



POWER & ENERGY MONITORING



J&D is one of the global leaders providing innovative and high quality solutions for measuring electrical parameters. Its main products - current and voltage sensors - are used in a broad range applications of drives & welding, renewable energies & power distribution monitoring, power supplies traction, high precision, conventional and sub-metering businesses.

J&D's mission is to exploit the intrinsic strengths of its leading business, and to develop opportunities & demands from the markets and realize them with advanced solutions



iSaST was born to look forward to a global leading company & brand
It means " **Innovation Smart Grid advanced Sensing Technology**"

▼ Certificate

CE



UL



ISO 9001



ISO 14001



RoHS



▼ Customers



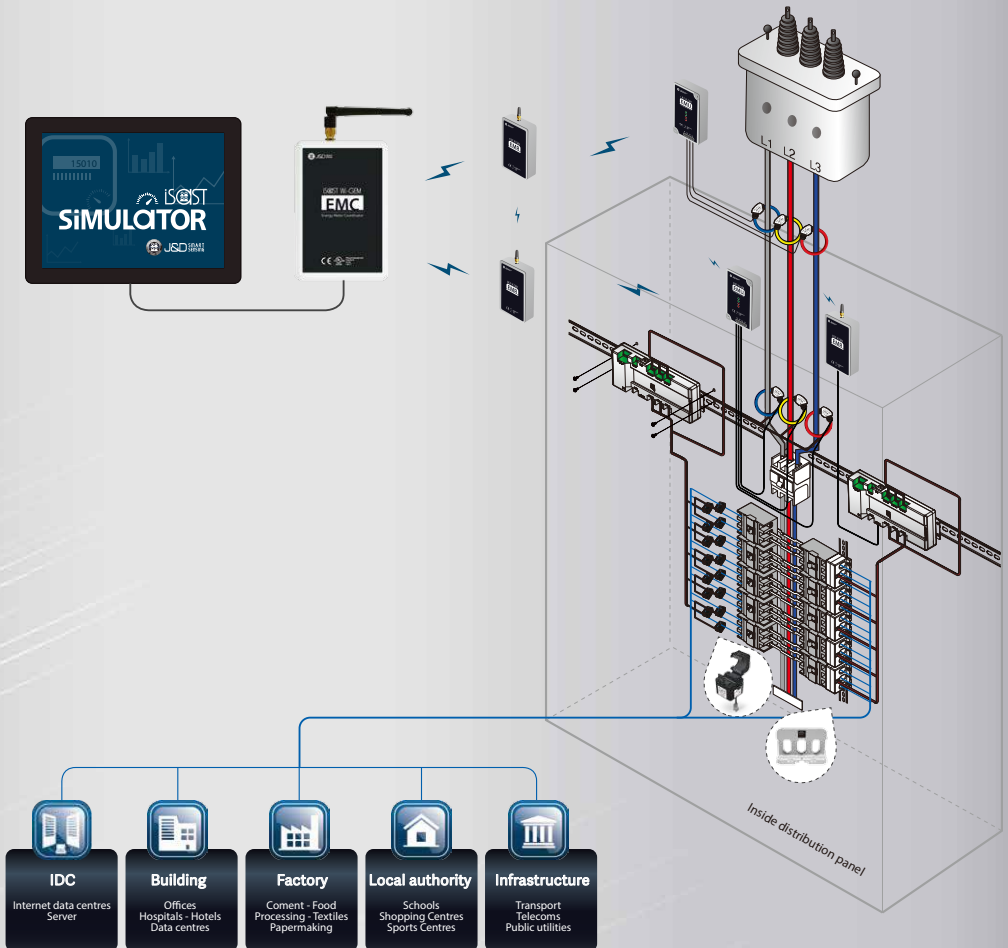
- ▼ Corporate Introduction
- ▼ Contents
- ▼ Product Introduction

WI-GEM & MULTI-GEM NETWORK SYSTEM	04
WIRELESS GREEN ENERGY METER	05 - 08
BRANCH CIRCUIT POWER METER	09 - 12
REMOTE CT ACCESSORY	13 - 45
PT ACCESSORY	46

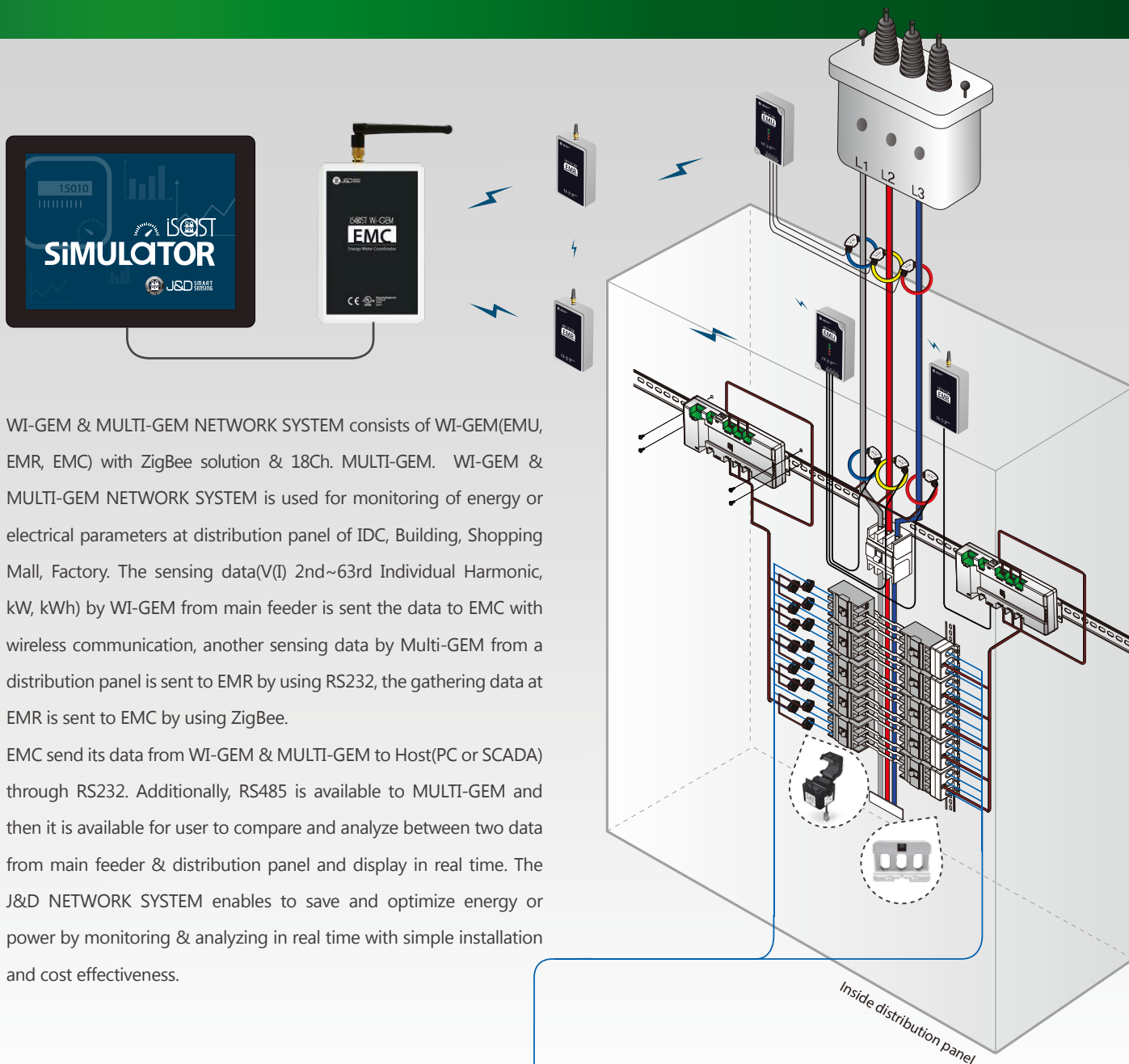
◆ 2015 TRADE SHOW

 2015 AHR EXPO	CHICAGO
South Hall 26-28 January 2015 - Booth#3741	
 DISTRIBUTECH	SAN DIEGO
CONFERENCE & EXHIBITION 3-5 February 2015 - Booth#3721	
 HANNOVER MESSE	HANNOVER
Hall 12 13-17 April 2015 - Booth #G19	
 AFRICAN UTILITY WEEK	CAPETOWN
12-14 May 2015 - Booth #K6	
 PCIM EUROPE	NUREMBERG
Hall 7 19-21 May 2015 - Booth #7-140	
 EMC 33rd	LONG BEACH
3-4 JUNE 2015 - Booth #521	
 European Utility Week	VIENNA
Hall A 3-5 November 2015 - Booth #h07	

WI-GEM & MULTI-GEM NETWORK



WI-GEM & MULTI-GEM NETWORK SYSTEM

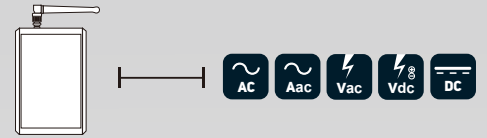


WI-GEM & MULTI-GEM NETWORK SYSTEM consists of WI-GEM(EMU, EMR, EMC) with ZigBee solution & 18Ch. MULTI-GEM. WI-GEM & MULTI-GEM NETWORK SYSTEM is used for monitoring of energy or electrical parameters at distribution panel of IDC, Building, Shopping Mall, Factory. The sensing data(V(I) 2nd~63rd Individual Harmonic, kW, kWh) by WI-GEM from main feeder is sent the data to EMC with wireless communication, another sensing data by Multi-GEM from a distribution panel is sent to EMR by using RS232, the gathering data at EMR is sent to EMC by using ZigBee.

EMC send its data from WI-GEM & MULTI-GEM to Host(PC or SCADA) through RS232. Additionally, RS485 is available to MULTI-GEM and then it is available for user to compare and analyze between two data from main feeder & distribution panel and display in real time. The J&D NETWORK SYSTEM enables to save and optimize energy or power by monitoring & analyzing in real time with simple installation and cost effectiveness.



WIRELESS GREEN ENERGY METER



Wireless Green Energy Meter(Wi-GEM) adopts ZigBee solution for a wireless telecommunication. It is used for industrial application like factory, building automation and SCADA as well. Wi-GEM is consisted of EMU(Energy Meter Unit), EMR(Energy Meter Router), EMC(Energy Meter Coordinator) and iSAST OPEN CTs such as split CTs or flexible Rogowski coils by customer need. Customer can choose their power lines from single phase to 3P3W(2CT) / 3P4W for metering. It measures power energy consumption effectively in real time. User can set up time to collect data. After installation of one EMU, it sends its sensing data to EMR in each floor as wireless communication then EMR sends the data to EMC. Finally EMC talks to computer. Installation is very simple and easy without cutting off power line as well as the compact design and easy Modbus open-protocol support.



CAUTION, RISK OF DANGER. DOCUMENTATION MUST BE CONSULTED IN ALL CASES WHERE THIS SYMBOL IS MARKED.



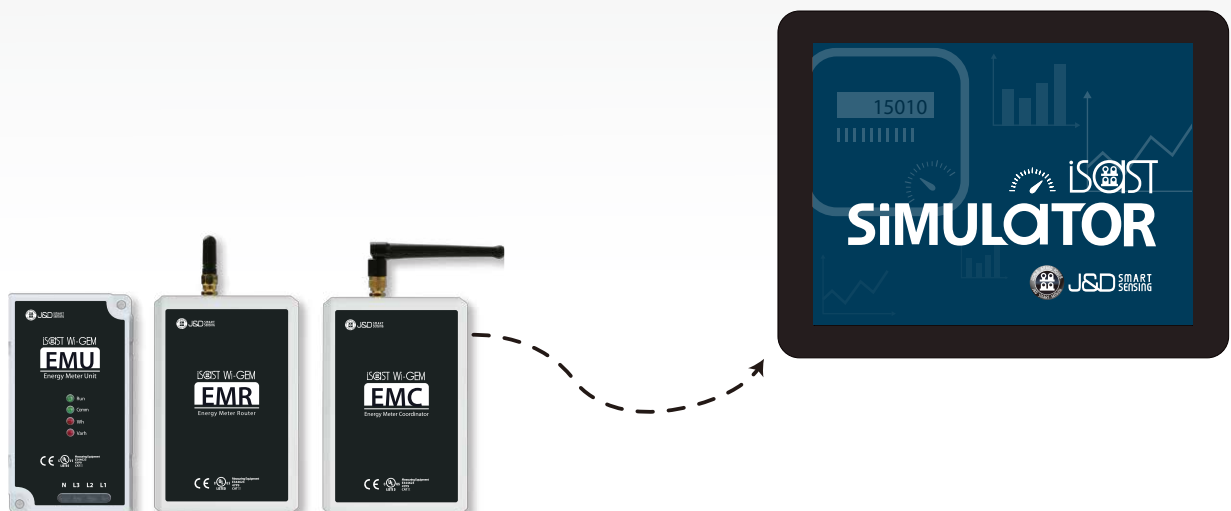
CAUTION, RISK OF ELECTRIC SHOCK.



PROTECTIVE CONDUCTOR TERMINAL.



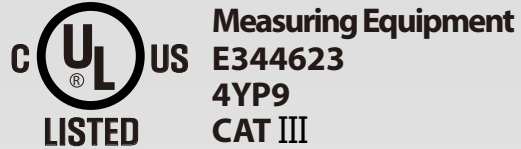
ALTERNATING CURRENT / VOLTAGE.



CERTIFICATION RELATED

This product has been designed to comply with the following standards and directives :

- IEC 61010_1 : 2001 (Safety Specification)
- FCC Part 15, Class B
- FCC Part 15, Class C



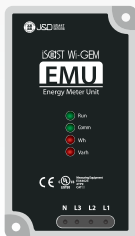
For more details, see this manual.

LABELING

The label including the model name, identification number and etc. is placed on the back cover.
The identification number of each device is placed on the bottom center of the back cover.

GLOSSARY

- Wi-GEM(Wireless Green Energy Meter) : Product name that consists of EMU, EMC, and EMR.
- EMU(Energy Meter Unit) : Energy meter that collects the required electrical parameters.
- EMC(Energy Meter Coordinator) : The network gateway.
- EMR(Energy Meter Router) : Router between EMU and EMC.
- RTC(Real Time Clock)
- Modbus : Communication protocol.
- L1/L2/L3/N : In case of 3phase 4wires, L1/L2/L3/N indicates the phase of power source.
In case of 3phase 3wires, only L1/L2/L3 exist. In this manual, we use L1, L2, L3, and N.



Energy Meter Unit

Electric power energy meter(EMU) performs variable electric measurements with pre-wired split core current transformers(CTs) and the voltage input and send the data to EMR or EMC automatically. EMU is applied to both single or three phase line with a wireless(radio) communication.



Energy Meter Router

Router(Repeater), EMR extends the transmission distance between the Meter(EMU) and the Coordinator(EMC) to get a smooth transmission.



Energy Meter Coordinator

Stand alone gateway, EMC manages the wireless network and collect the data periodically sent by the Wireless EMU or EMR. The Meter Coordinator(EMC) can be accessed by the data logging system for metering and the other analysis use.

WIRELESS GREEN ENERGY METER



EMU (ENERGY METER UNIT) GENERAL FEATURES

EMU is the energy meter that collects the required electrical parameters at the specific interval after its sensors are fixed on the power cable. A single EMU can also be connected to a computer for analysis. An EMU can have 2 sensors that measure the electrical parameters for 3phase 3wires(L1/L2/L3). An EMU can have 3 sensors that measure the electrical parameters for 3phase 4wires(L1/L2/L3/N). It can support wirings for single phase, 3phase 3wires, and 3phase 4wires. Communication is possible by a single EMU or multiple EMUs.

- Measurement : Voltage, Current, Frequency, Power Factor, Active/Reactive/Apparent Power, Active/Reactive/Apparent Energy of each phase and total, THD(V/I), 2nd~63rd Individual Harmonics(50Hz).
- Frequency : 45~65Hz
- Voltage : 100~250VAC(± 10%)/phase to neutral.
- Current : 5~2,400A using the split core CT.
250~5,000A using the Rogowski coil CT.
- Control voltage : 100~250V AC(± 10%)/ L1-N
- Power consumption : 10VA
- Measurement category : CAT III 600V AC
- Ambient operating temperature : -10°C ~ +55°C
- Max altitude : 2,000m
- 2.4GHz wireless via ZigBee, max 200 node installation, IEEE 802.15. 4 compliant radio, RF Data rate : 250 kbps
- Time stamps for transmission data, Logging interval : 1~60 min.
- Accuracy : IEC62053-21 Class 1.0, IEC62053-22 Class 0.5
- Support DIN rail mounting.
- Modbus protocol(Coordinator)

EMR (ENERGY METER ROUTER)

EMR is the router that relays the data between EMU and EMC. It is automatically detected by an EMC. An EMC can connect EMRs up to 255 logically.

EMR has the same shape as EMC except for RS232 to USB connection port to a PC. EMR has no connection port. The adapter that is used to supply power must have been evaluated by UL. The DC power to EMR can use the DC adapter for 5 to 9 V.



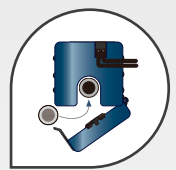
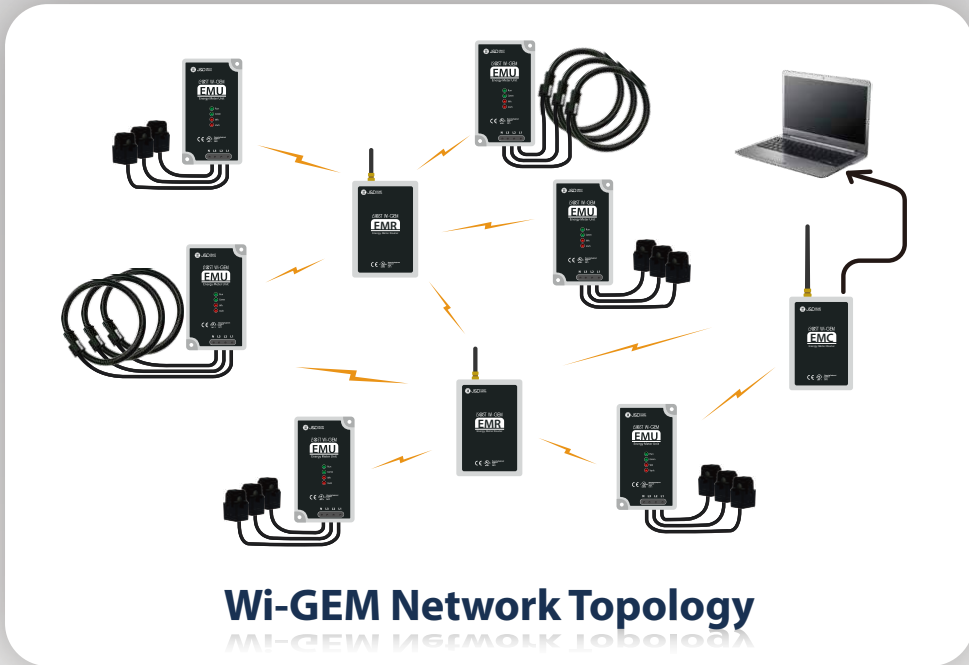
EMC (ENERGY METER COORDINATOR)

EMC is the gateway that controls the wireless network and periodically gathers the collected data from EMUs. It can be accessed by an application program for data analysis. The program shows the power-related values such as voltage, current, frequency, etc. It is connected with PC via the USB cable.

EMC has the following parts :

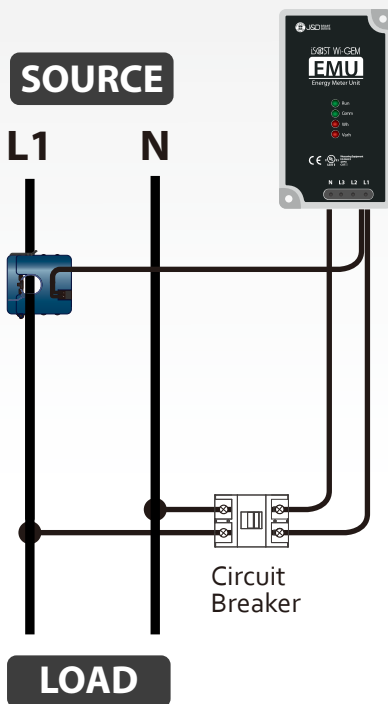
NAME	FUNCTION
Fixing Screw Hole 1&2	To fix EMC on a wall, insert screws in these holes and fasten them.
Antenna	Used for wireless communication.
DC Jack	5V DC
RJ45 Connector	Used to connect EMC with a RS232 to PC.
Product Label	The product label is placed.

WIRELESS GREEN ENERGY METER

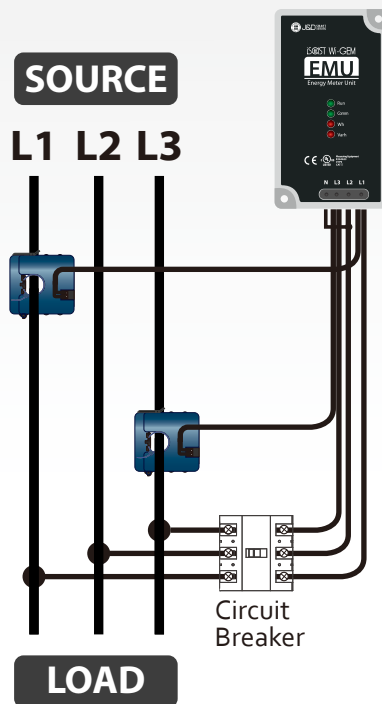


PHASE CONNECTION

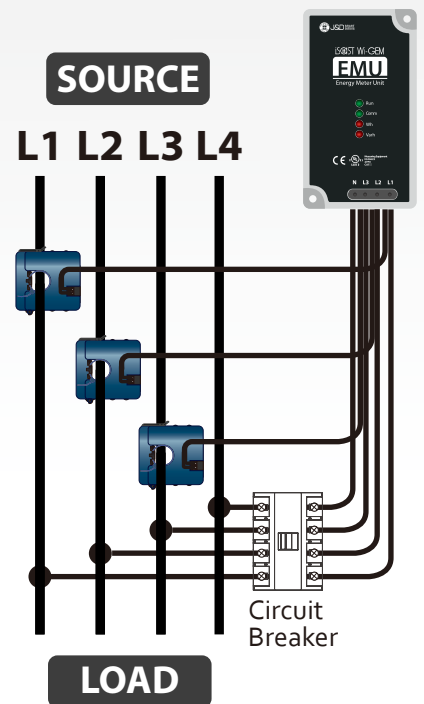
Wiring for Single phase 2wires



Wiring for 3phase 3wires(2CT)



Wiring for 3phase 4wires



BRANCH CIRCUIT POWER METER



Multi Green Energy Meter(Multi-GEM) offers reliable and accurate energy monitoring & management in real-time at electric multiple feeding points. The Multi-GEM automatically provides metering, demand, energy readings and loggings over multi feeding points with Multi-GEM 18 channels monitoring from the 18 feeders for 1P2W, 8 feeders for 3P3W, 6 feeders for 3P4W or any combination of single and three phase circuits. This useful flexibility makes Multi-GEM to be effective over IDC(Internet Data Center), office buildings and shopping mall and the other industries. Current detection of Multi-GEM is operated via external current transformers(CTs). Each CT measures and log the current and energy with the voltage input consumed by each of the branch circuits at the electric feeding points. This flexibility allows simple restructuring for electric circuit group without wiring changes. The flexible structure makes an easy energy consuming analysis and electric bill count for a valuable saving of time and money naturally.



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CAUTION, RISK OF ELECTRIC SHOCK.



PROTECTIVE CONDUCTOR TERMINAL.



ALTERNATING CURRENT / VOLTAGE.



ISOST MULTI-GEM 18

CHARACTERISTICS

- Multi Green Energy Meter (Multi-GEM) is able to measure and monitor multi electric power loads.
- Max. 18 Channels 1P2W or Max. 8 channels 3P3W feeders(needs an auxiliary transformer for providing 230V supply) or Max. 6 channels for 3P4W power monitoring.
- Measurement : Phase voltage, Line voltage & current, Frequency, Power Factor, Unbalance.
- Active/Reactive/Apparent Power, Active/Reactive/Apparent Energy.
- 0.5/1.0 Class accuracy for power measurement conformed by IEC62053-22/IEC62053-21.
- Flexible application for the single phase 2wires / 3phase 4wires / 3phase 3wires power line.
- Cost saving by power consumption monitoring.
- Sag/Swell detection.
- Total Harmonics Distortion(THD)
- 1 Analog input terminal for temperature measurement(NTC)
- Support RS485 Serial(Modbus RTU) and Ethernet(Modbus TCP) Comm.

SPECIFICATIONS

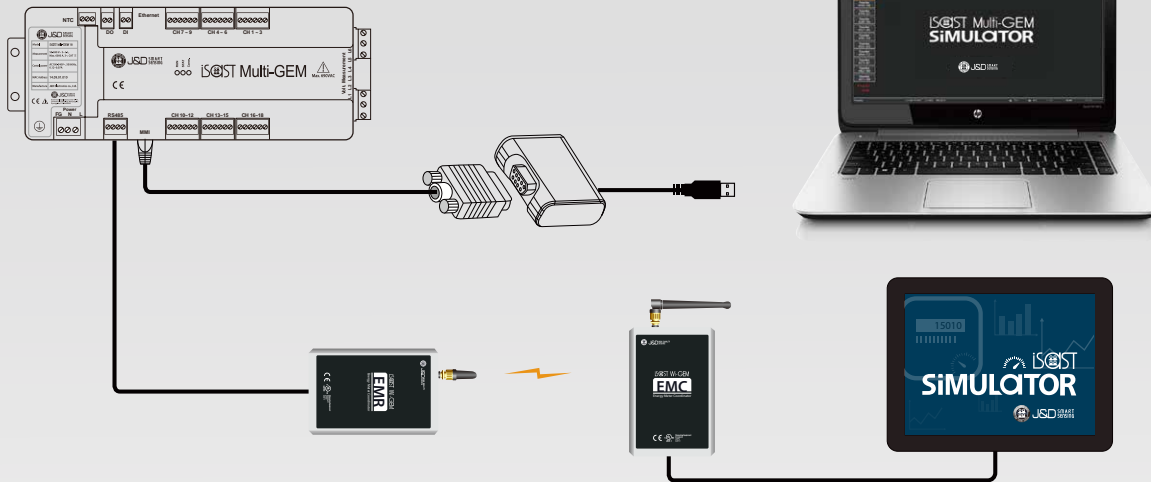
Model	ISOST MULTI-GEM 18	
Power system	1P2W, 3P3W(2CT), 3P4W	
Inputs Rating	Measurement	50-690 V~ 3~ L-L, Max. 6000 A, 3~, CAT III 600V AC
	Frequency	50 /60 Hz
	CT port	Instantaneous current, 100mA or 333mV (depends on ref.)
	Control power	AC100-240V~, 50/60Hz, 0.12~0.07A
	Power Consumption	5W max
	Digital Input	1point, AC 220V external input power
	NTC	25°C, 10kΩ($\beta(25/85)=3970^{\circ}\text{k}$)
Output Contact	1-SPST, AC 250V 5A, DC 30V 5A	
Communication	Modbus RS485 Modbus TCP	
Usage	Indoor use	
altitude up to	2,000 m	
Operating Temperature	- 10°C to 55°C	
Storage Temperature	-25°C to 70°C	
Humidity	Maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40 °C	
Over voltage category	II for AC Mains CAT III 600V AC for Measurement Terminals	
Pollution degree	2	
Short-term temporary	overvoltage: 1440V for AC Mains/1s	
Long-term temporary	overvoltage: 490V for AC mains/5s	
Standards	IEC 62053-21/22	

BRANCH CIRCUIT POWER METER

NEW
HIGH QUALITY
TECHNOLOGY



CONNECTION



ORDERING INFORMATION

1) ISOST MULTI-GEM 18-XX-XXX

① ②

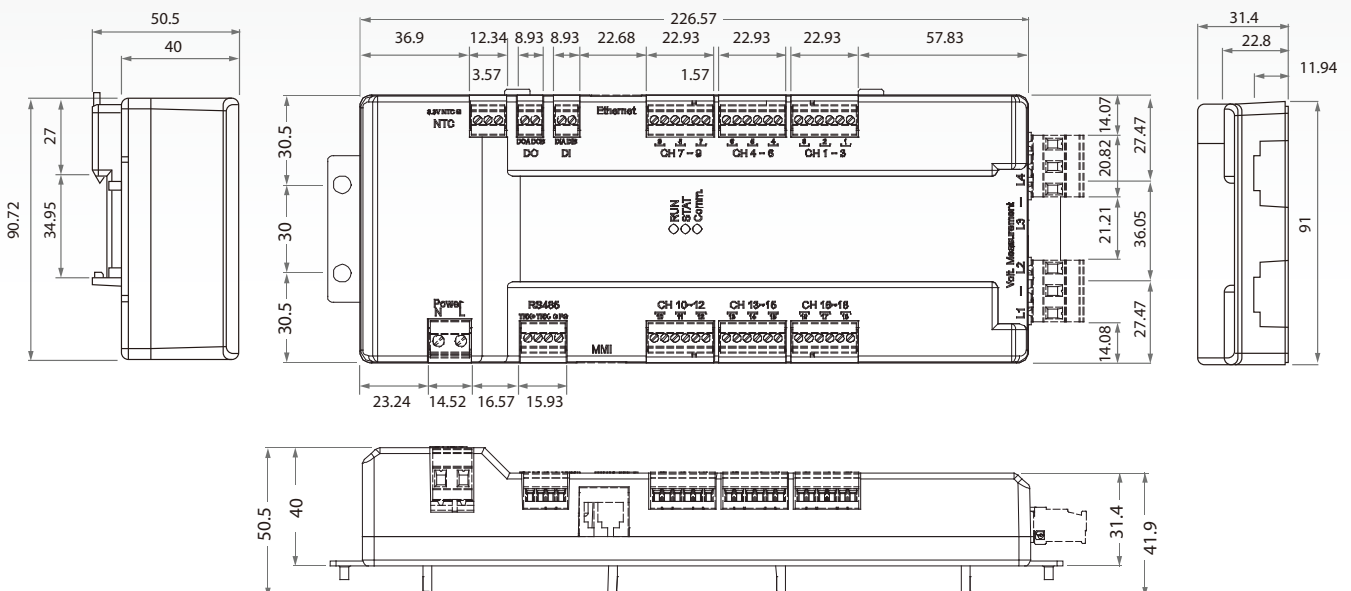
010 → 10mA, 100 → 100mA, 333 → 333mV

3W → 3P3W, 4W → 3P4W

2) ISOST MULTI-GEM 18 Ordering Example

→ ISOST Multi-GEM 18-3W-100 (ISOST Multi-GEM 18-3P3W-0.1A)

DIMENSIONS

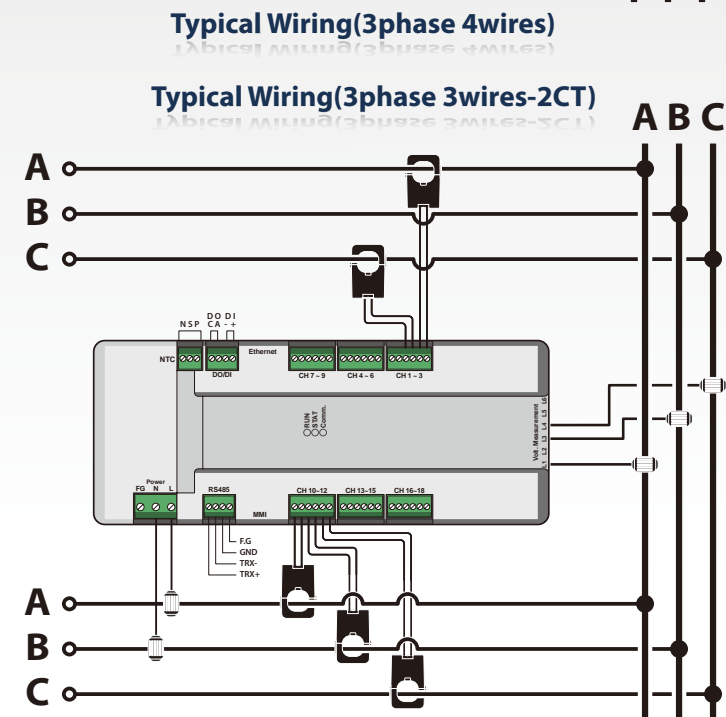
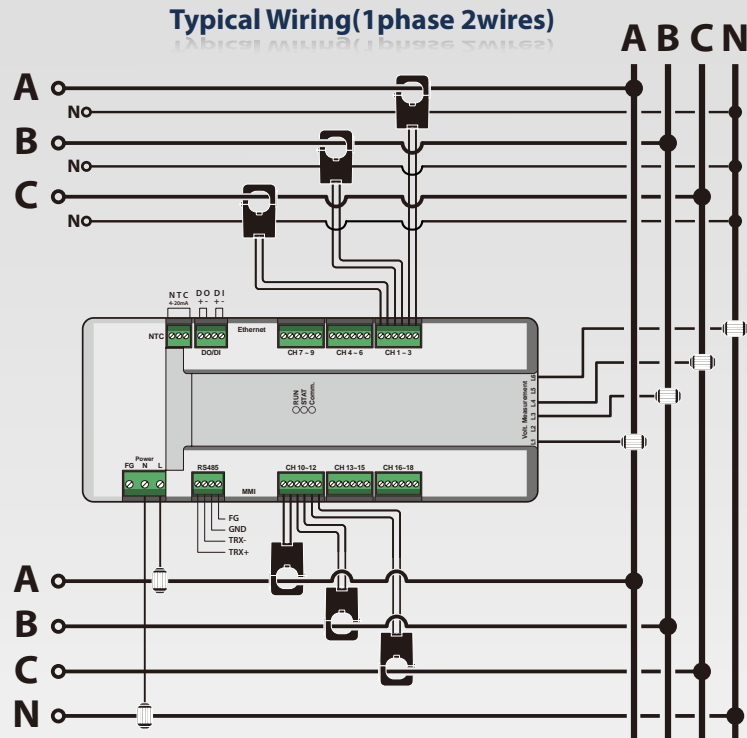


BRANCH CIRCUIT POWER METER

NEW
HIGH QUALITY
TECHNOLOGY

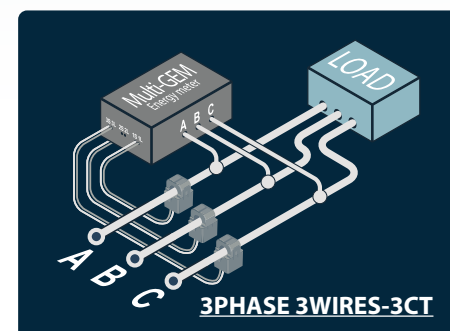
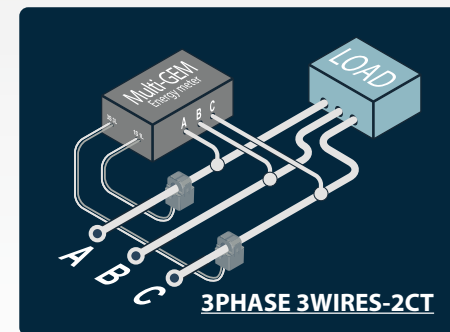
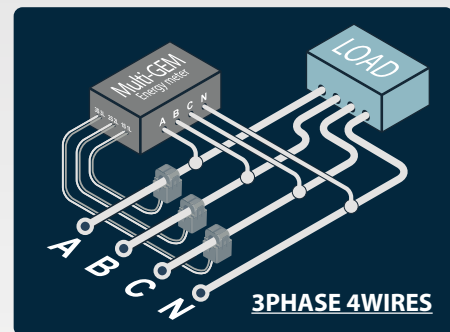
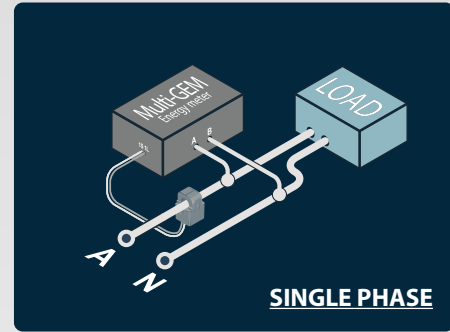


PHASE CONNECTION

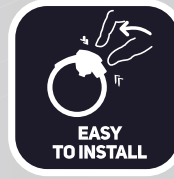
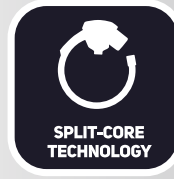


Max. 18 Channels 1P2W or Max. 8 channels 3P3W feeders (needs an auxiliary transformer for providing 230V supply) or Max. 6 channels for 3P4W power monitoring.

INSTALLATION



REMOTE CT ACCESSORY



High accuracy and low phase shift

Thin, lightweight and flexible

Cost-effective solution

Compact case

Reinforced isolation

Easy installation

Contributes towards CO₂ reduction

Heterogeneous field

Very low positioning error

WIRELESS GREEN ENERGY METER

How to use >>>

1. Connect the remote CT accessory to the meter.
2. Connect the meter to the power source.
3. Connect the meter to the data logger.
4. Connect the meter to the simulator.

BRANCH CIRCUIT POWER METER

How to use >>>

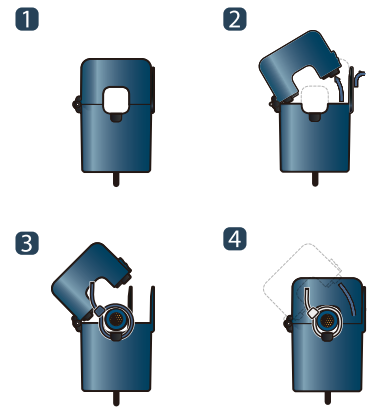
1. Connect the remote CT accessory to the meter.
2. Connect the meter to the power source.
3. Connect the meter to the data logger.
4. Connect the meter to the simulator.

REMOTE CT ACCESSORY

JSXXL-333mV AC



How to use >>>>



JS series of split-core current transformer offers 333mV AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JS series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Features

- PC housing, output-lead-wire, secure locking hinge, one-touch structure make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 1.0 / ANSI Class1.2
Leads	AWG 22(10NL/16FL), AWG 18(24FL)
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2



>>> Current Transformer Versions

How to Order / Model Reference

eg JS10NL 000 333mV

Model JS10NL
 Primary Current
 Select code from CT table
 Secondary Voltage
 333mV AC 333mV

How to Order / Model Reference

eg JS16FL 000 333mV

Model JS16FL
 Primary Current
 Select code from CT table
 Secondary Voltage
 333mV AC 333mV

How to Order / Model Reference

eg JS24FL 000 333mV

Model JS24FL
 Primary Current
 Select code from CT table
 Secondary Voltage
 333mV AC 333mV

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
5			0.0005	005	
10			0.001	010	
20			0.002	020	
25			0.003	025	
30			0.003	030	
50			0.005	050	
75			0.008	075	

333mV AC Secondary

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
70			0.007	070	
100			0.01	100	

333mV AC Secondary

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
5			0.0005	005	
10			0.001	010	
30			0.003	030	
50			0.005	050	
70			0.007	070	
100			0.01	100	
150			0.02	150	
200			0.02	200	

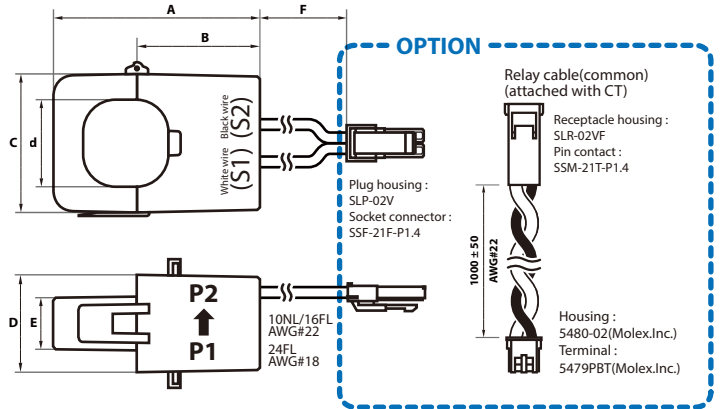
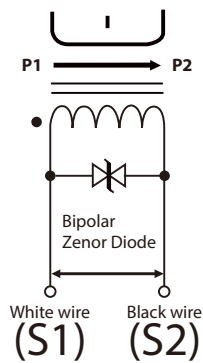
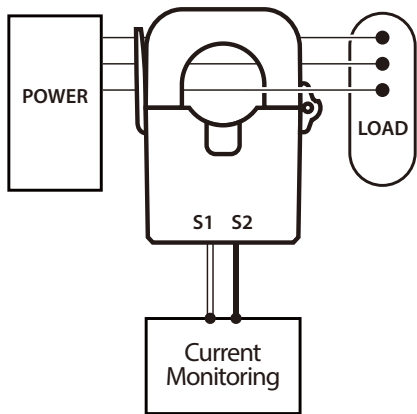
333mV AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

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>>> Applications / Dimensions



Unit : mm

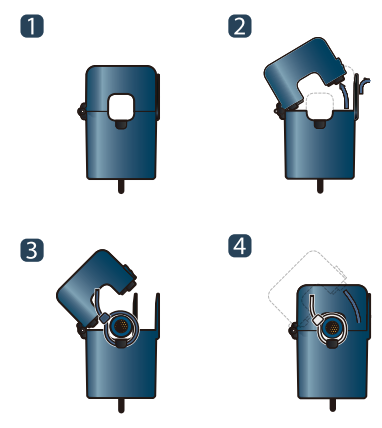
Model	A	B	C	D	E	F	Ød
JS10NL	40.5	23	23.7	26.6	14.5	150±20	10
JS16FL	45	26	30	31.6	18.8	150±20	16
JS24FL	65	37.5	45	33.7	21.1	200±20	24

REMOTE CT ACCESSORY

JSXXSL-333mV AC



How to use >>>>



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- Power meter
- Switchgear
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- General Sets
- Control panels

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- PC housing, output-lead-wire, secure locking hinge, one-touch structure make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 0.5S / ANSI Class 0.6
Leads	AWG 18
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

Current Transformer Versions

How to Order / Model Reference

eg JS24SL 000 333mV

Model JS24SL
 Primary Current
 Select code from CT table
 Secondary Voltage
 333mV AC 333mV

How to Order / Model Reference

eg JS36SL 000 333mV

Model JS36SL
 Primary Current
 Select code from CT table
 Secondary Voltage
 333mV AC 333mV

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
250	0.03			250	
300	0.03			300	

333mV AC Secondary

Current Transformer Rated Values

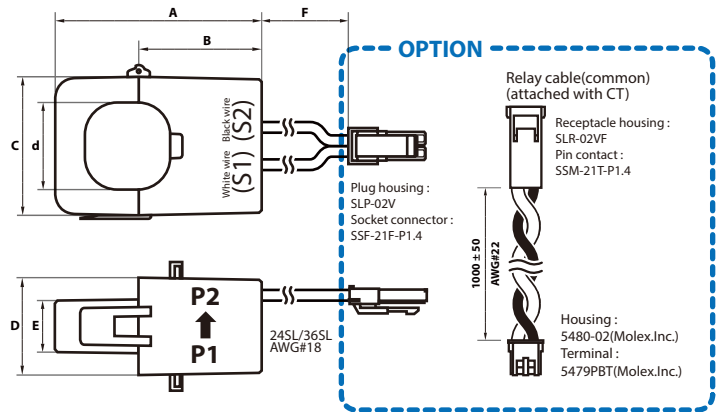
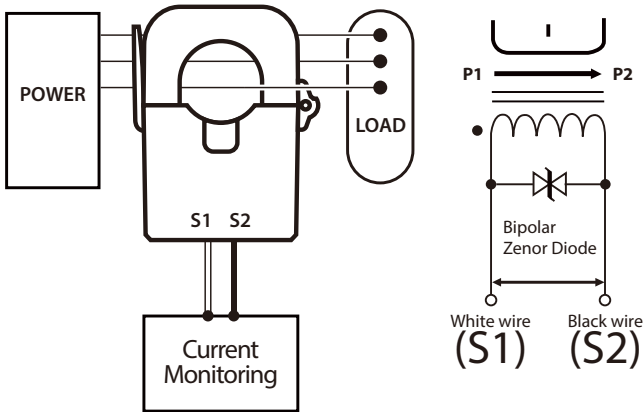
Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
300	0.05			300	
400	0.07			400	
500	0.06			500	
600	0.07			600	

333mV AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120 % of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120 % of In

Applications / Dimensions



Unit : mm

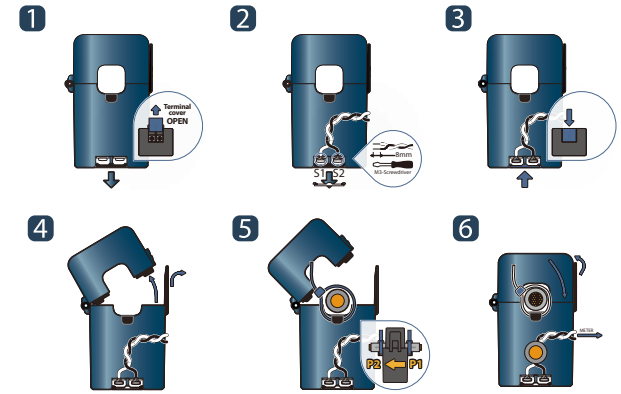
Model	A	B	C	D	E	F	Ød
JS24SL	65	37.5	45	33.7	21.1	200±20	24
JS36SL	82.4	48	57.1	40.2	21.1	200±20	36

REMOTE CT ACCESSORY

JSXXF-333mV AC



How to use >>>>



JS series of split-core current transformer offers 333mV AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JS series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Features

- PC housing, output-terminal, secure locking hinge, one-touch structure make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 0.5S, 1.0 / ANSI Class 0.6, 1.2
Output Terminals	2 X M3-Screw, with Terminals cover
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

Current Transformer Versions / Dimensions

How to Order / Model Reference

eg JS17F-000/333mV

Model JS17F

Primary Current
Select code from CT table

Secondary Voltage
333mV AC

How to Order / Model Reference

eg JS24F-000/333mV

Model JS24F

Primary Current
Select code from CT table

Secondary Voltage
333mV AC

Current Transformer Rated Values

Primary Current (A)	Metering Burden (VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
50			0.005		050
70			0.007		070
100			0.01		100
125			0.01		125
150			0.02		150

333mV AC Secondary

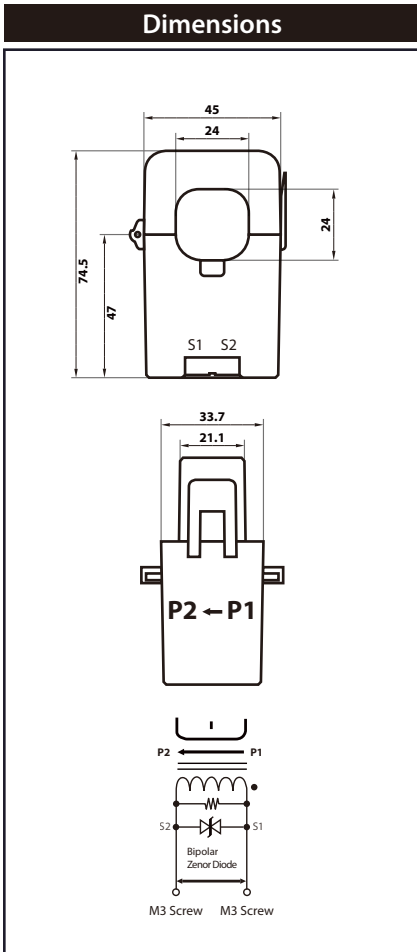
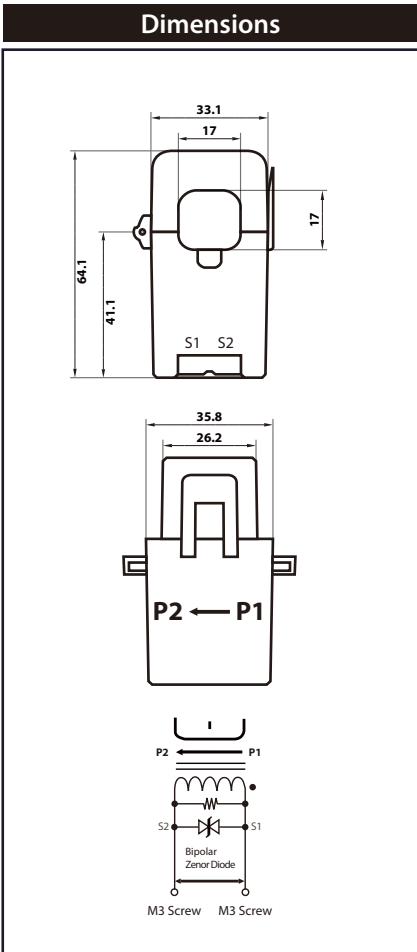
Current Transformer Rated Values

Primary Current (A)	Metering Burden (VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6			
200		0.02			200

333mV AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In



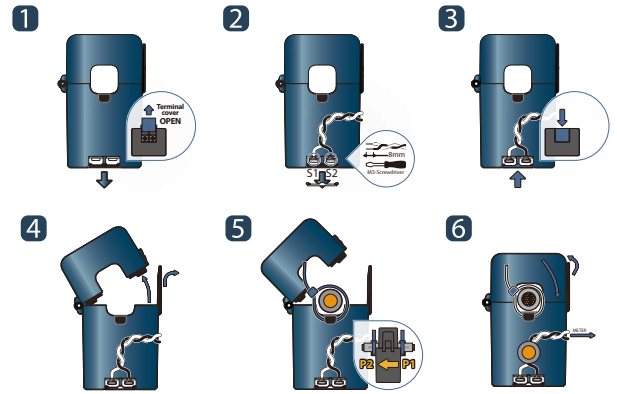
REMOTE CT ACCESSORY

JSXXS-333mV AC

NEW
HIGH QUALITY
TECHNOLOGY



How to use >>>>



JS series of split-core current transformer offers 333mV AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JS series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Features

- PC housing, output-terminal, secure locking hinge, one-touch structure make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 0.5S / ANSI Class 0.6
Output Terminals	2 X M3-Screw, with Terminals cover
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

>>>> Current Transformer Versions / Dimensions

How to Order / Model Reference

eg JS17S-000/333mV

Model JS17S
Primary Current
Select code from CT table
Secondary Voltage 333mV AC

How to Order / Model Reference

eg JS24S-000/333mV

Model JS24S
Primary Current
Select code from CT table
Secondary Voltage 333mV AC

How to Order / Model Reference

eg JS36S-000/333mV

Model JS36S
Primary Current
Select code from CT table
Secondary Voltage 333mV AC

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.2S	cl. 0.5S	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
200	0.02				200

333mV AC Secondary

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.2S	cl. 0.5S	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
250	0.03				250
300	0.03				300

333mV AC Secondary

Current Transformer Rated Values

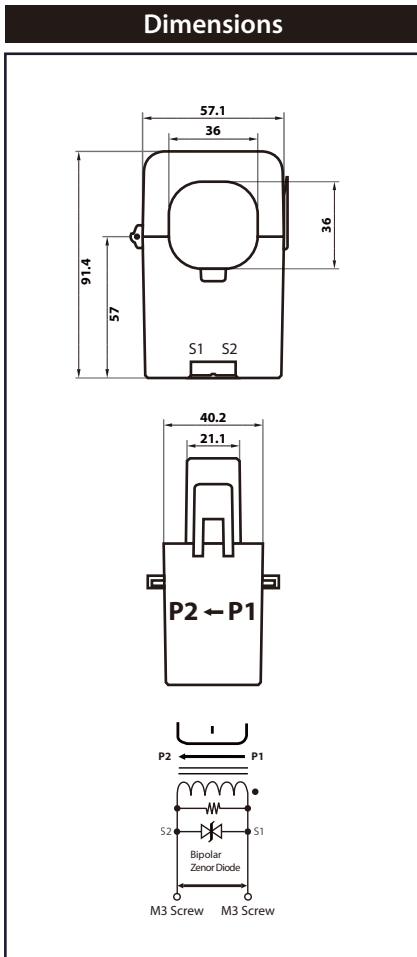
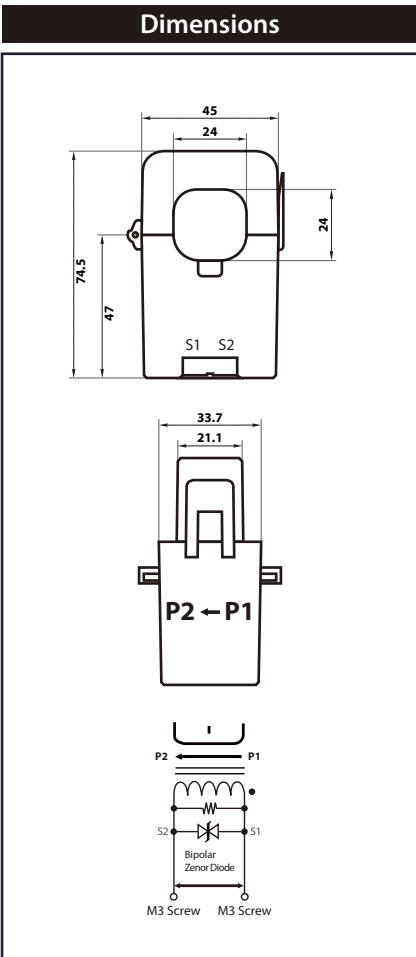
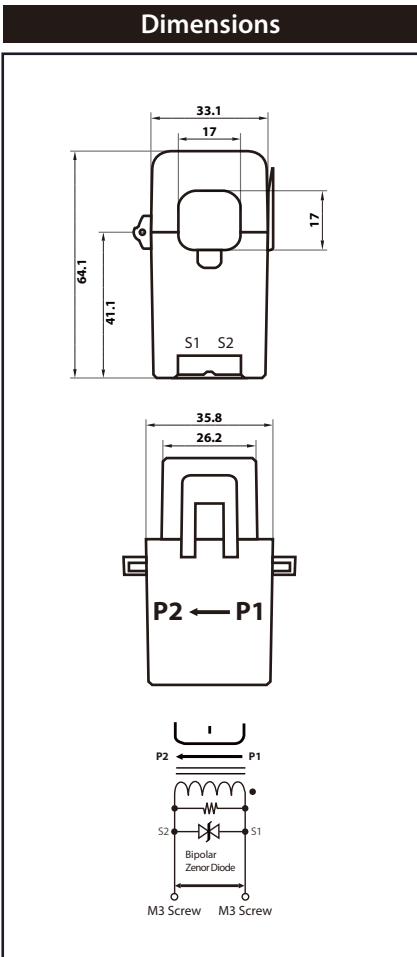
Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.2S	cl. 0.5S	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
300	0.05				300
400	0.07				400
500	0.06				500
600	0.07				600

333mV AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

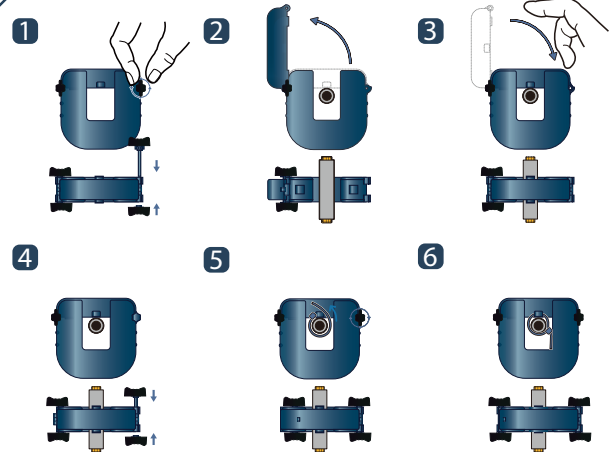


REMOTE CT ACCESSORY

JSC-XX-333MV AC



How to use >>>>



JSC series of split-core current transformer offers 333mV AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JSC series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Features

- High quality comprehensive measurement
- Available in a wide range of transformer ratings
- Accuracy up to Class 0.5S

>>>> Benefits

- Faster installation
- Cost effective
- Long product life

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 0.5S / ANSI Class 0.6
Leads	18AWG, 600V AC
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 60°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

>>> Current Transformer Versions / Dimensions

How to Order / Model Reference

eg **J S C - 0 1 - 0 0 0 0 / 3 3 3 mV**

Model **J S C - 0 1**

Primary Current
Select code from CT table

Secondary Voltage
333mV AC **3 3 3 mV**

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.2S	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
250		0.035		0250
400		0.035		0400

333mV AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of I_n

Dimensions

How to Order / Model Reference

eg **J S C - 0 2 - 0 0 0 0 / 3 3 3 mV**

Model **J S C - 0 2**

Primary Current
Select code from CT table

Secondary Voltage
333mV AC **3 3 3 mV**

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.2S	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
400		0.035		0400
600		0.035		0600
800		0.035		0800
1000		0.035		1000
1200		0.035		1200

333mV AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of I_n

Dimensions

How to Order / Model Reference

eg **J S C - 0 3 - 0 0 0 0 / 3 3 3 mV**

Model **J S C - 0 3**

Primary Current
Select code from CT table

Secondary Voltage
333mV AC **3 3 3 mV**

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.2S	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
800		0.035		0800
1000		0.035		1000
1200		0.035		1200
1600		0.035		1600
2000		0.035		2000
2400		0.035		2400

333mV AC Secondary

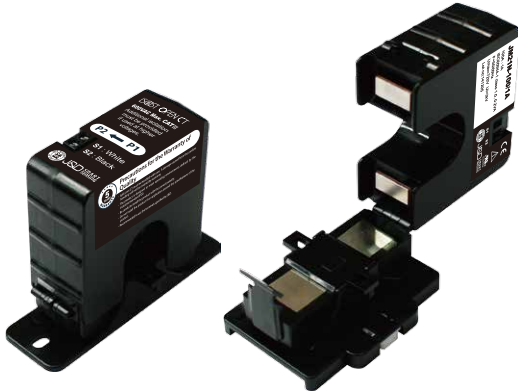
Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of I_n

Dimensions

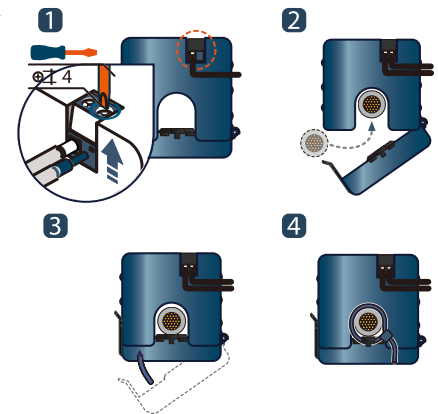
REMOTE CT ACCESSORY

JM21X-333mV AC

NEW
HIGH QUALITY
TECHNOLOGY



How to use >>>>



JM21X series of split-core current transformer offers 333mV AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JM21X series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Features

- Panel or DIN rail mountable, output-terminal, secure locking hinge, one-touch structure easily to install to existing equipment such as a power distribution board
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Notice

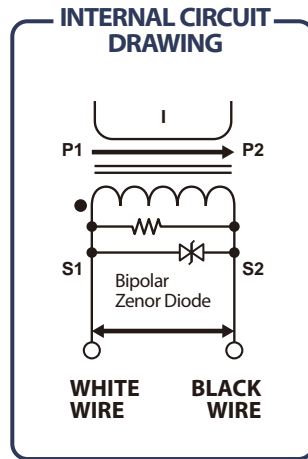
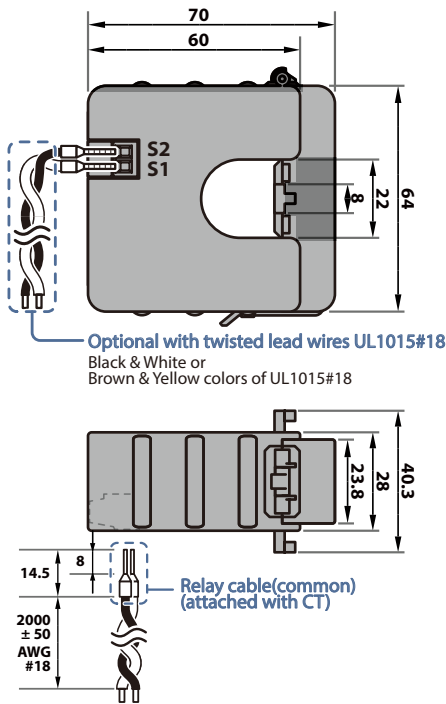
- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 0.5S, 1.0 / ANSI Class 0.6, 1.2
Output Terminals	Terminal Block(2P) - PART NUMBER : LM5.08/02/90 SW(black)
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Latch/Unlatch	about 100 times
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	5.1V0-P
Insulation Category	CAT III 600V AC / PD2



Current Transformer Versions / Dimensions



How to Order / Model Reference

eg **JM21X-000/333mV**

Model	J M 2 1 X
Primary Current	Select code from CT table
Secondary Voltage	333mV AC

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.5S	cl. 1	cl. 3	cl. 2.4	
5	0.0006	0.0006			005
15	0.0015	0.0015			015
20	0.002	0.002			020
30	0.0035	0.0035			030
50	0.005	0.005			050
70	0.008	0.008			070
100	0.01	0.01			100
150	0.02	0.02			150
200	0.02	0.02			200
250	0.03	0.03			250
		(JM21N)	(JM21F)		

333mV AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120 % of In

5 YEARS WARRANTY Precautions for the Warranty of Quality

- Split-core CT must be handled with care. A damage caused from the careless handling will not be covered by warranty.
- The product is designed to meet operating environments defined by the industrial standard IP20.
- Be sure about the right Primary current direction and terminal allocation. Otherwise any power measurements result in wrong values!
- Do not install the product if an application exceed the specifications of the product.
- Recommended to use the terminals specified by J&D.

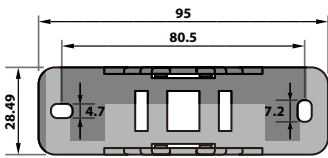
ELECTRICAL PROPERTIES Check Point for the Accurate Measurement

- Protection circuit built in inside of the product for user safety. An additional external protection circuit can impact the characteristics.
- The product is designed for measuring sinusoidal 50/60Hz of primary current. Be aware that it is possible to occur the significant error if it is used to measure non-sinusoidal.
- Use Split-core CT with proper diameter to fit the conductor, otherwise it may cause the ratio error and the phase shift.
- Be careful to install Split-core CT without any pollutions on the splitting core surfaces. The pollutions such as moisture, dust and rust can cause metering errors. After removing the pollutions, recommended to use WD-40 or CRC5-56 on the core surfaces.
- Check whether the secondary leads is connected correctly or not. If the connection is not correctly, the secondary output could be lower than the expected one.

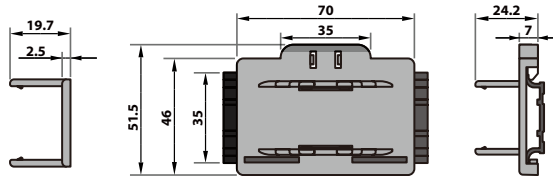
ODM (ON REQUEST) Remarks for the Customized Products

- Please provide the technical requirements for a technical evaluation.
- The color of housing is changeable upon the customer's requirements.
- The leads can be mounted on the terminals by J&D.
- A protective tailor-made housing is available.

• PANEL MOUNT

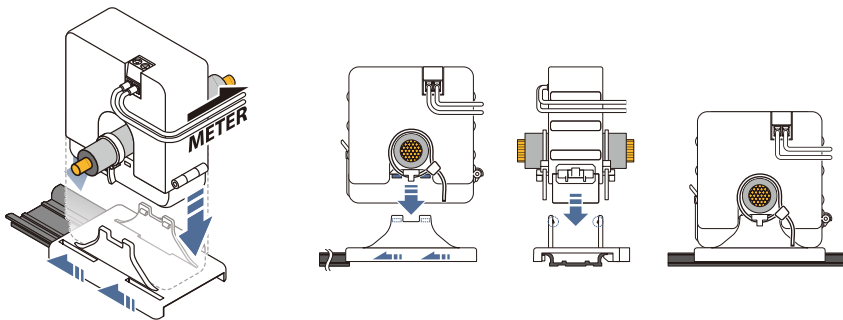


• DIN RAIL MOUNT



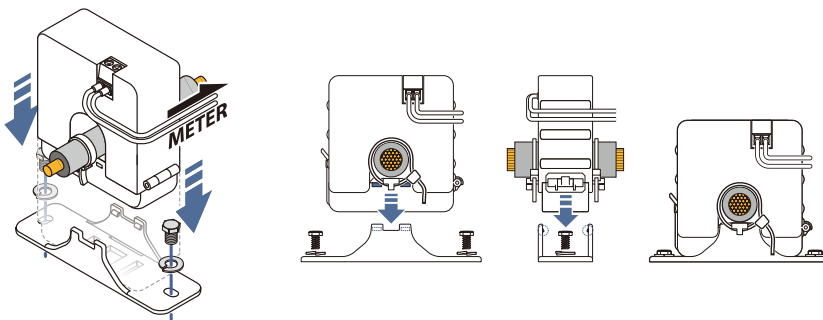
DIN RAIL MOUNTING

Mount the bracket on the rail and install current transformer



PANEL MOUNTING

Tighten screws on the hole to mount bracket and install current transformer

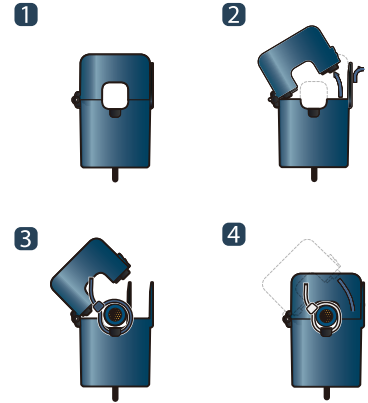


REMOTE CT ACCESSORY

JSXXL-100MA AC



How to use >>>



JS series of split-core current transformer offers 100mA AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JS series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>> Features

- PC housing, output-lead-wire, secure locking hinge, one-touch structure make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>> Specification

Accuracy	IEC Class 0.5S , 1.0 / ANSI Class 0.6, 1.2
Leads	AWG 22(16NL), AWG 18(24FL)
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

>>>> Current Transformer Versions

How to Order / Model Reference

eg JS16NL 000 100mA

Model JS16NL
Primary Current
Select code from CT table
Secondary Current
100mA AC 100mA

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25		cl. 1		
	cl. 0.3	cl. 0.6	cl. 0.35	cl. 1.2	
50			0.035	050	
70			0.035	070	
100			0.035	100	

100mA AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

How to Order / Model Reference

eg JS24FL 000 100mA

Model JS24FL
Primary Current
Select code from CT table
Secondary Current
100mA AC 100mA

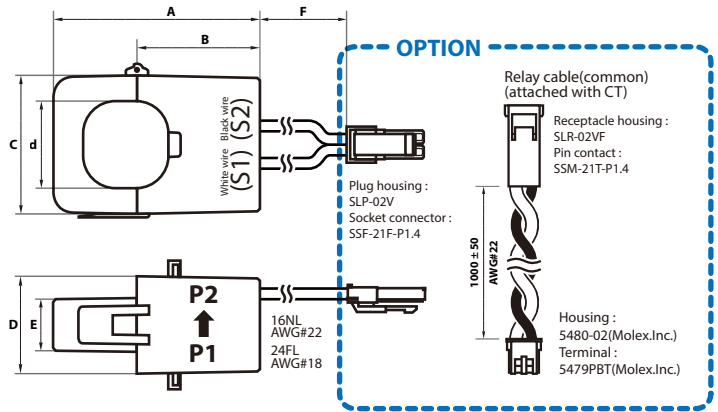
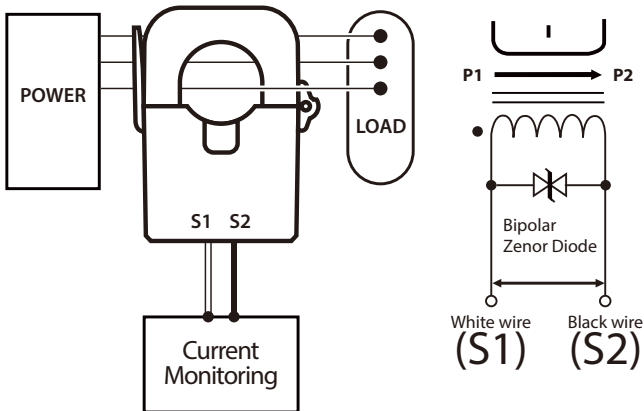
Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25		cl. 1		
	cl. 0.3	cl. 0.6	cl. 0.35	cl. 1.2	
200			0.035	200	

100mA AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

>>>> Applications / Dimensions



Unit : mm

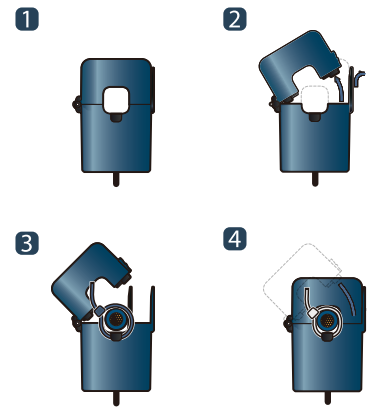
Model	A	B	C	D	E	F	Ød
JS16NL	45	26	30	31.6	18.8	150±20	16
JS24FL	65	37.5	45	33.7	21.1	200±20	24

REMOTE CT ACCESSORY

JSXXSL-100MA AC



How to use >>>>



JS series of split-core current transformer offers 100mA AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JS series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Features

- PC housing, output-lead-wire, secure locking hinge, one-touch structure make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 1.0 / ANSI Class 1.2
Leads	AWG 18
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

Current Transformer Ratios

How to Order / Model Reference

eg JS24SL 000 100mA

Model JS24SL
Primary Current
Select code from CT table
Secondary Current
100mA AC

How to Order / Model Reference

eg JS36SL 000 100mA

Model JS36SL
Primary Current
Select code from CT table
Secondary Current
100mA AC

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
250			0.035	250	
300			0.035	300	

100mA AC Secondary

Current Transformer Rated Values

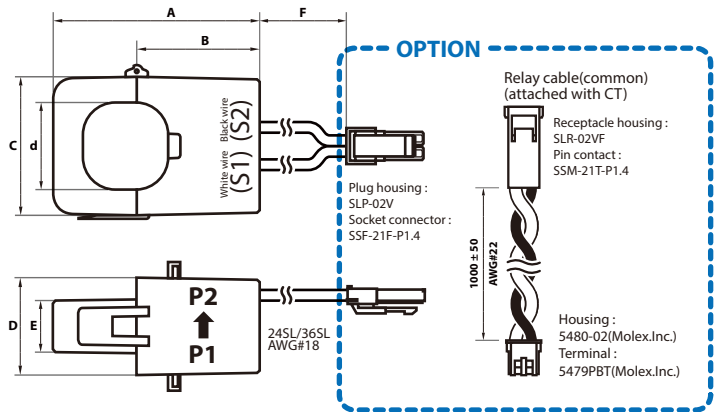
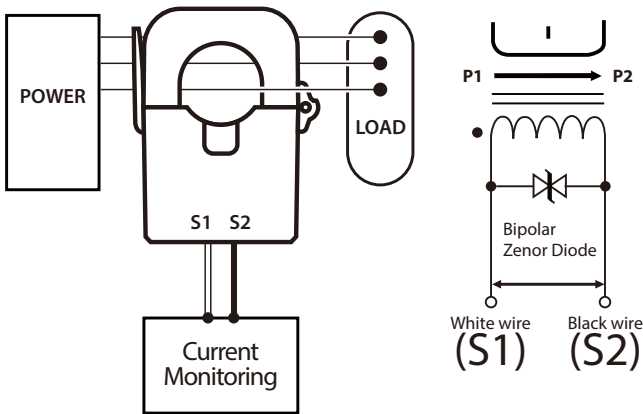
Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
300			0.035	300	
400			0.035	400	
500			0.035	500	
600			0.035	600	

100mA AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120 % of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120 % of In

Applications / Dimensions



Unit : mm

Model	A	B	C	D	E	F	Ød
JS24SL	65	37.5	45	33.7	21.1	200±20	24
JS36SL	82.4	48	57.1	40.2	21.1	200±20	36

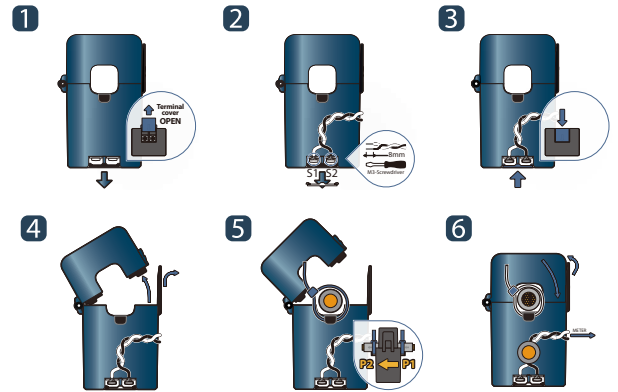
REMOTE CT ACCESSORY

JSXXF-100MA AC

NEW
HIGH QUALITY
TECHNOLOGY



How to use >>>>



JS series of split-core current transformer offers 100mA AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JS series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Specification

Accuracy	IEC Class 1.0 / ANSI Class 1.2
Output Terminals	2 X M3-Screw, with Terminals cover
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

>>>> Features

- PC housing, output-terminal, secure locking hinge, one-touch structure make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

Current Transformer Versions / Dimensions

How to Order / Model Reference

eg **J S 1 7 F - 0 0 0 / 1 0 0 mA**

Model **J S 1 7 F**

Primary Current
Select code from CT table

Secondary Current
100mA AC **1 0 0 mA**

How to Order / Model Reference

eg **J S 2 4 F - 0 0 0 / 1 0 0 mA**

Model **J S 2 4 F**

Primary Current
Select code from CT table

Secondary Current
100mA AC **1 0 0 mA**

Current Transformer Rated Values

Primary Current (A)	Metering Burden (VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
100			0.035		100
125			0.035		125
150			0.035		150

100mA AC Secondary

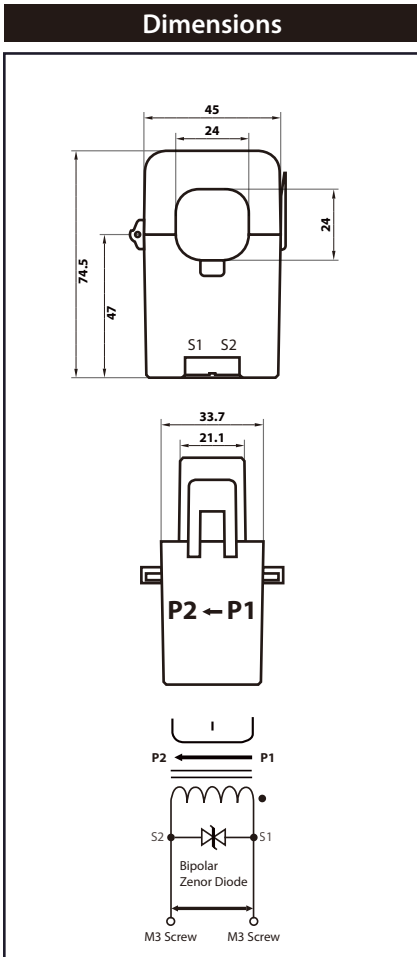
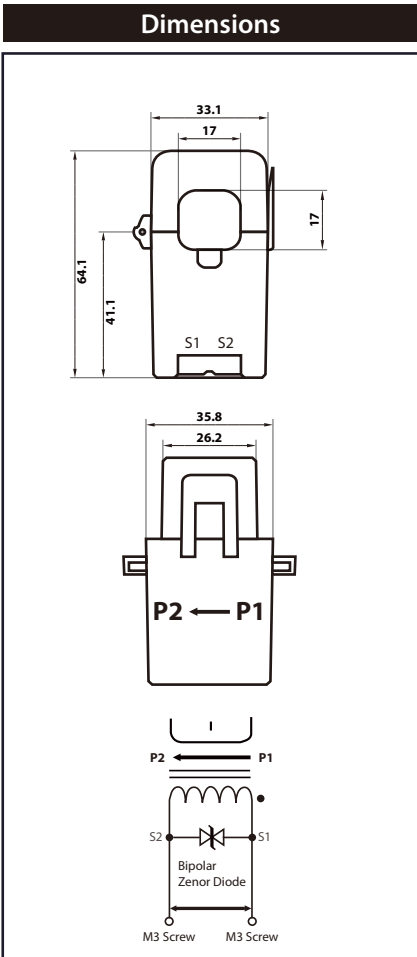
Current Transformer Rated Values

Primary Current (A)	Metering Burden (VA)				Code
	cl. 0.25	cl. 0.55	cl. 1		
	cl. 0.3	cl. 0.6	cl. 1.2		
200			0.035		200

100mA AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of I_n

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of I_n



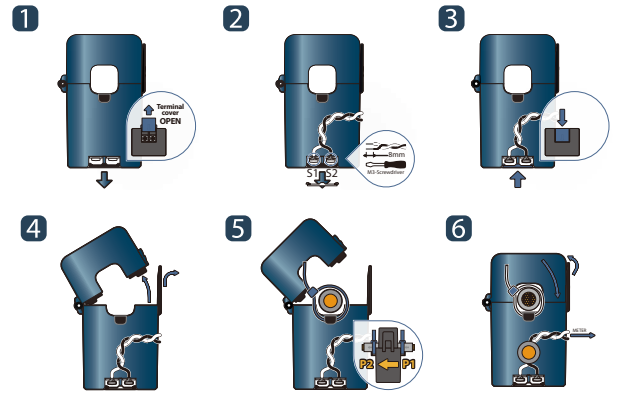
REMOTE CT ACCESSORY

JSXXS-100MA AC

NEW
HIGH QUALITY
TECHNOLOGY



How to use >>>>



JS series of split-core current transformer offers 100mA AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JS series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Features

- PC housing, output-terminal, secure locking hinge, one-touch structure make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 1.0 / ANSI Class 1.2
Output Terminals	2 X M3-Screw, with Terminals cover
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

Current Transformer Versions / Dimensions

How to Order / Model Reference

eg JS17S-000/100mA

Model JS17S

Primary Current
Select code from CT table

Secondary Current
100mA AC 100 mA

How to Order / Model Reference

eg JS24S-000/100mA

Model JS24S

Primary Current
Select code from CT table

Secondary Current
100mA AC 100 mA

How to Order / Model Reference

eg JS36S-000/100mA

Model JS36S

Primary Current
Select code from CT table

Secondary Current
100mA AC 100 mA

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.25	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
200			0.035	200

100mA AC Secondary

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.25	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
250			0.035	250
300			0.035	300

100mA AC Secondary

Current Transformer Rated Values

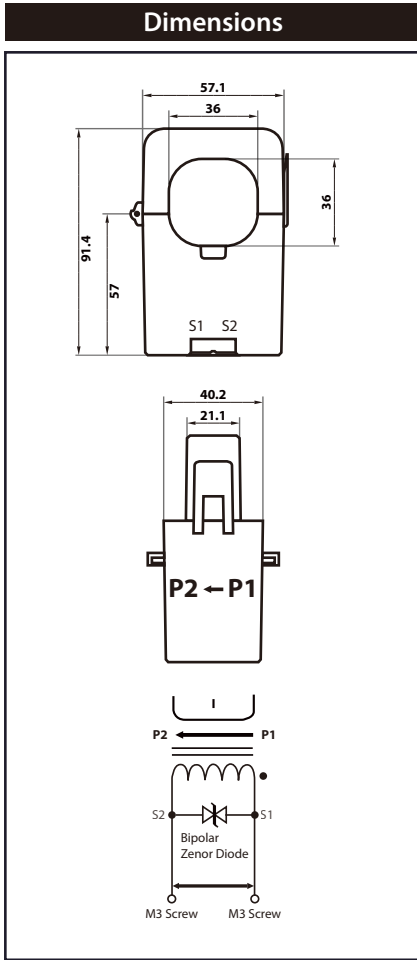
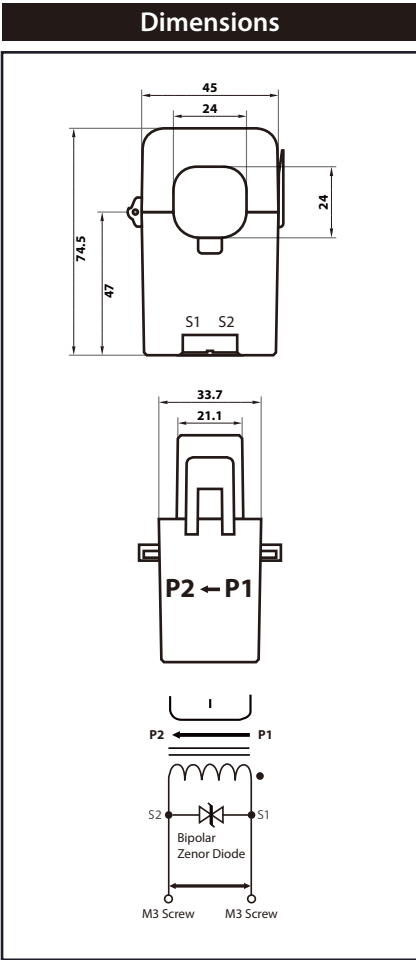
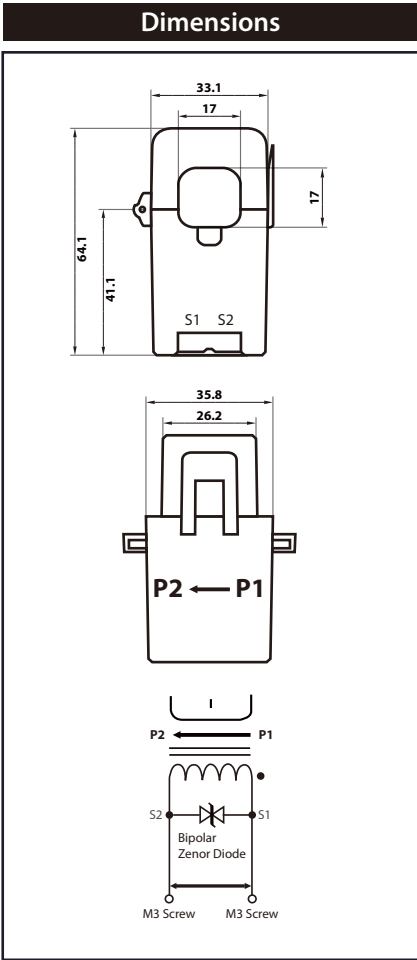
Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.25	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
300			0.035	300
400			0.035	400
500			0.035	500
600			0.035	600

100mA AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

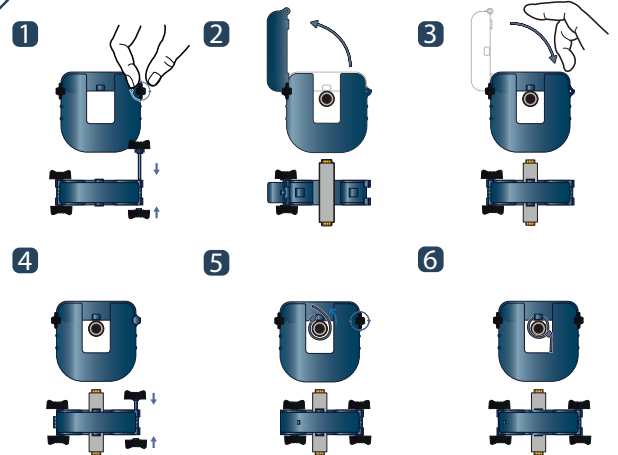


REMOTE CT ACCESSORY

JSC-XX-100MA AC



How to use >>>>



JSC series of split-core current transformer offers 100mA AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JSC series to a meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact design meter and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Features

- High quality comprehensive measurement
- Available in a wide range of transformer ratings
- Accuracy up to Class 0.5S

>>>> Benefits

- Faster installation
- Cost effective
- Long product life

>>>> Notice

- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 0.5S / ANSI Class 0.6
Leads	18AWG, 600V AC
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 60°C
Relative Humidity	0-90% non-condensing
Test Voltage	3kV AC for 1 minute
Frequency Range	50/60Hz
Protection Level	3.0V0-P
Insulation Category	CAT III 600V AC / PD2

Current Transformer Versions / Dimensions

How to Order / Model Reference

eg **J S C - 0 1 - 0 0 0 0 / 1 0 0 m A**

Model **J S C - 0 1**

Primary Current
Select code from CT table

Secondary Current
100mA AC **1 0 0 mA**

How to Order / Model Reference

eg **J S C - 0 2 - 0 0 0 0 / 1 0 0 m A**

Model **J S C - 0 2**

Primary Current
Select code from CT table

Secondary Current
100mA AC **1 0 0 mA**

How to Order / Model Reference

eg **J S C - 0 3 - 0 0 0 0 / 1 0 0 m A**

Model **J S C - 0 3**

Primary Current
Select code from CT table

Secondary Current
100mA AC **1 0 0 mA**

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.25	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
250	0.035			0250
400	0.035			0400

100mA AC Secondary

Current Transformer Rated Values

Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.25	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
400	0.035			0400
600	0.035			0600
800	0.035			0800

100mA AC Secondary

Current Transformer Rated Values

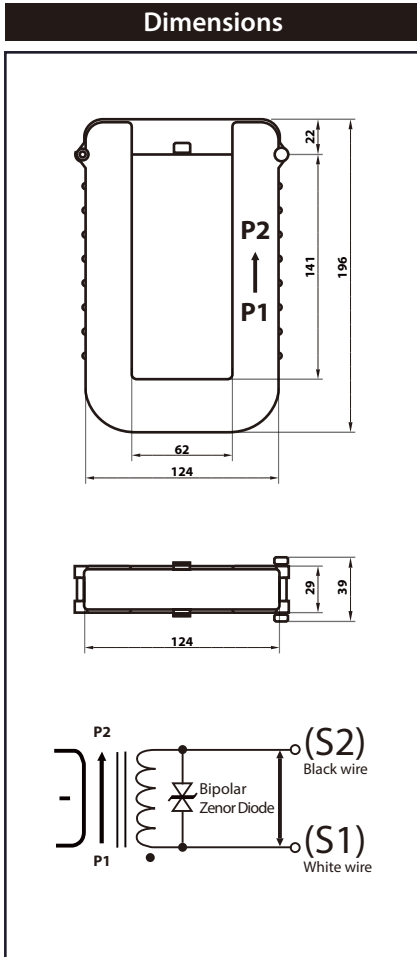
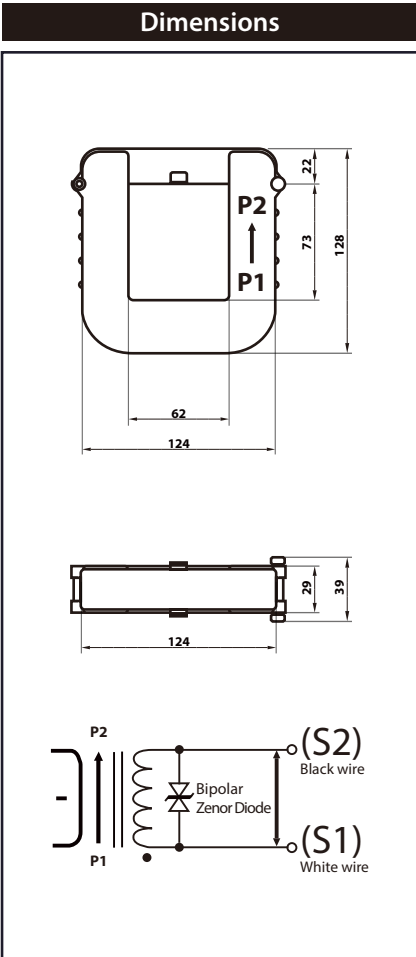
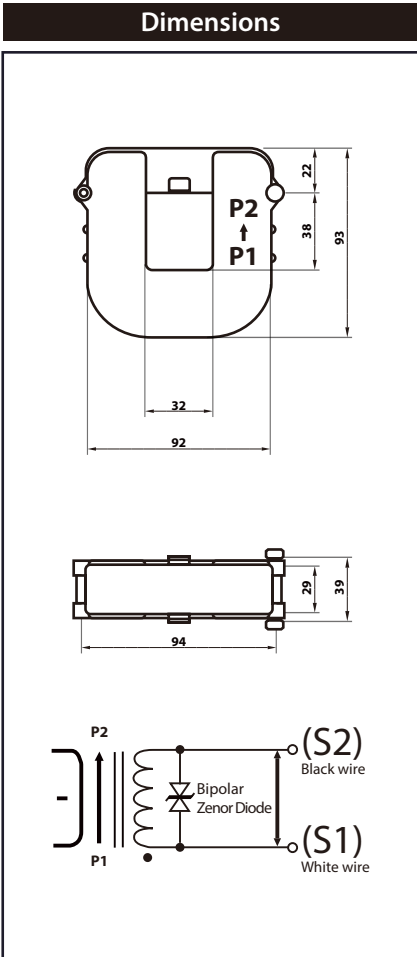
Primary Current (A)	Metering Burden(VA)			Code
	cl. 0.25	cl. 0.5S	cl. 1	
	cl. 0.3	cl. 0.6	cl. 1.2	
800	0.035			0800
1000	0.035			1000
1200	0.035			1200

100mA AC Secondary

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

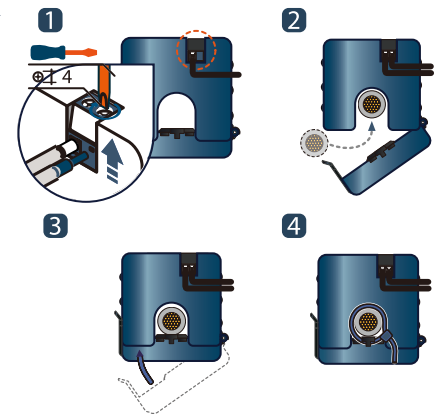


REMOTE CT ACCESSORY

JM21X-100MA AC



How to use >>>>



JM21X series of split-core current transformer offers 100mA AC at secondary from sensed primary current. Without using secondary CT inside of meter, users directly connect JM21X series to meter for high accuracy metering application. It enables one meter to be adopted for various current rating by only changing primary CT so it makes compact meter design and reduces developing cost. Also, over-voltage protection circuit is included to offer safe, fast and cost effective installation.

>>>> Applications

- Power meter
- Switchgear
- Distributed measurement systems
- General Sets
- Control panels

>>>> Features

- Panel or DIN rail mountable, output-terminal, secure locking hinge, one-touch structure easily to install to existing equipment such as a power distribution board
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010-1 certified

>>>> Benefits

- Small-size, light-weight
- Simple Installation
- Over-Voltage protection circuit is installed.

>>>> Notice

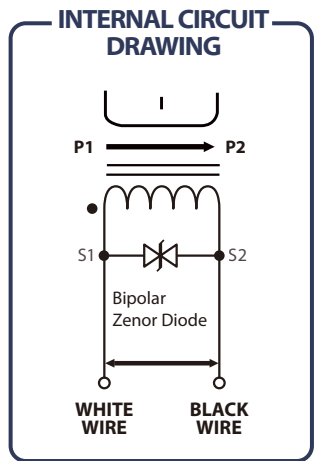
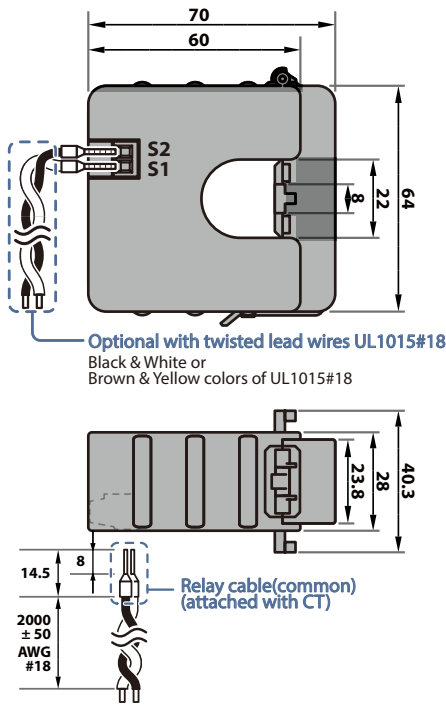
- Core contact surface is waterproofed, however if it gets rusty, you could reuse after removing rusts with spraying WD-40 or CRC5-56 on the rusted side. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.

>>>> Specification

Accuracy	IEC Class 0.5S, 1.0 / ANSI Class 0.6, 1.2
Output Terminals	Terminal Block(2P) - PART NUMBER : LM5.08/02/90 SW(black)
System Voltage	720V(0.72kV)
Overload withstand	1.2 times rated current continuously
Compliant with	IEC/EN60044-1 & IEC61010-1 & ANSI C57.13
Operating Temperature Range	-20°C to 55°C
Relative Humidity	0-85% non-condensing
Latch/Unlatch	about 100 times
Test Voltage	3kV AC for 1minute
Frequency Range	50/60Hz
Protection Level	5.1V0-P
Insulation Category	CAT III 600V AC / PD2



>>> Current Transformer Versions / Dimensions



How to Order / Model Reference

eg **JM21X-000/100mA**

Model **J M 2 1 X**

Primary Current
Select code from CT table

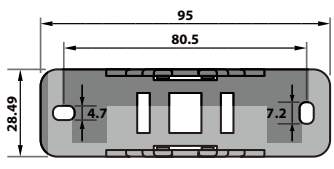
Secondary Current
100mA AC **1 0 0 mA**

Current Transformer Rated Values

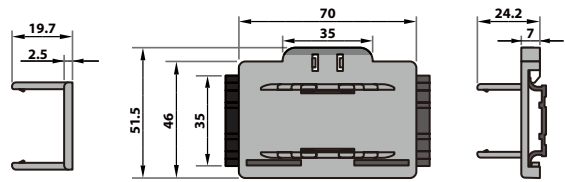
Primary Current (A)	Metering Burden(VA)				Code
	cl. 0.5S cl. 0.6	cl. 1 cl. 1.2	cl. 3 cl. 2.4		
50		0.035			050
70		0.035			070
100	0.035	0.035			100
125	0.035	0.035			125
150	0.035	0.035			150
200	0.035	0.035			200
250	0.035	0.035			250
		(JM21N)	(JM21F)		
100mA AC Secondary					

Accuracy conforms to IEC 60044-1 & IEEE/ANSI C57.13 meets the measuring range from 1 to 120% of In

• PANEL MOUNT



• DIN RAIL MOUNT



5 YEARS WARRANTY Precautions for the Warranty of Quality

- Split-core CT must be handled with care. A damage caused from the careless handling will not be covered by warranty.
- The product is designed to meet operating environments defined by the industrial standard IP20.
- Be sure about the right Primary current direction and terminal allocation. Otherwise any power measurements result in wrong values!
- Do not install the product if an application exceed the specifications of the product.
- Recommended to use the terminals specified by J&D.

ELECTRICAL PROPERTIES Check Point for the Accurate Measurement

- Protection circuit built in inside of the product for user safety. An additional external protection circuit can impact the characteristics.
- The product is designed for measuring sinusoidal 50/60Hz of primary current. Be aware that it is possible to occur the significant error if it is used to measure non-sinusoidal.
- Use Split-core CT with proper diameter to fit the conductor, otherwise it may cause the ratio error and the phase shift.
- Be careful to install Split-core CT without any pollutions on the splitting core surfaces. The pollutions such as moisture, dust and rust can cause metering errors. After removing the pollutions, recommended to use WD-40 or CRC5-56 on the core surfaces.
- Check whether the secondary leads is connected correctly or not. If the connection is not correctly, the secondary output could be lower than the expected one.

ODM ON REQUEST Remarks for the Customized Products

- Please provide the technical requirements for a technical evaluation.
- The color of housing is changeable upon the customer's requirements.
- The leads can be mounted on the terminals by J&D.
- A protective tailor-made housing is available.

DIN RAIL MOUNTING

Mount the bracket on the rail and install current transformer

PANEL MOUNTING

Tighten screws on the hole to mount bracket and install current transformer

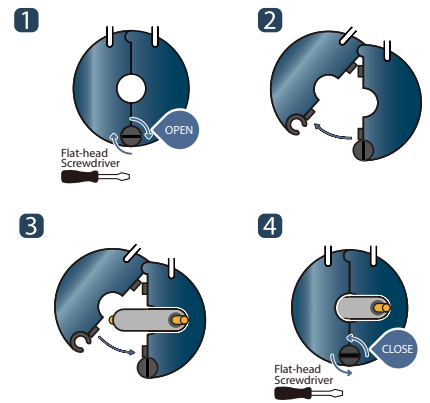
REMOTE CT ACCESSORY

JS08W

NEW
HIGH QUALITY
TECHNOLOGY



How to use >>>>



The split-core current transformer design is used for energy efficiency monitoring and automation applications. This includes sub-metering cost allocation, dynamic energy consumption and peak load analysis. The JC series of current transformer is simple to use, compact split-core design which is easily installed for metering applications. This is ideal for distributed measurement systems and can be retro-fitted into existing installations and non-interruptible equipment as there is no requirement for disconnection and reconnection of wiring.

>>>> Applications

- Energy sub - meter
- Power meters
- Power quality monitoring
- HVAC&Pumps, etc
- Distributed measurement system

>>>> Benefits

- Small-size, light-weight
- Simple Installation

>>>> Features

- Output-lead-wire, secure locking hinge, flat screw clip type make easy to install to the existent equipments such as a power distribution boards.
- Isolated plastic case recognized according to UL94-V0
- UL / EN 61010 - 1 certified

>>>> Notice

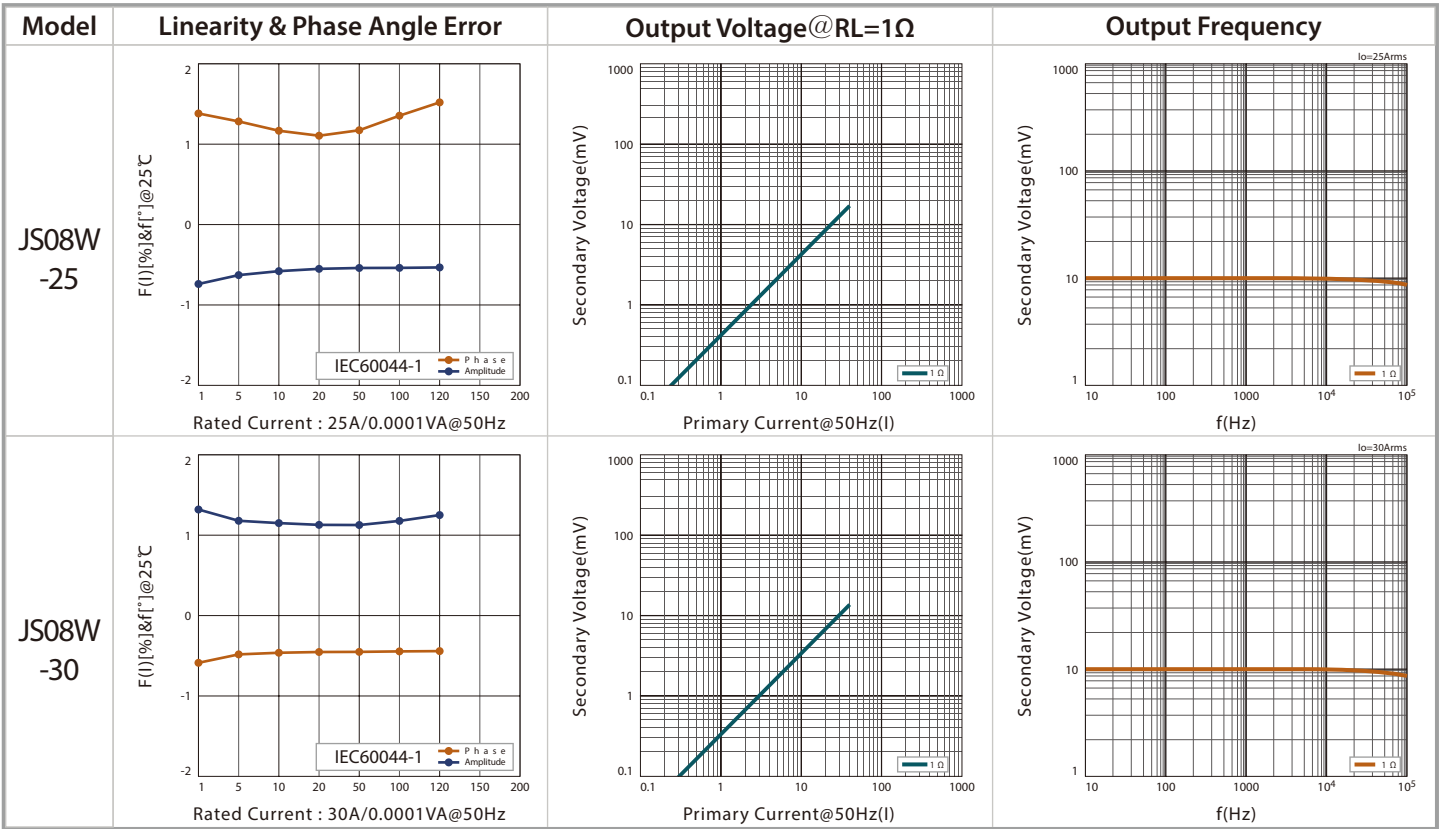
- If you impact the core contact surface, internal core material could be damaged. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.
- Silicone rubber reducing sleeves for central positioning of thinner conductors (5.5mm~6.5mm) are optional available.

>>>> Specification

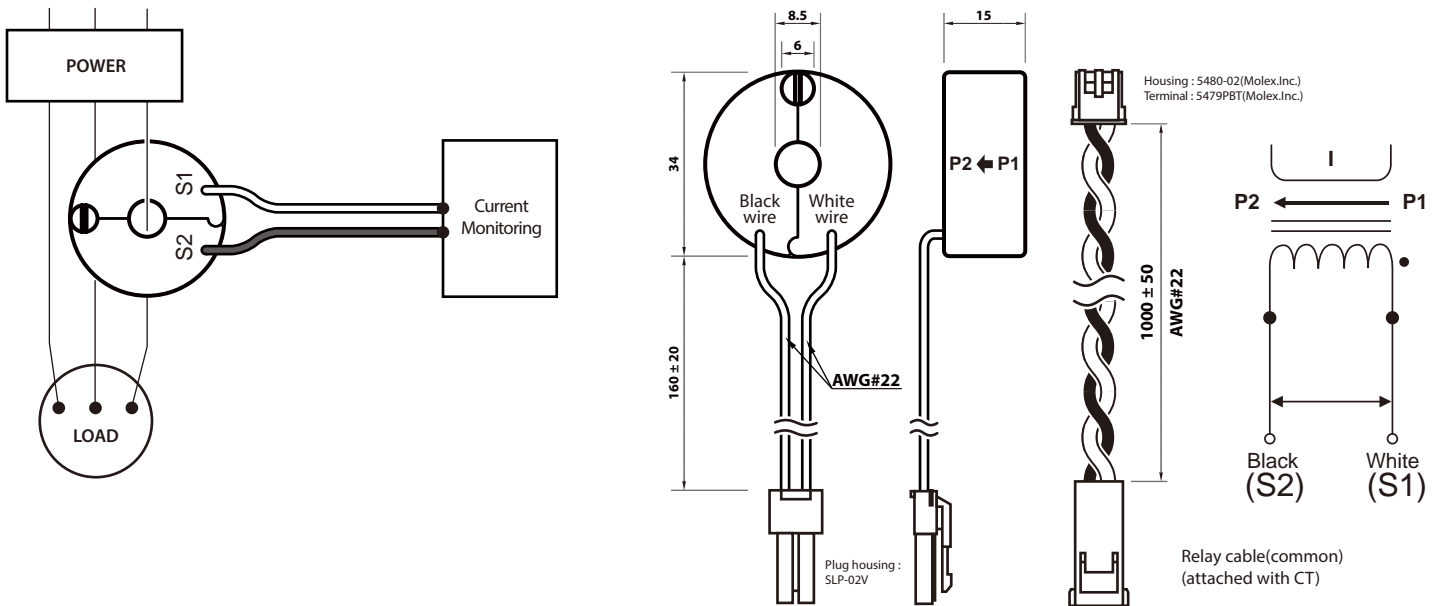
(F=50/60Hz)

MODEL	JS08W-25	JS08W-30
	Ø8.5	Ø8.5
Current Ratio	25A/10mA	30A/10mA
Current Range	0.01~42A (RL=1Ω)	0.01~45A (RL=1Ω)
Max Continuous Current	70A	70A
Nominal Phase Angle Error	+1±1°	+1±1°
Nominal Linearity Error	-0.5 ~ ±1%	-0.5 ~ ±1%
Turns Ratio	2500:1	3000:1
DCR	200±20Ω	240±24Ω
Protection Level	Over-voltage protection circuit is not included, please pay careful attention during installation.	
Insulation Category	CAT III 600V AC / PD2	
Operating Condition	-20°C~+50°C, ≤85%RH, No condensation, In-house & Any direction installable	
Storage Condition	-30°C~+90°C, ≤85%RH, No condensation	

>>>> Current Transformer Versions



>>>> Application / Dimensions



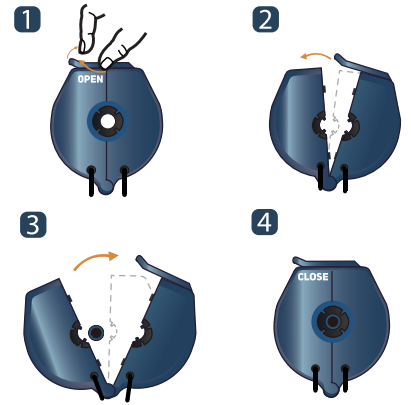
REMOTE CT ACCESSORY

JC08W

NEW
HIGH QUALITY
TECHNOLOGY



How to use >>>>



>>>> Applications

- Energy sub - meter
- Power meters
- Power quality monitoring
- HVAC&Pumps, etc
- Distributed measurement system

>>>> Benefits

- Small-size, light-weight
- Simple Installation

>>>> Features

- $\varnothing 5 \sim \varnothing 8.5$ mm sensing aperture for non-contact measurement

>>>> Notice

- If you impact the core contact surface, internal core material could be damaged. Do not use any other chemicals except WD-40 or CRC5-56 on housing or any parts.
- Additionally, CTs are deliverable with customized output lead cable.
- Silicone rubber reducing sleeves for central positioning of thinner conductors (5.5mm~6.5mm) are optional available.

>>>> Specification

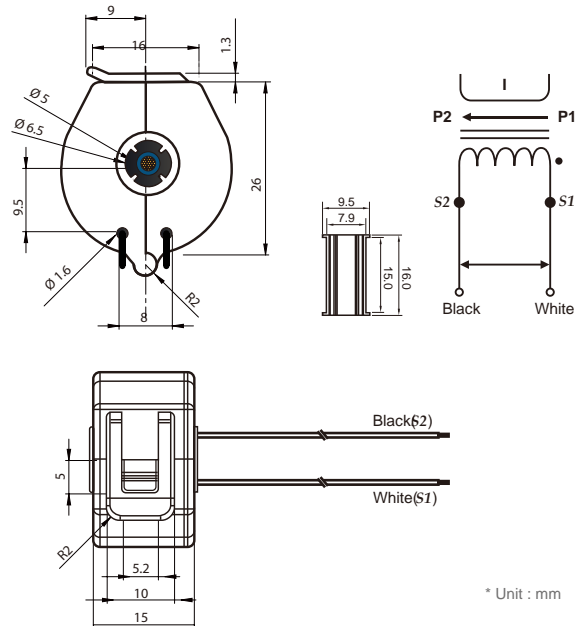
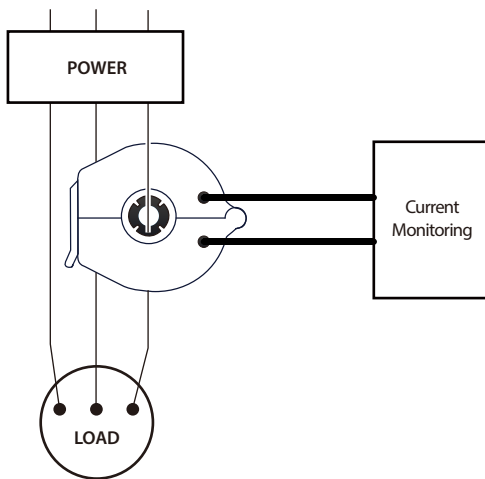
(F=50/60Hz)

MODEL	JC08W-25 $\varnothing 8.5$	JC08W-30 $\varnothing 8.5$
Current Ratio	25A/10mA	30A/10mA
Current Range	0.01~42A (RL=1 Ω)	0.01~45A (RL=1 Ω)
Max Continuous Current	70A	70A
Nominal Phase Angle Error	+1 \pm 1 $^\circ$	+1 \pm 1 $^\circ$
Nominal Linearity Error	-1.5 ~ \pm 0.5%	-0.5 ~ \pm 1%
Turns Ratio	2500:1	3000:1
DCR	200 \pm 20 Ω	240 \pm 24 Ω
Protection Level	Over-voltage protection circuit is not included, please pay careful attention during installation.	
Insulation Category	CAT III 600V AC / PD2	
Operating Condition	-20 $^\circ$ C~+50 $^\circ$ C, \leq 85%RH, No condensation, In-house & Any direction installable	
Storage Condition	-30 $^\circ$ C~+90 $^\circ$ C, \leq 85%RH, No condensation	

Current Transformer Versions

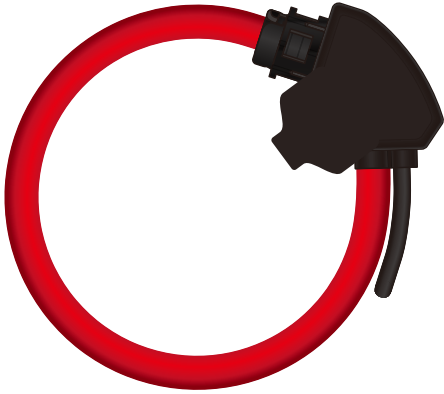
Model	Linearity & Phase Angle Error	Output Voltage@RL=1Ω	Output Frequency
JC08W -25	<p>Rated Current : 25A/0.0001VA@50Hz</p>	<p>Primary Current@50Hz(I)</p>	<p>f(Hz)</p>
JC08W -30	<p>Rated Current : 30A/0.0001VA@50Hz</p>	<p>Primary Current@50Hz(I)</p>	<p>f(Hz)</p>

Applications / Dimensions

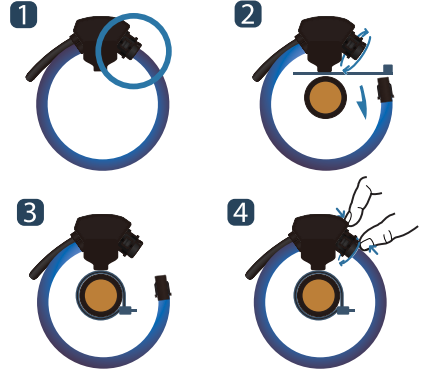


REMOTE CT ACCESSORY

JRF MOI-PU-333mV AC



How to use >>>>



JRF-MOI-PU Rogowski coil current transformer are accurate, flexible, rope style air coils that can be connected around conductors while the conductor is “lives”. They are easier to install and measure than traditional split and solid core CT. With their flexible design and light weight, they are ideal for bus bars and irregular-shaped bundles of multiple conductors. The Rogowski coil technology offers low phase shift error, inductance and excellent linearity while largely immune to electromagnetic interference and pulsed DC, providing a high rate of accuracy.

JRF-MOI-PU coils can be used in single and three-phase measurement applications. The output of the built-in voltage integrator provides an AC voltage of 333mV at the rated input current. There is an option to choose a different output voltage between 100-500mV AC at up to 6,000 Amps. The built-in integrator and DC power supply allows simple wiring installation. Multiple rogowski coils can be powered by one AC/DC power supply.

※ Choose JRF-MOI-PUC version if you require ties for fixing to the conductor

>>>> Applications

- Revenue-Grade distribution transformer monitoring
- Energy sub-meters
- Power meters
- Power quality monitoring
- Condition monitoring
- Distributed measurement systems

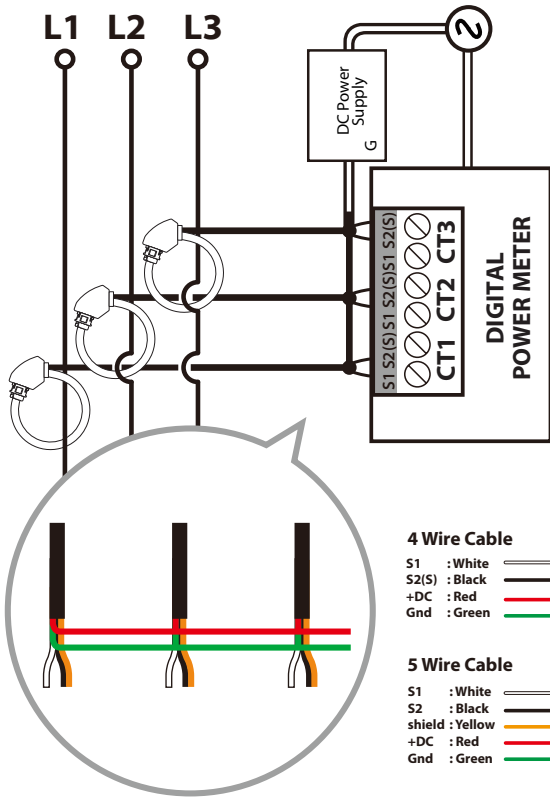
>>>> Features

- AC current probe
- Flexible and lightweight
- Easy & quick installation on uninterruptible power lines
- Insulation CATIII 1,000V AC, IV 600V AC.
- Accuracy Class 0.5/1.0 complying with IEC60044-1, ANSI C57.13
- In progress of certification for UL&CE complying with IEC61010-1
- IP65, IP67, IP68 (International Protection code)
- Several size are available from coil length from 285 to 385mm (aperture from 80 to 115 mm)

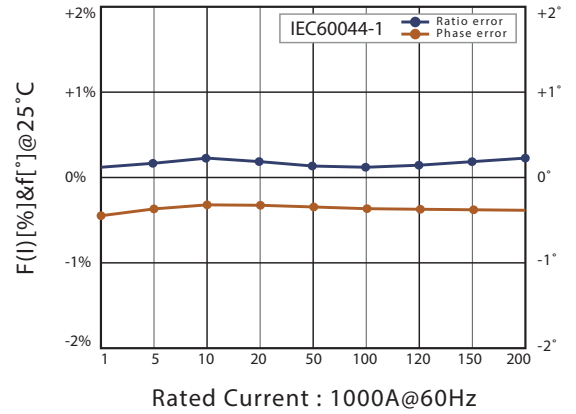
>>>> Specification

MODEL	JRF MOI XXXPU-80	JRF MOI XXXPU-115
Current Range	250 Amp to 6,000 Amp	
Rated Currents	250, 300, 400, 500, 600, 800, 1K, 1.2K, 1.5K, 2K, 2.4K, 2.5K, 3K, 4K, 5K, 6K	
Max Output	1.3VAC	
Accuracy	<1% typical at 2% to 120% of rated current	
Rated Output Voltage	333 mV AC	
Power Requirement	+24V DC, ±5%, 70mA Maximum	
Phase Shift	<0.5° at rated current	
Frequency	50/60Hz	
Linearity	±0.2%	
Conductor Position Sensitivity	±1% maximum	
Influence of External Fields	±1.5% maximum	
Operating Temperature Range	-25°C ~ +65°C	
Coil length	From 185 to 385mm	
Connection Cable type	4 x AWG24	
Connection Cable Length	on request	

Outdoor power & Indoor power Load



Ratio & Phase error graph



Positioning error



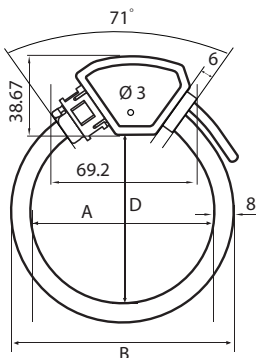
Conductor Position	Typical Error(%)
● Adjacent to the coil edge	< 0.5%
● Adjacent to the clip together mechanism	< 0.5%
● Central in the Rogowski loop	0.1%

Note that with a larger conductor the variation of error with conductor position will decrease and approach the calibrated value.

AC/DC Power Supply

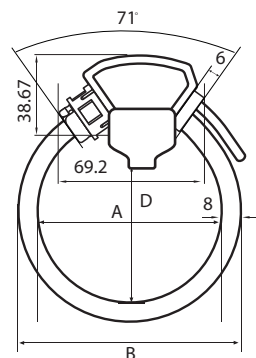
Models	Application	AC Input Voltage (Nominal)	Nominal Weight
FWA020012A-10B	Desktop power supply, For up to 24 pcs JRF-MOI xxxPU Conditioning Circuits	85-264 Vac (100-240)@1.67 amps	11.5 oz (326 grams)
MDR-10-12	DIN-rail power supply, For up to 12 pcs JRF-MOI xxxPU Conditioning Circuits	85-264 Vac (100-240)@0.84amps	6 oz (170 grams)

Dimensions(Choose JRF-MOI-PUC version if you require ties for attaching to the conductor)



* Unit : mm

Model	A	B	C	D
JRF MOI xxxPU-80	80	96	285	80
JRF MOI xxxPU-115	115	131	385	115



* Unit : mm

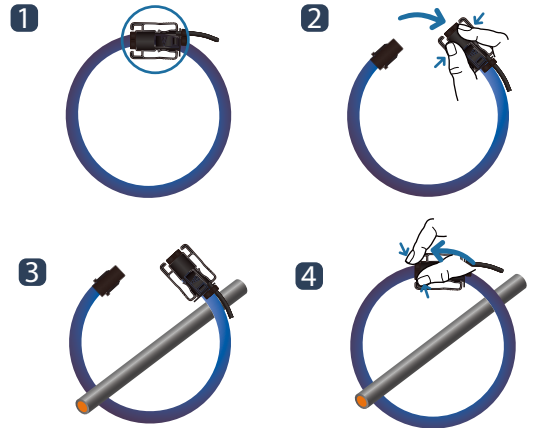
Model	A	B	C	D
JRF MOI xxxPUC-80	80	96	285	70
JRF MOI xxxPUC-115	115	131	385	105

REMOTE CT ACCESSORY

JRF-333mV AC



How to use >>>>



Clamp-on Flexible Rogowski coil Current Transducer has been designed for accurate measurement of AC current with a safe AC output voltage. JRF series is the precision current probe for Revenue-Grade Distribution transformer monitoring. With voltage integrator configuration, it can replace the existing CT directly.

>>>> Applications

- Revenue-Grade distribution transformer monitoring
- Energy sub-meters
- Power meters
- Power quality monitoring
- Condition monitoring
- Distributed measurement systems

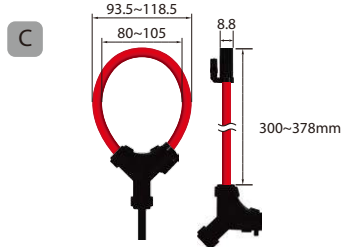
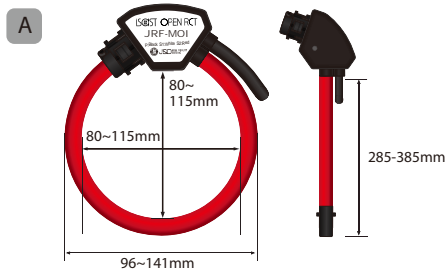
>>>> Features

- AC current probe utility by the Rogowski principle
- Flexible and lightweight
- Easy & quick installation in uninterruptible power lines
- Optional size is available from ID 80 to 500mm.
- Standard Input Current 250A-6,000A
- Frequency 50Hz / 60Hz
- Accuracy 1.0
- IEC60044-1 / ANSI C57.13 and C12.20 Standards
- IEC 61010-1, 61010-031, 61010-2-031, 61010-2-032
- IP65, IP67, IP68 (International Protection code)
- Insulation CATIII 1,000V AC, IV 600V AC
- Pollution Degree 2D

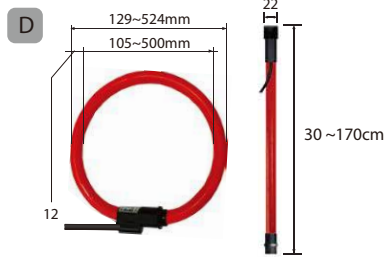
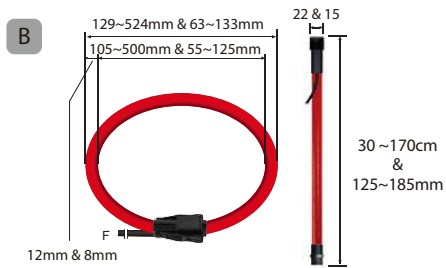
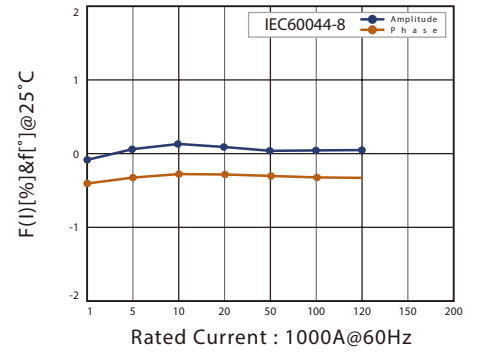
>>>> Specification

J & D P/N	Current Range(Rated Current Option)	AVAILABLE OUTPUTS (XXXX)
JRF MOI 333X	Input from 250Amp to 6,000 Amp	VOLTAGE OUTPUTS 333mV AC
JRF-333X-1,2,3	Input from 250Amp to 6,000 Amp	
JRF-333X-XXX	Input from 250Amp to 6,000 Amp	
JRF-333X-XXXXS	Input from 250Amp to 6,000 Amp	

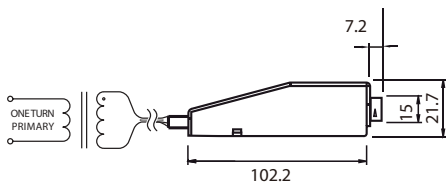
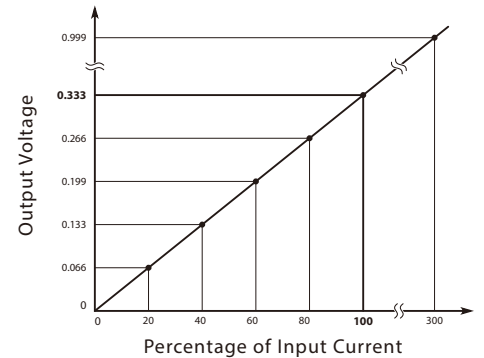
Dimension



Linearity & Phase angle error graph

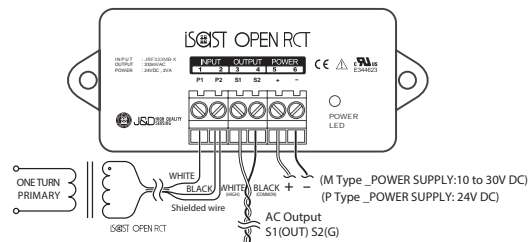


Output voltage graph



C Type 333mV AC

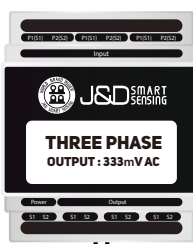
* Diagnostic green LED to check power supply function



M Type 333mV AC

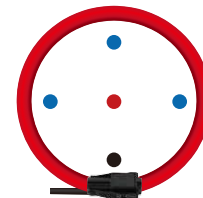


D Type 333mV AC



T Type 333mV AC

Positioning error



Conductor Position	Typical Error(%)
● Adjacent to the coil edge	< 1%
● Adjacent to the clip together mechanism	< 2%
● Central in the Rogowski loop	0.2%

Note that with a larger conductor the variation of error with conductor position will decrease and approach the calibrated value.

PT ACCESSORY

BUSBAR TYPE/RAIL TYPE/WIRE TYPE

Easy Voltage Tap for busbar



Technical specifications

Maximum voltage	690V
Test voltage/spike	3kV/50Hz 6kV
Max current	10A
Isolation class	E(Max. 120°C)
Fuse type	5X25mm(with indicator) 10A SIBA DIN41565-2
Short circuit rating	70kA@400V/50Hz
IP rating	IP20
Ambient temperature	-5...+40°C
Temperature rise busbar	Max. 75K
Busbar connection	Via Allen key bolt M8
Allen key size	Number 6
Busbar thickness	Max. 15mm/Min. 4mm
Housing	Polyamide(PA6.6)
Material terminal	Nickel plated brass

Maximum temperature of the busbar: 120°C
(Sum of the busbar temperature rise and the ambient temperature)
KEMA certified, IEC 60947-7-3

Order specifications

Description	Model	Connection
Fused phase terminal	UAK4Z	1,5 - 4mm ²
Phase terminal	UAK16	0 - 16mm ²
Neutral terminal	UAK16N	0 - 16mm ²

Fused voltage branch on for rail mounting



Technical specifications

Location	Indoor use
Operating temp	-10°C - +55°C
Relative humidity	5% - 85%, non condensing
Protection degree	Ip20, basic insulation
Suitable for copper bar conductors	
Application conditions	IEC 60947-7-3:2009
Standard	400Vac
Umax	3kV/50Hz
Test voltage	6kV 1,2/50µs
I _{max}	2A
Voltage drop	<500mV AC
Fuse	2A, 450V, F, 70kA, 5X25mm,ceramic (SIBA Part. no. 7008913.2)
Prim. connection	M6(6mm) or M8(8mm)
Sec. connection	1.5.4mm ² torque max. 2.0Nm

Order specifications

Type	Article number
Zk4-M6	500030
Zk4-M8	500031

Easy Voltage Tap for wires



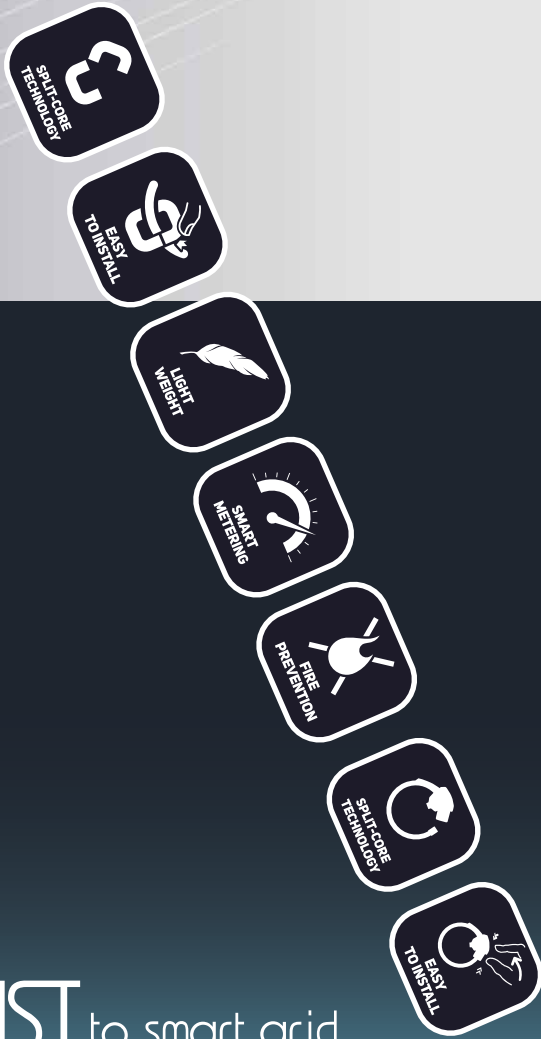
Technical specifications

CE Directive Standard	Low voltage directive 2006/95/EC IEC 60998(clamp), IEC 60947(fuse)
Standard Class	IEC 60721-3-3:1996 3K3
Operating temp	+5°C - +55°C
Relative humidity	5% - 85%, non condensing
Operating height	0..2000m over NN
Protection degree	IP20, basic insulation
Pollution degree	2
Measurement category	CAT III
Insulation material	PVC or XLPE
Wire diameter	3 - 5mm(2,5 - 6mm ²)
UAD6(n)-R	Rigid wire(Solid, Stranded)
UAD6(n)-F	Flexible wire
Umax	400Vac
Test voltage	3kV / 50Hz
Impulse voltage	6kV 1,2 / 50µs
I _{max}	2A
Voltage drop	<500mVac
Fuse(UAD6-R/F)	2A, 450V, F, 70kA, 5X25mm, ceramic(SIBA Part.no. 7008913.2)
Sec. lead	1mm flexible, 50cm, end-sleeve
Usability	Multiple use, max. 24 times
Torque	1.5 - 2.0Nm
temperature	-20°C - +70°C
Relative humidity	5% - 85%, non condensing
Weight	28 gram
Dimensions	diameter 23mm, height 59mm
Material	PA 6.6, UL94V2

Order specifications

Art. nr.	Cable dimensions
500072R	UAD6-R, fused for 2.5-6mm ²
500073R	UAD6n-R, not fused for 2.5-6mm ²
500072F	UAD6-F, fused for 2.5-6mm ²
500073F	UAD6n-F, not fused for 2.5-6mm ²
500074R	UAD6 set, 3xUAD6-R + 1xUAD6nR
500074F	UAD6 set, 3xUAD6-R + 1xUAD6nF

MEMO



ISOST to smart grid