 45-65Hz 55-65Hz | 100V 220V 380V 415V 440V | 0.5 | Flush mounting with bracket | LED display | |

Frequency Meter Scale Plates

| | | | | | |
|---|---|--|---|--|---|
|  |  |  |  |  |  |
|  |  | <p>The length of the graduation on the 90° scales is as follows: 48×48=39mm 72×72=62mm 80×80=71mm 96×96=92mm</p> | | | |

Power Factor Meter

| Picture | Product Structure | Symbols | Type | Specification | Operating Voltage | Current | Accuracy | Standard Mounting | Remark |
|---|---|------------------|--|---------------|--------------------------------------|--------------|----------|-----------------------------|--------|
|  | Power Factor Meter Single-phase system | $\sim 2.5 \perp$ | SF-96-3# SF-80-3# SF-72-3# SF-48-3# | CAP | 100V 220V 240V | 1A 5A | 2.5 | Flush mounting with bracket | |
| | | | | IND | | | | | |
|  | Power Factor Meter Three-phase system with balanced load | $\sim 2.5 \perp$ | SF-96-3# SF-80-3# SF-72-3# SF-48-3# | CAP | 100V 220V 240V 380V 415V | 1A 5A | 2.5 | Flush mounting with bracket | |
| | | | | IND | | | | | |

Active Power Meter and Rective Power Meter

| Picture | Product Structure | Symbols | Type | Specification | Operating Voltage | Current | Accuracy |
|--|--|------------------|--|----------------------|------------------------------|----------|----------|
|  | Active Power Meter(Reactive Power Meter) Single-Phase system | $\sim 1.5 \perp$ | SF-96-3# SF-80-3# SF-72-3# SF-48-3# | 0-800KW 0-10000MW | 57.7V 100V 220V | 1A 5A | 1.5 |
| | Active Power Meter(Reactive Power Meter) 3P3W balanced system 3P3W unbalanced system | | | | 100V 220V 380V 440V | | |
| | Active Power Meter(Reactive Power Meter) 3P4W balanced system 3P4W unbalanced system | | | | 220V 240V 380V 415V | | |

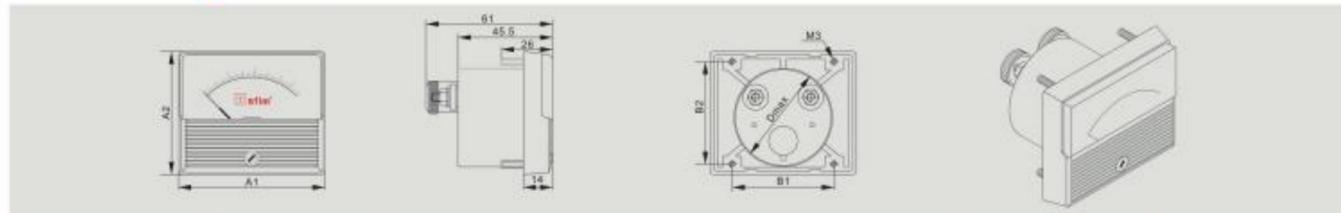
Phase Sequence Indicator , Hours Run Meter

| Picture | Product Structure | Type | Specification | Accuracy | Standard Mounting | Remark |
|---|--------------------------|----------------------------------|------------------------------|----------|-----------------------------|--------|
|  | Phase Sequence Indicator | SF-96-3# | AC 100V-380V AC 150V-500V | 1.5 | Flush mounting with bracket | |
|  | Hours Run Meter | SF-96-3# SF-72-3# SF-48-3# | AC 110V-250V AC 250V-450V | 0.5 | Flush mounting with bracket | |

SFT Panel Meter



Outline drawing (unit:mm)

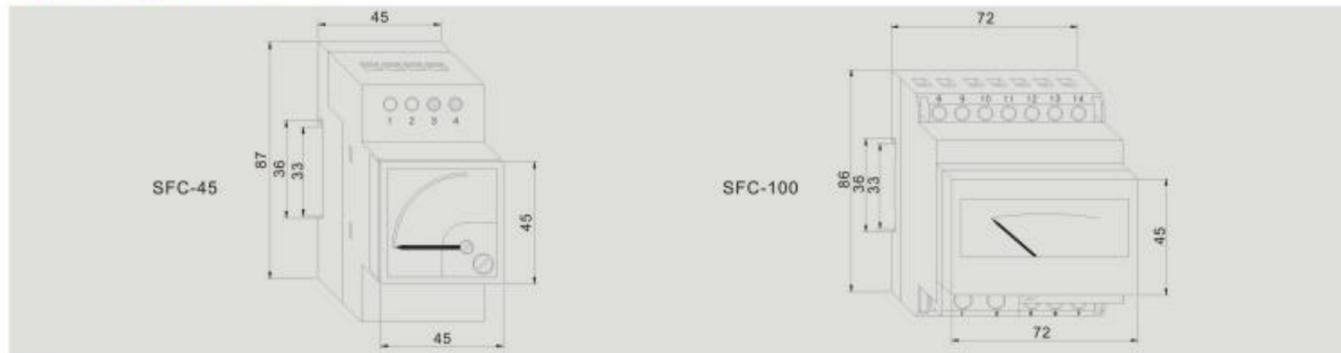


| Type | A1 | A2 | B1 | B2 | Dmax | Hole Cutout Dimension |
|----------|-----|----|------|------|------|-----------------------|
| SFT-8100 | 100 | 80 | 64 | 64 | 46.5 | 47.5 |
| SFT-80 | 80 | 80 | 64 | 64 | 46.5 | 47.5 |
| SFT-780 | 80 | 70 | 64 | 64 | 46.5 | 47.5 |
| SFT-680 | 80 | 60 | 47.5 | 47.5 | 46.5 | 47.5 |
| SFT-670 | 70 | 60 | 47.5 | 47.5 | 46.5 | 47.5 |
| SFT-60 | 60 | 60 | 47.5 | 47.5 | 46.5 | 47.5 |
| SFT-560 | 60 | 50 | 36 | 36 | 43 | 44 |
| SFT-50 | 50 | 50 | 36 | 36 | 43 | 44 |

Modular Type Panel Meter



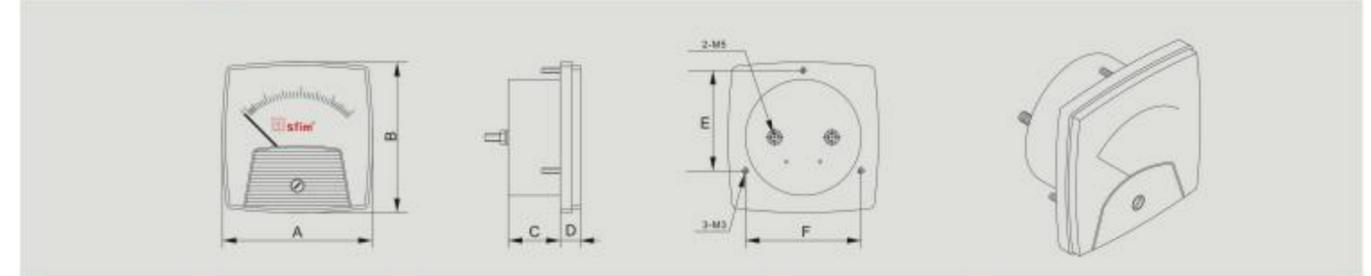
Outline drawing (unit:mm)



SF-100Y Panel Meter



Outline drawing (unit:mm)

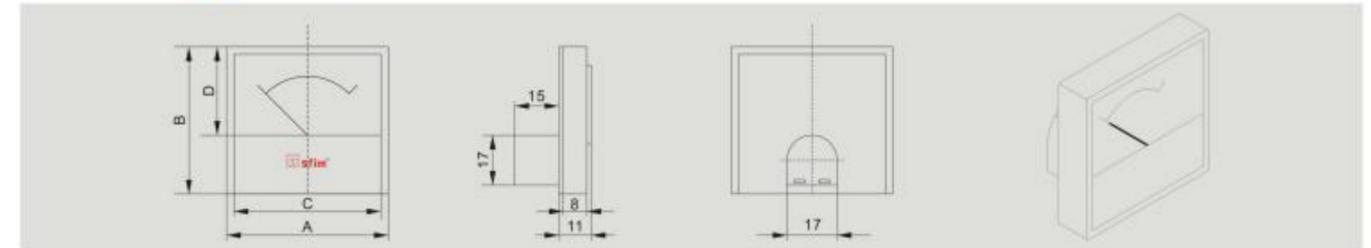


| Type | A | B | C | D | E | F |
|---------|------|------|----|------|----|----|
| SF-68Y | 68 | 68 | 32 | 12.5 | 45 | 55 |
| SF-100Y | 89.5 | 89.5 | 32 | 12.5 | 60 | 68 |

Supply-Battery Panel Meter



Outline drawing (unit:mm)

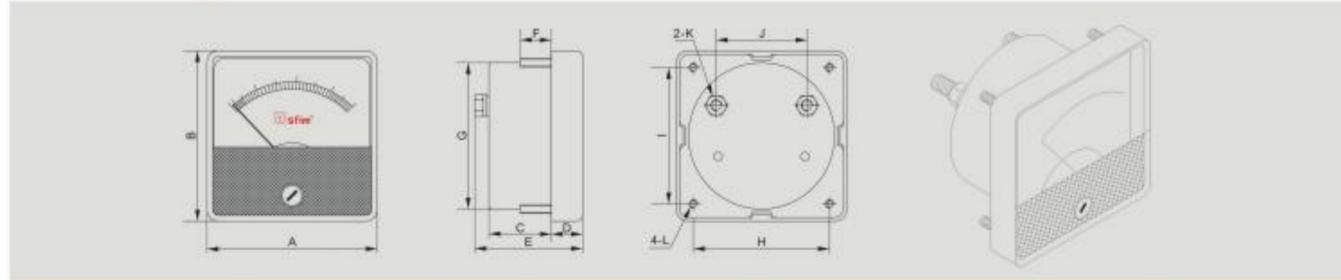


| Type | A | B | C | D |
|--------|----|----|----|----|
| SF-55 | 55 | 50 | 50 | 30 |
| SF-48 | 55 | 48 | 60 | 28 |
| SF-40 | 40 | 40 | 36 | 21 |
| SF-48A | 48 | 48 | 44 | 25 |

Square or Rectangular Panel Meter



Outline drawing (unit:mm)

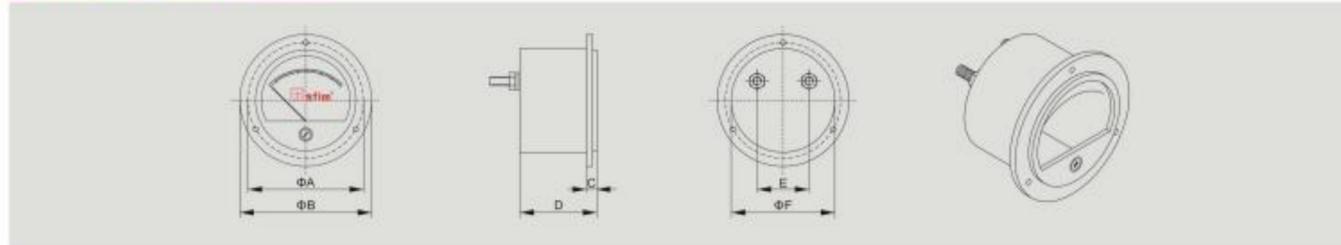


| Type | A | B | C | D | E | F | G | H | I | J | K | L |
|--------|----|----|----|----|----|----|----|----|----|----|------------|----|
| SF-80 | 80 | 80 | 23 | 13 | 49 | 13 | 63 | 65 | 65 | 24 | M5 Outside | M3 |
| SF-670 | 70 | 60 | 22 | 11 | 45 | 10 | 51 | 50 | 50 | 31 | M4 Inside | M3 |
| SF-60 | 60 | 60 | 22 | 11 | 39 | 11 | 51 | 48 | 48 | 25 | M4 Inside | M3 |
| SF-50 | 52 | 52 | 22 | 11 | 39 | 10 | 44 | 38 | 38 | 31 | M4 Inside | M3 |

Round Panel Meter



Outline drawing (unit:mm)



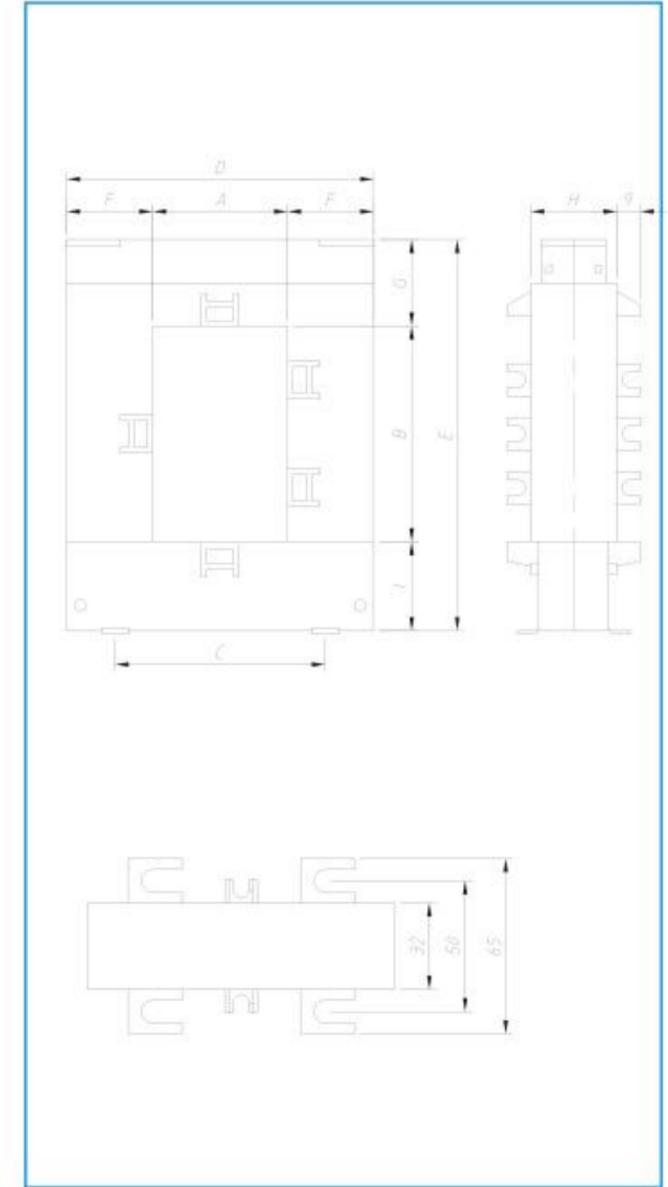
| Type | A | B | C | D | E | F |
|---------|------|------|-----|------|----|------|
| SF-45 | 45 | 45 | 1.5 | 35 | 18 | 45.2 |
| SF-52 | 58 | 58 | 4.5 | 40.5 | 39 | 52 |
| SF-65 | 73.5 | 83.5 | 4.5 | 42 | 39 | 65 |
| SF-62T2 | 78 | 90 | 8 | 52 | 35 | 70 |

DP Series Current Transformer



| Type | Standard current ratio | Class:0.5 |
|--------|------------------------|-------------------|
| | | Rated Burden (VA) |
| DP-23 | 100 | |
| | 150 | |
| | 200 | |
| | 250 | |
| | 300 | 1.5 |
| | 400 | 2.5 |
| DP-58 | 250 | 1.5 |
| | 300 | 1.5 |
| | 400 | 1.5 |
| | 500 | 2.5 |
| | 600 | 2.5 |
| | 750 | 2.5 |
| DP-88 | 800 | 2.5 |
| | 1000 | 5 |
| | 250 | 1.5 |
| | 300 | 1.5 |
| | 400 | 1.5 |
| | 500 | 2.5 |
| DP-812 | 600 | 2.5 |
| | 750 | 2.5 |
| | 800 | 2.5 |
| | 1000 | 5 |
| | 1200 | 6 |
| | 1250 | 7.5 |
| DP-816 | 1500 | 7.5 |
| | 1000 | 10 |
| | 1500 | 15 |
| | 2000 | 15 |
| | 2500 | 15 |
| | 3000 | 20 |
| | 4000 | 20 |
| | 5000 | 20 |

Outline drawing (unit:mm)



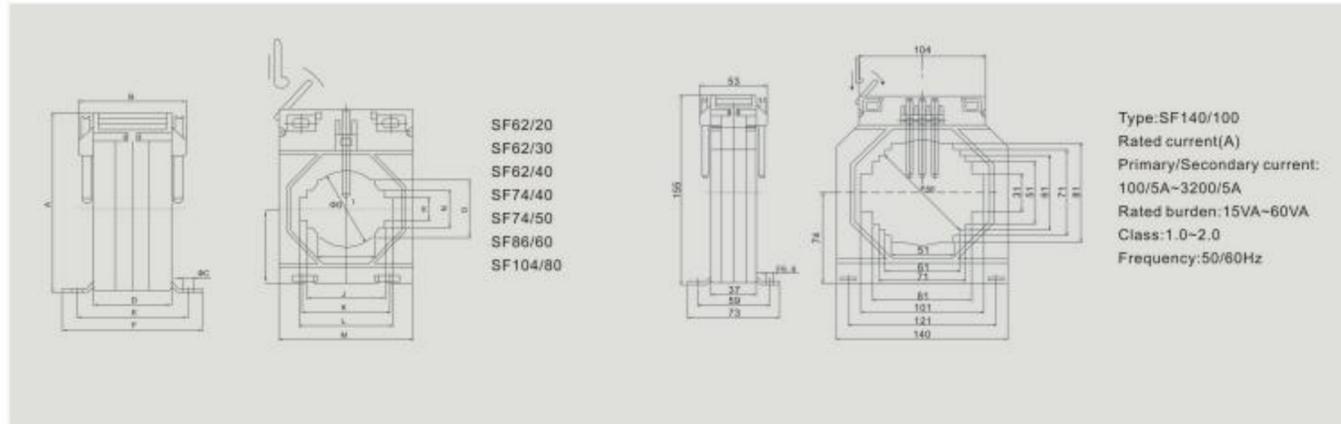
| Type | A | B | C | D | E | F | G | H | I | Weight (kg) |
|--------|----|-----|-----|-----|-----|----|----|----|----|-------------|
| DP-23 | 20 | 30 | 51 | 89 | 111 | 34 | 47 | 40 | 32 | 0.75 |
| DP-58 | 50 | 80 | 78 | 114 | 145 | 32 | 32 | 32 | 33 | 0.90 |
| DP-88 | 80 | 80 | 108 | 144 | 145 | 32 | 32 | 32 | 33 | 1.05 |
| DP-812 | 80 | 120 | 108 | 144 | 185 | 32 | 32 | 32 | 33 | 1.25 |
| DP-816 | 80 | 160 | 120 | 184 | 245 | 52 | 47 | 52 | 38 | 4.30 |

SF Series Current Transformer



Outline drawing (unit:mm)

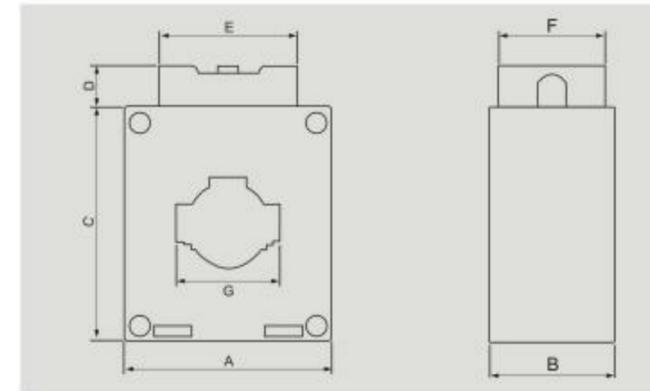
| Type | Rated Current(A) | Rated Burden(VA) | Class | Rated Voltage(V) | Rated Frequency(Hz) |
|-----------|------------------|------------------|---------|------------------|---------------------|
| SF62/20 | 30/5A~200/5A | 1.5~2.5 | 3.0~0.5 | 720 | 50/60 |
| SF62/30 | 100/5A~400/5A | 1.5~5 | 1.0~0.5 | 720 | 50/60 |
| SF62/40 | 200/5A~600/5A | 5~10 | 1.0~0.5 | 720 | 50/60 |
| SF74/40 | 150/5A~600/5A | 2.5~20 | 1.0~0.5 | 720 | 50/60 |
| SF74/50 | 250/5A~1000/5A | 5~20 | 1.0~0.5 | 720 | 50/60 |
| SF86/60 | 250/5A~1200/5A | 5~30 | 1.0~0.5 | 720 | 50/60 |
| SF104/80 | 600/5A~2000/5A | 5~45 | 1.0~0.5 | 720 | 50/60 |
| SF140/100 | 1000/5A~3200/5A | 5~50 | 1.0~0.5 | 720 | 50/60 |



Outline drawing (unit:mm)

| Type | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|----------|-----|----|-----|----|----|----|------|------|----|----|----|----|-----|----|----|
| SF62/20 | 78 | 36 | 6.6 | 36 | 55 | 71 | 30.1 | 30.1 | 11 | 23 | 44 | 21 | 62 | 21 | 26 |
| SF62/30 | 78 | 47 | 6.6 | 35 | 55 | 71 | 31 | 31 | 16 | 31 | 44 | 31 | 62 | 21 | 26 |
| SF62/40 | 78 | 47 | 6.6 | 35 | 55 | 71 | 33 | 33 | 11 | 31 | 47 | 41 | 74 | 21 | 31 |
| SF74/40 | 98 | 61 | 6.6 | 45 | 67 | 81 | 41 | 41 | 31 | 41 | 47 | 41 | 74 | 21 | 31 |
| SF74/50 | 98 | 61 | 6.6 | 45 | 67 | 81 | 51 | 51 | 21 | 51 | 68 | 51 | 86 | 31 | 44 |
| SF86/60 | 110 | 56 | 6.6 | 40 | 62 | 76 | 65 | 65 | 31 | 61 | 86 | 61 | 104 | 31 | 56 |
| SF104/80 | 126 | 56 | 6.6 | 40 | 62 | 76 | | | | | | 81 | | | |

MSQ Series Current Transformer



| Type | A | B | C | D | E | F | G |
|---------|-----|----|-----|----|----|----|-----|
| MSQ-30 | 60 | 36 | 68 | 16 | 60 | 30 | 30 |
| MSQ-40 | 75 | 40 | 82 | 16 | 60 | 30 | 40 |
| MSQ-60 | 101 | 39 | 110 | 16 | 60 | 30 | 60 |
| MSQ-80 | 124 | 40 | 102 | 16 | 60 | 30 | 80 |
| MSQ-100 | 170 | 40 | 120 | 16 | 60 | 30 | 100 |
| MSQ-120 | 165 | 50 | 135 | 16 | 60 | 30 | 120 |

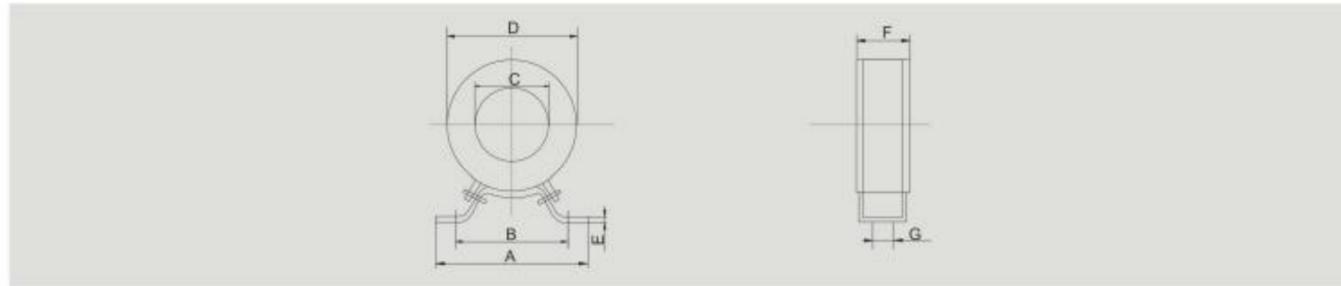
| Picture | Type | Rated current | Rated Burden (VA) | | Weight(kg) | |
|---|--|---------------|-------------------|-----------|------------|------|
| | | | Class:0.5 | Class:1.0 | | |
|  | MSQ-30 Bar:30x10mm Conductor:F20mm | 30/5A | 5 | 5 | 0.30 | |
| | | 60/5A | | | | |
| | | 80/5A | | | | |
| | | 100/5A | | | | |
| | | 200/5A | | | | |
|  | MSQ-40 Bar:40x10mm Conductor:F30mm | 100/5A | 2.5 | 2.5 | 0.38 | |
| | | 200/5A | 5 | 5~10 | | |
| | | 300/5A | 5~10 | 5~10 | | |
| | | 400/5A | 5~10 | 5~10 | | |
| | | 500/5A | 5~10 | 5~10 | | |
|  | MSQ-60 Bar:60x20mm Conductor:F40mm | 300/5A | 5 | 5 | 0.60 | |
| | | 400/5A | 5~10 | 5~10 | | |
| | | 500/5A | 5~10 | 5~10 | | |
| | | 600/5A | 10~15 | 10~15 | | |
| | | 800/5A | 10~15 | 10~15 | | |
|  | MSQ-80 Bar:82x30mm Conductor:F80mm | 1000/5A | 15 | 15 | 0.75 | |
| | | 750/5A | 15 | 15 | | 0.82 |
| | | 800/5A | | | | 0.89 |
| | | 1000/5A | | | | 0.99 |
| | | 1200/5A | | | | 1.02 |
|  | MSQ-100 Bar:105x30mm Conductor:F60mm | 1500/5A | | | 15 | 15 |
| | | 1600/5A | 0.80 | | | |
| | | 2000/5A | 0.94 | | | |
| | | 2500/5A | 1.10 | | | |
| | | 3000/5A | 1.16 | | | |
|  | MSQ-120 Bar:125x57mm or 125x10mm Conductor:F60mm | 1500/5A | 15 | 15 | 1.00 | |
| | | 2000/5A | | | 1.15 | |
| | | 2500/5A | | | 1.45 | |
| | | 3000/5A | | | 1.60 | |
| | | 4000/5A | | | 1.90 | |
| | | 5000/5A | | | 2.20 | |

RCT Series Current Transformer



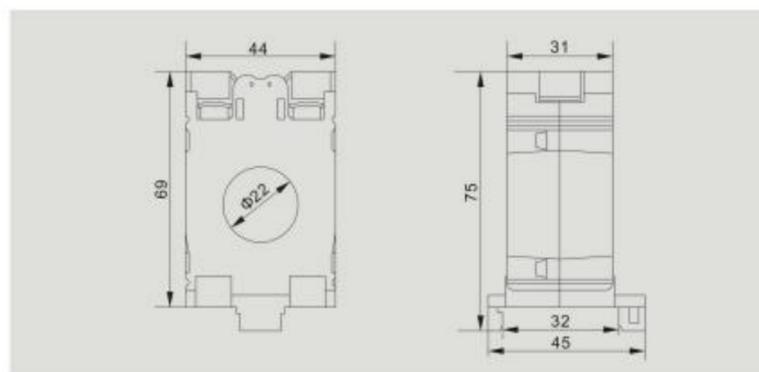
| Type | Rated Current (A) |
|---------|--|
| RCT-35 | 30/5A, 50/5A, 60/5A, 80/5A, 100/5A, 120/5A, 150/5A, 200/5A, 250/5A, 300/5A |
| RCT-58 | 300/5A, 400/5A, 500/5A, 600/5A, 800/5A, 1000/5A, 1200/5A |
| RCT-90 | 800/5A, 1000/5A, 1200/5A, 1500/5A, 1600/5A |
| RCT-110 | 1000/5A, 1200/5A, 1500/5A, 1600/5A, 2000/5A, 2500/5A, 3000/5A |

Primary current: 30~3000A
 Secondary current: 5A, 1A
 Standard approval: IEC44-1
 Maximum voltage: 0.66KV
 Frequency: 50/60Hz
 Rated load: 15VA
 Class: 1.0
 Short-time thermal current: 1th=60×1h
 Rated security coefficient: FS<5



| Type | A | B | C | D | E | F | G |
|---------|-----|----|-----|-----|---|----|---|
| RCT-35 | 93 | 78 | 25 | 78 | 2 | 55 | 9 |
| RCT-58 | 93 | 78 | 60 | 104 | 2 | 41 | 9 |
| RCT-90 | 93 | 78 | 90 | 136 | 2 | 41 | 9 |
| RCT-110 | 102 | 86 | 111 | 157 | 2 | 52 | 9 |

DM Series Current Transformer

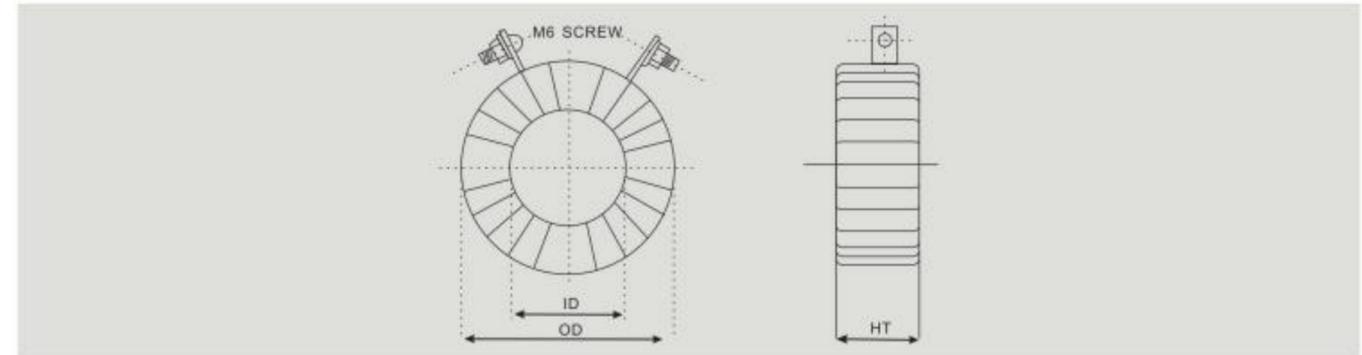


| Type | Rated Current(A) | Secondary Current | Rated Burden(VA) | Class | Rated Voltage(V) | Rated Frequency (Hz) | High Voltage Test | Security Factor |
|-------|------------------|-------------------|------------------|---------|------------------|----------------------|--------------------|-----------------|
| DM-20 | 50/5A~400/5A | 5A | 1.5~5 | 1.0~0.5 | 720 | 50/60 | 4KVeFF, 50Hz, 1min | FS<5 |

MR Series Current Transformer



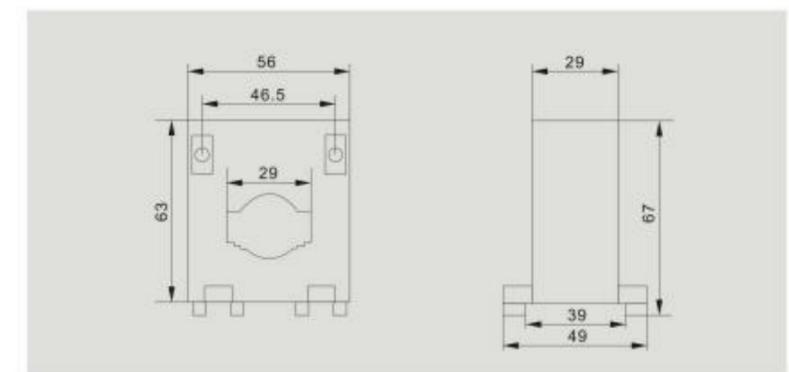
| | |
|-----------------------------|----------------|
| Primary current: | 30~5000A |
| Secondary current: | 5A, 1A |
| Standard approval: | BS7626, IEC185 |
| Maximum voltage: | 0.72KV |
| Frequency: | 50/60Hz |
| Rated load: | 5VA~15VA |
| Class: | 1.0, 3.0 |
| Short-time thermal current: | 1th=60×1h |
| Rated security coefficient: | FS<5 |



| Type | Rated Current(A) | ID | OD | HT |
|--------|------------------|-----|-----|----|
| MR-28 | 30/5A~100/5A | 28 | 70 | 40 |
| MR-42 | 100/5A~250/5A | 42 | 80 | 30 |
| MR-45 | 300/5A | 45 | 80 | 30 |
| MR-60 | 400/5A | 60 | 100 | 30 |
| MR-60 | 500/5A~600/5A | 60 | 100 | 30 |
| MR-85 | 800/5A~1600/5A | 85 | 120 | 20 |
| MR-125 | 2000/5A~5000/5A | 125 | 165 | 20 |

★ Noted: For measuring current transformers, the accuracy class is designated by the highest permissible percentage current (ratio) error at the rated current prescribed for the accuracy class concerned.

DSC Series Current Transformer



| Type | Rated Current(A) | Secondary Current | Rated Burden(VA) | Class | Rated Voltage(V) | Rated Frequency (Hz) | High Voltage Test | Security Factor |
|--------|------------------|-------------------|------------------|---------|------------------|----------------------|--------------------|-----------------|
| DSC-30 | 50/5A~400/5A | 5A | 1.5~5 | 1.0~0.5 | 720 | 50/60 | 4KVeFF, 50Hz, 1min | FS<5 |

FL-2 Shunt



1-50A



75-100A



150-200A



300A



500A



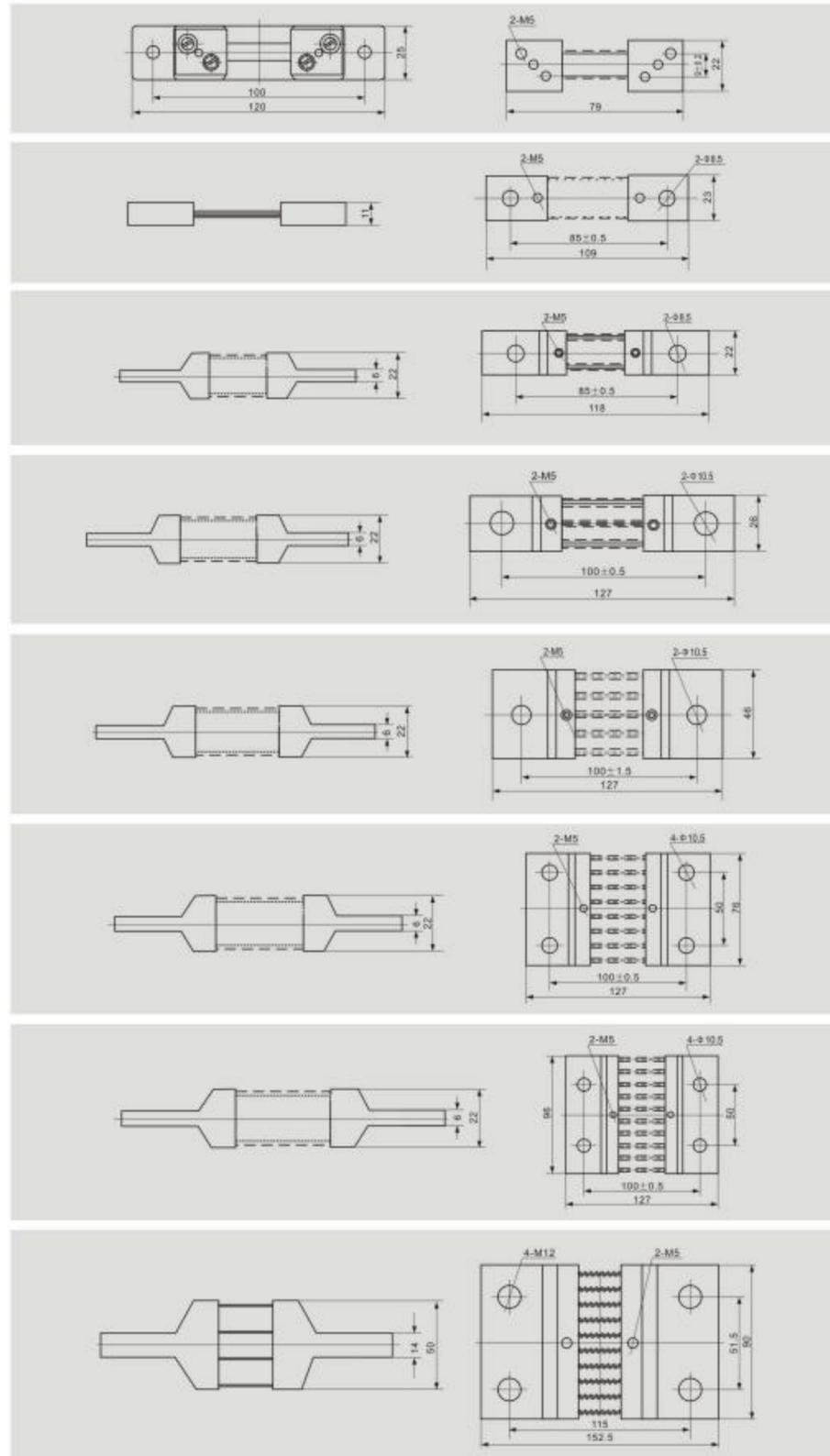
750A



1000A



1500A



★Note: If you need special specification, please contact with us

General changeover switch



Sphere of application

LW 28 series general changeover switch, is mainly used in the electric circuit for AC 50HZ, rated voltage lower than 380V, DC 220V and rated current up to 160A. It is used for controlling and changing the unfrequently manual connecting or cutting circuit. It can directly control the three phase asynchronous motor and also used for master controlling and circuit measuring. The LW-28 is widely used and instead of the national various changeover switch. It can be used as circuit controlling switch, instrument testing switch, motor controlling switch, master controlling switch and welding machine used changeover switch.

Standards-compliant: main circuit changeover switch, directly controlling motor changeover switch in line with GB14048. 3-2001
master controlling and testing changeover switch in line with GB14048. 5-2001

Classification

According to purpose: main circuit changeover switch, directly controlling motor changeover switch and master controlling and testing changeover switch

According to the operation mode: self-restoring, position-type, self-re-positioning

According to the connecting system: position-type changeover switch has 1~12 segments (63A only has 8 segments), self-restoring changeover switch has 1~3 segments, directly controlling motor changeover switch has 1~6 segments

According to the changing angle: 30 degree, 45 degree, 60 degree and 90 degree

According to the scales shape: Square scales, rectangular scales and round scales (only 20A)

According to the rotary switch: R type, O type, F type, B type, S type, L type, P type and K type

According to operation mode and actuator position, see the following picture (See form 1)

Outline drawing (unit:mm) 外形图 (单位:毫米)

