



## Split-Core Current Transducer JM21NA-XXX-V



Split-core current transducer for the electronic measurement of AC waveform currents, with galvanic isolation between the primary circuit (power) and the secondary circuit (measurement). 0-5V DC, output proportional to the RMS value of the primary current.

### Applications

- Automation and Supervision
- Safety and Condition Monitoring
- HVAC & Pumps
- Refrigeration
- Small Industrial Motors
- Fans / Lighting

### Main characteristics

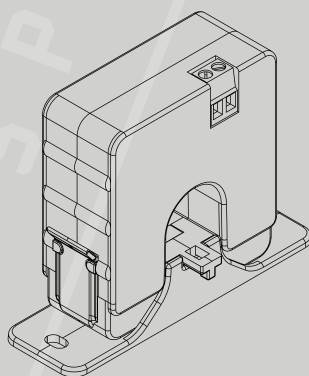
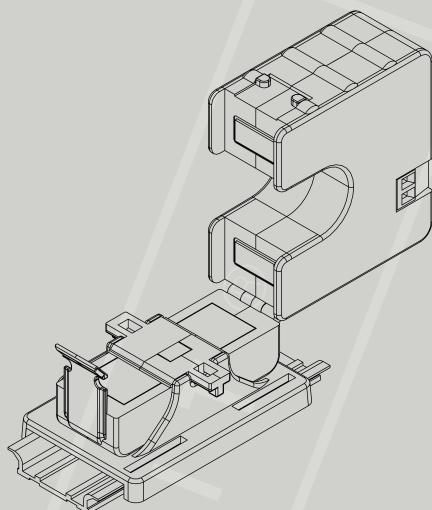
- Current transformer and RMS circuit in a single case
- Choice of primary current ranges: 5 to 250A
- Standard output type: 0-5V
- Accuracy: <2% of nominal primary current
- Bandwidth: 50/60 Hz

### Features

- True-RMS (Bipolar DC in → Unipolar DC out)
- Single power supply (24V)
- Operating range: -20°C to +60°C
- Isolation test voltage : 3.5kV RMS / 50Hz / 1min
- Sensing aperture : 21mm
- UL94-V0 recognized materials

### Advantages

- High isolation between primary and secondary circuits
- Compact case
- Cost-effective solution
- Easy installation

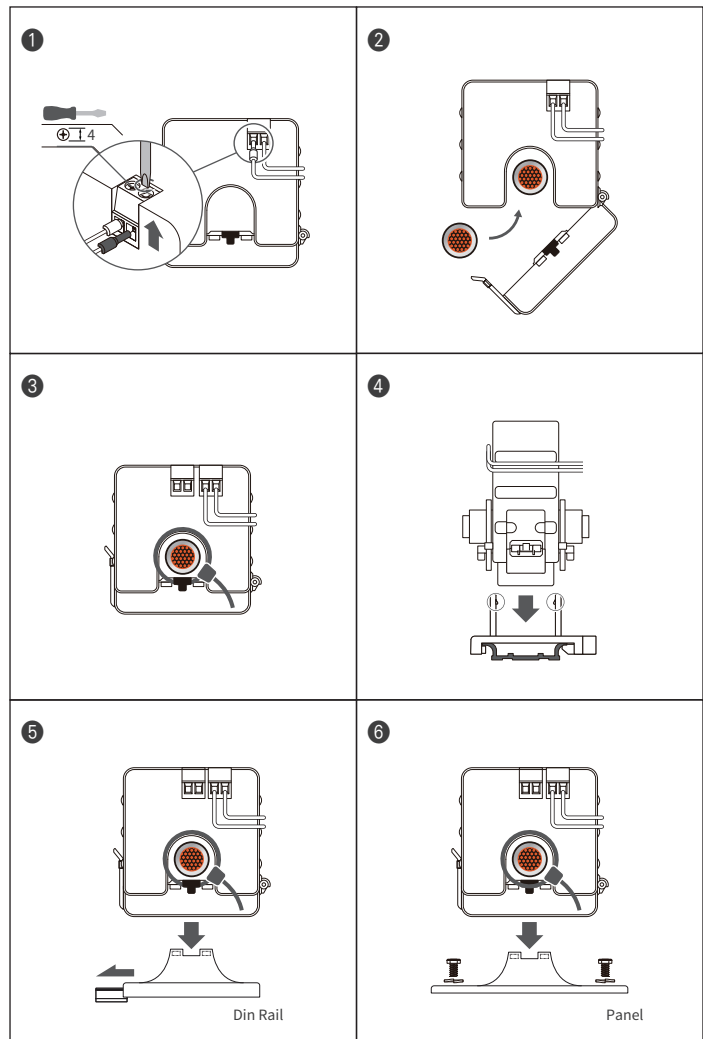
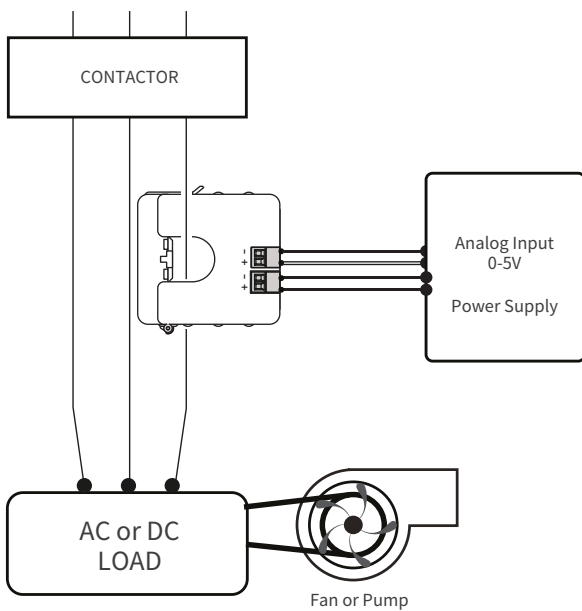


## Specification

Rated Current(A)		5,10,20,25,50,75,100,150,200,250
Model	Output	Electrical Data
JM21NA-XXX-V	0-5V DC	Output Impedance 5.8kΩ(Self Power) & Average output

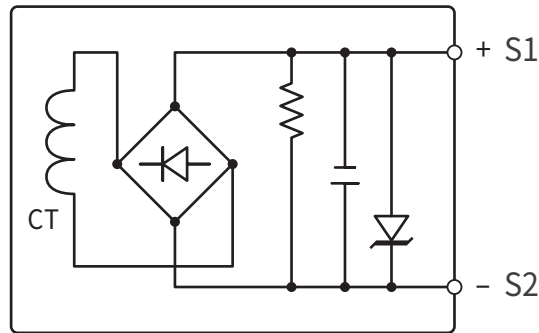
## How to use

### Applications

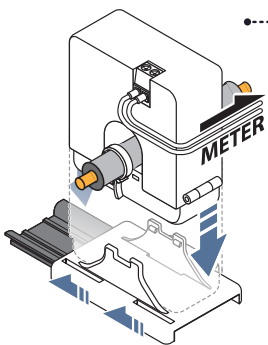


## Internal circuit drawing

### • JM21XA-XXX-V/VH



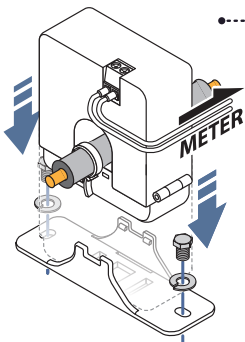
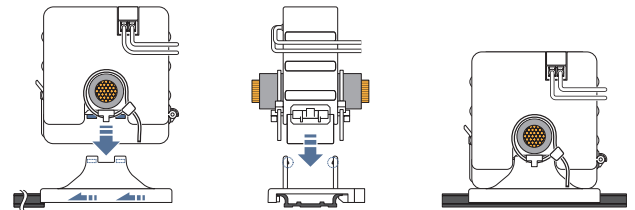
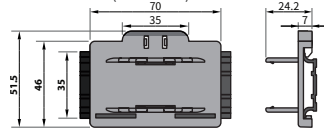
## Accessory Option



### DIN RAIL MOUNTING

Mount the bracket on the rail and install current transformer

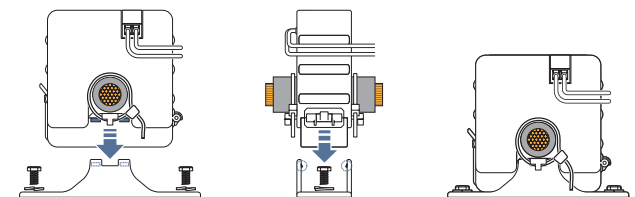
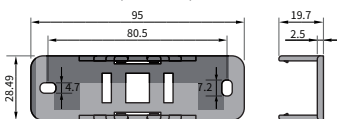
• Dimensions (unit : mm)



### PANEL MOUNTING

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

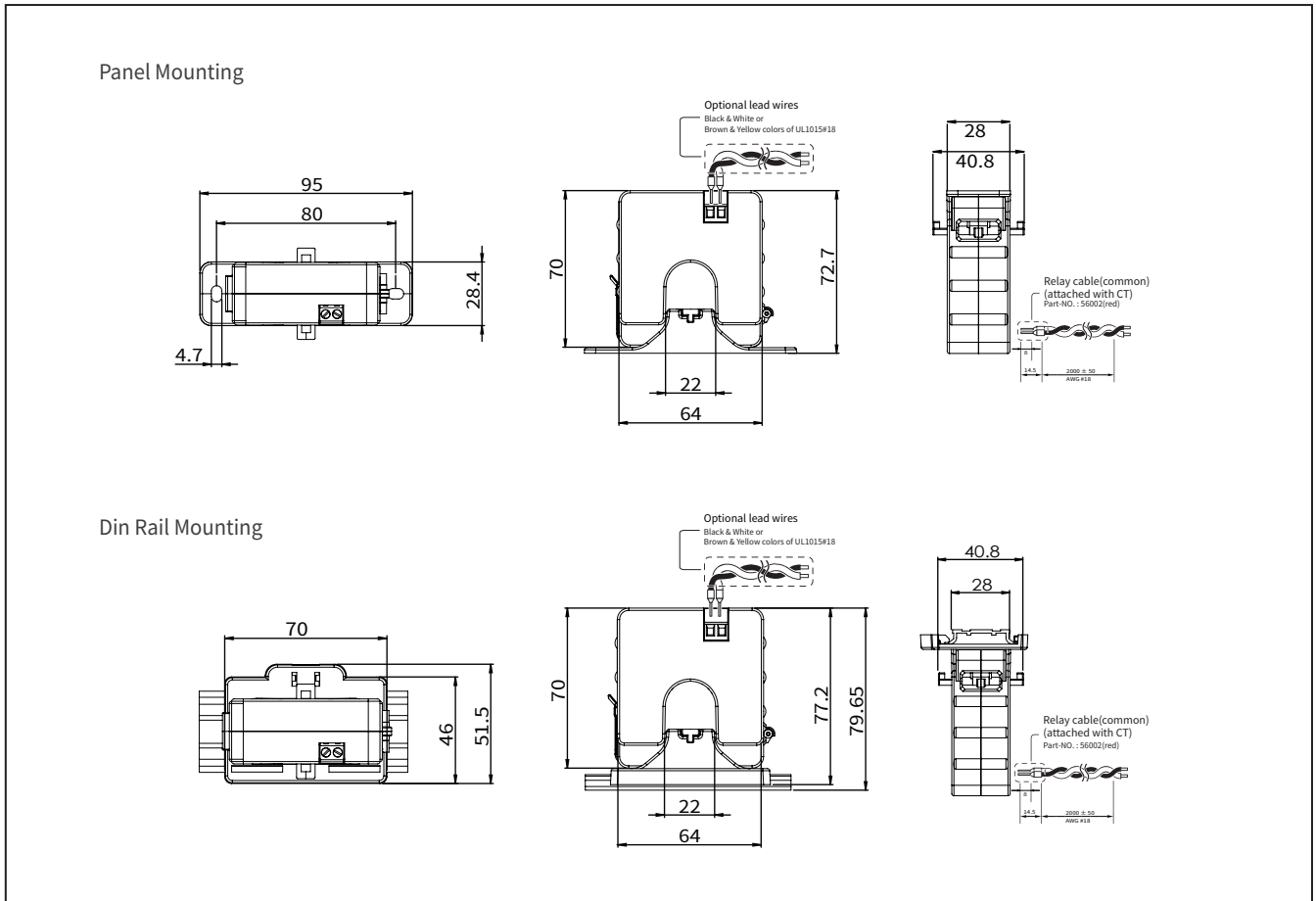
• Dimensions (unit : mm)



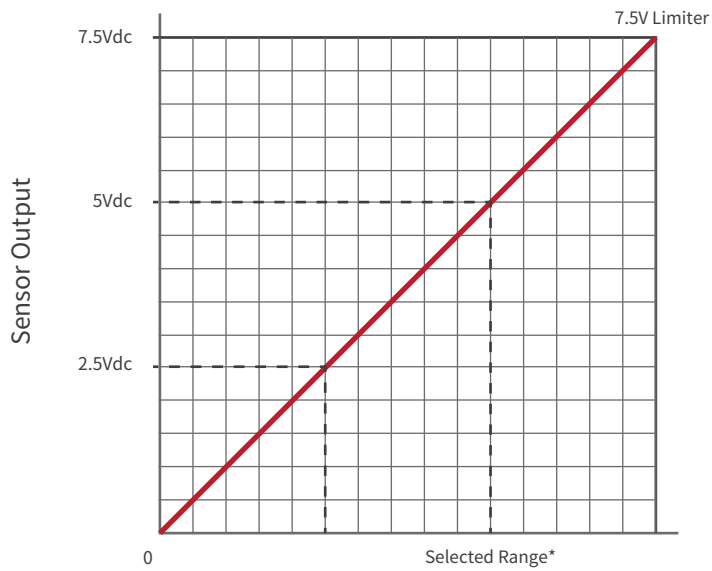
# Dimensions

JM21NA-XXX-V

Unit : mm



# Output Voltage 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.