

## Split-Core Current Transducer JC16FXXX-RMS



Split-core current transducer for the electronic measurement of DC or AC waveform currents, with galvanic isolation between the primary circuit and the secondary circuit (measurement). True-RMS outputs proportional

### Applications

- HVAC & Pumps
- Refrigeration
- Small Industrial Motors
- Fans
- Lighting

### Benefits

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

### Features

- Nylon-spring, output-terminal, secure locking hinge, one-touch structure make it easy to install to the existent equipment such as a power distribution board.
- 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.
- Please use only the original output screws. Not recommended to replace it with anything else.
- Clean the contact surface and make sure to remove all debirs on the contact parts.
- Be careful of damaging or breaking the core.

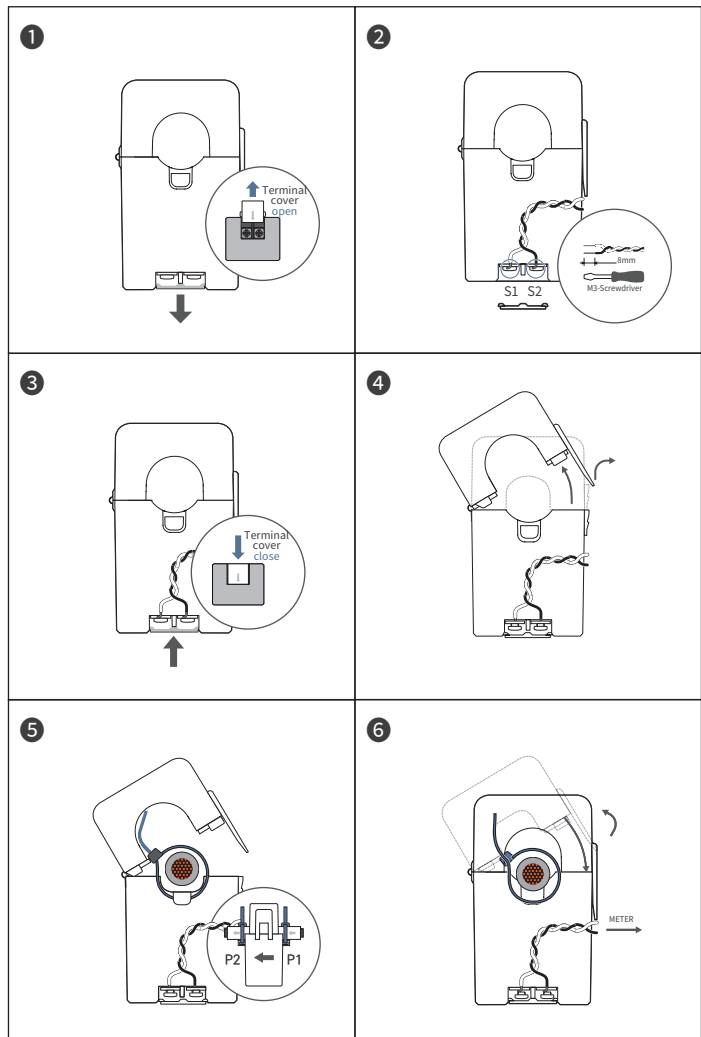
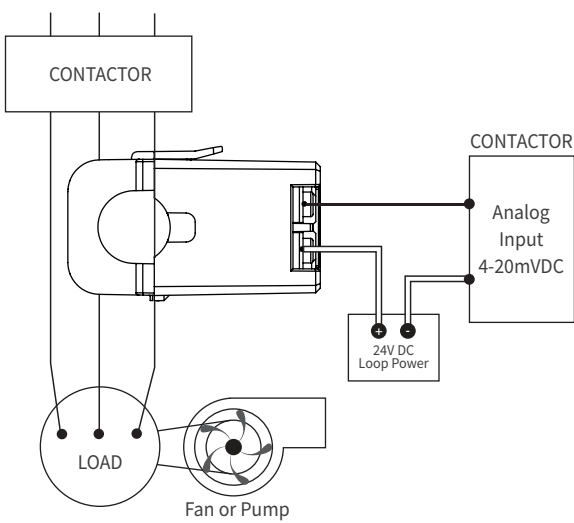
# Specification

(F=50/60Hz)

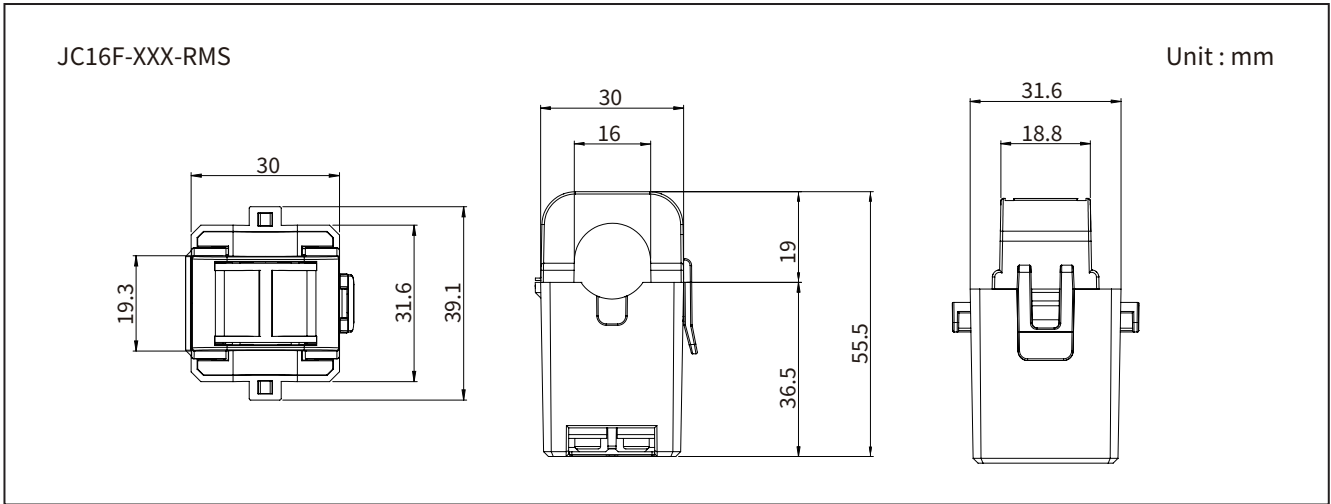
Model	JC16FXXX-RMS / $\phi$ 16
Rated Current (A)	5, 10, 20, 25, 50, 100
Max. Allowable Current	120%(Continuous)/ 150%(1 min.)
Output	4-20mA DC (RMS)/0-Rated Current (Load resistance: < 600 $\Omega$ at P/S: 24V)
Accuracy / Linearity	$\pm$ 2% FS. Dynamic Range 1:100 at 50/60Hz Sinewave
Sensor Supply Voltage	24V DC Loop Power (20-30 V DC(25mA Max.))
Response Time	100ms
Output Ripple Voltage	Within 2% of Output Voltage
Output Terminals	2 x M3-Screw, with Terminals cover
Insulation Category	CATIII
Operating Condition	-20 $^{\circ}$ C~+50 $^{\circ}$ C, <85%RH, No condensation, In-house & Any direction installable
Storage Condition	-30 $^{\circ}$ C~+90 $^{\circ}$ C/ $\leq$ 85%RH, No condensation

# How to use

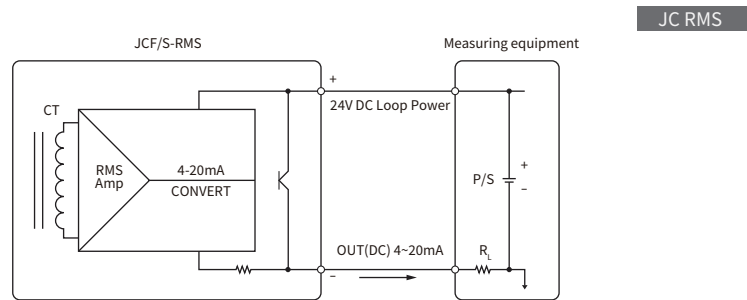
## Applications



## Dimensions

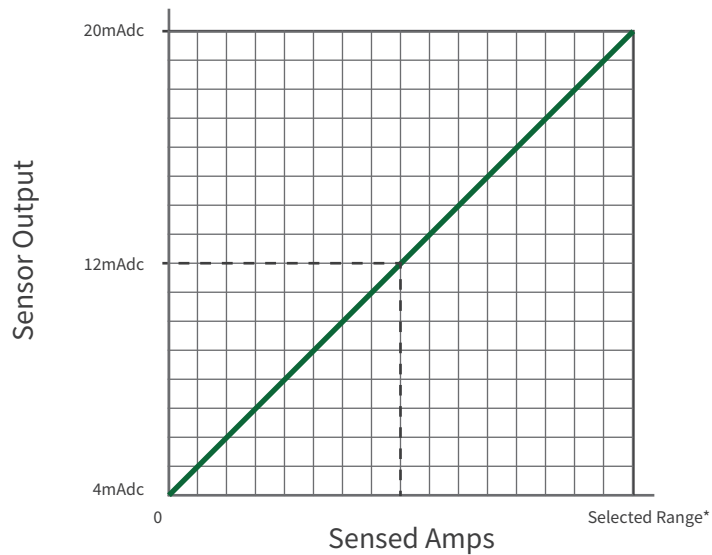


## Internal Circuit Drawings



2-Wire Transmission method(Loop powered) using P/S(+ side) of Measuring equipment

## Output Ampere Data



\*Factory calibrated ranges selected with the amperage range switch

## SAFETY

The J&D CTs are UL/EN 61010-1, CE, RoHS compliant and certified, are also conformed up to Pollution degree 2, 600Vac CAT III rated devices.

- Please be sure that Failure to follow these instructions can result in serious injury and/or cause damage. The transducer shall be used in electric/electronic equipment in accordance with the operating instructions of all related systems and component manufacturers with respect to applicable standards and safety requirements.



- Follow corresponding national regulations and safe electrical work practices. This equipment must only be installed and serviced by qualified personnel. And the qualified personnel is one who has skills and knowledge related to the construction and operation of this electrical equipment and installations, and has received safety training to recognize and avoid the hazards involved. In addition, the installation and maintenance shall be done with the main power supply disconnected except if there are no hazardous live parts in or in close proximity to the system and if the applicable national regulations are fully observed.



- When operating the transducer, there may be dangerous active voltages (e.g. primary conductor) in certain parts of the module. Users should make sure to take all necessary steps to protect against electric shock. The transducer is a built-in device containing conductive parts that are inaccessible after installation. Therefore, a protective enclosure or additional insulation barrier is necessary. Safe and trouble-free operation of this converter can only be guaranteed if transport, storage and installation are carried out correctly and operation and maintenance are carried out carefully.

## REMARK

- $V_o$  is positive when  $I_p$  flows in the direction of the arrow. (o : output, p : primary current)
- Temperature of the primary conductor should not exceed 75°C(167°F)
- Dynamic performances (di/dt and delay time) are the best with a single bar when the primary hole is completely filled.
- By hysteresis of core, offset drift occurs proportionally to the over-current higher than rating value.
- The output value fluctuates upon the various factors, so it is recommended to use the current range higher than 5% of the rated current.
- Do not use the product over the maximum current continuously.

## ATTENTION

- Contact areas (air gap) must be kept clean (particle free) to ensure proper performance.