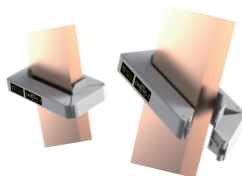


# Split-core DC Current Sensors IDCS-U

DC/AC current sensor, IDCSXXU series, applying with accurate laminating split-core technology and Open-Loop technology, has a strong durability and a good stability of error in low current and external vibration or shock.



## Features

- One touch split core structure
- Isolation measurement CATIII
- Three Installation type:  
Panel mounting / DIN rail mounting / Cable tie mounting
- Insulating plastic case recognized under UL94-V0
- Complied with CE and RoHSIII

## Applications

- Uninterruptible Power Supplies (UPS)
- Monitoring and measuring Power supplies for Telecom
- Switched Mode Power Supplies (SMPS)
- Battery supplied applications
- Chopper / Inverter monitoring
- DC Power Meter

## Advantages

- Low power consumption with high accuracy
- Easy mounting by Split-core structure
- No insertion losses
- DC Immunity

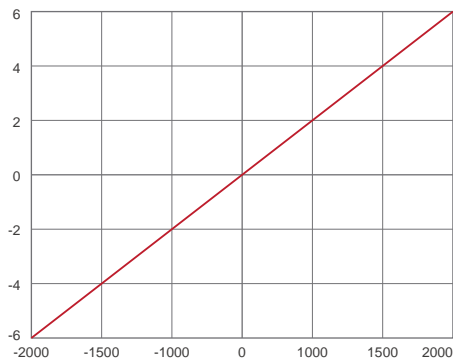
## Specification

SPEC	MODEL	IDCS-U 1000	IDCS-U 1500	IDCS-U 2000	IDCS-U 2500	IDCS-U 3000	IDCS-U 4000	IDCS-U 5000
Rating Current		±1000	±1500	±2000	±2500	±3000	±4000	±5000
Saturation Current		±1500	±2250	±3000	±3750	±4500	±6000	±7500
Output Voltage		±4 V, 0.5% at rated current(F.S) RL=10KΩ						
Offset Voltage		±20 mV						
Output Linearity		±0.5% rated current						
Power Supply		±15V (±5%)						
di/dt Response Time		7 μ sec (Typ.) at di/dt=F.S/μ sec						
Output temperature character		±0.1% / °C(Typ.)						
Offset voltage temperature coefficient		±1mV / °C(Typ.)						
Hysteresis error		25mV(IF-F.S) Less than 25mV						
Insulation Withstand Voltage		AC 4000V / 1min.						
Insulation Resistance		DC 500V / 500MΩ max						
Operating Condition		-10°C~+70°C						
Storage Condition		-25°C~+85°C						

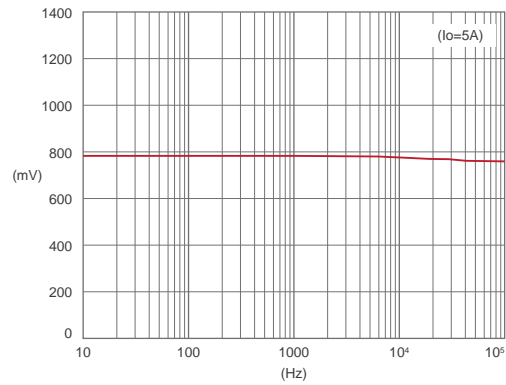
# Split-core DC Current Sensors IDCS-U

## Graphs

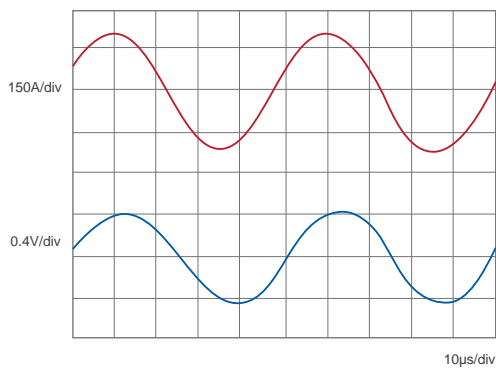
Output Voltage Characteristic



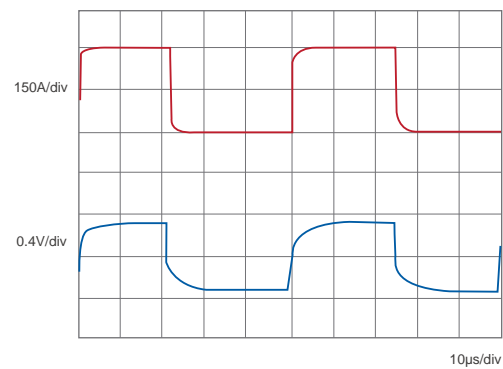
Frequency Characteristic



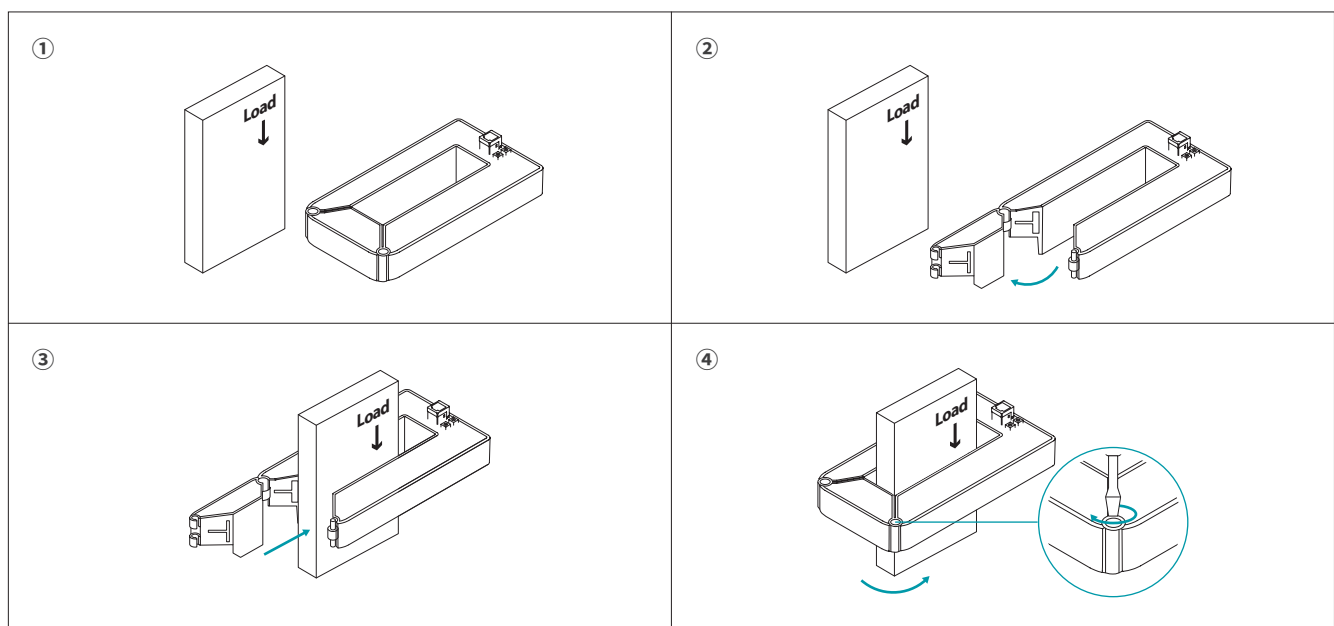
Output Wave-1



Output Wave-2



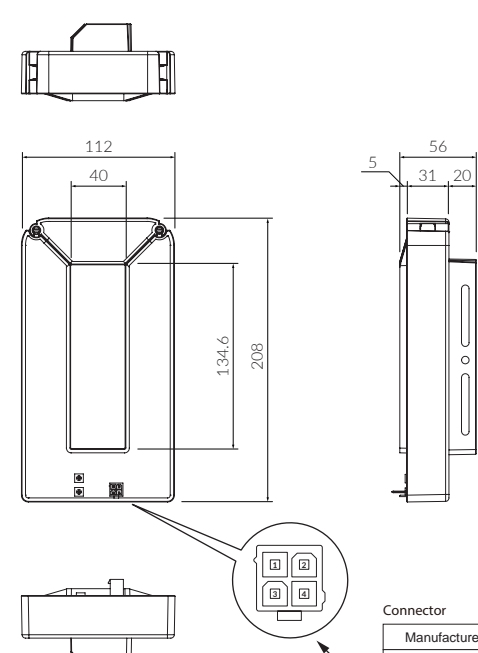
## How to use



# Split-core DC Current Sensors IDCS-U

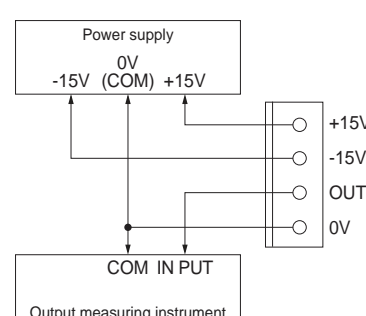
## Dimensions IDCS-U (in mm)

**IDCS-U**



Connector	
Manufacturer	Molex
Part Number	39-28-8040
Old Part Number	5566-04A-210

**Wiring Diagram :**



Terminal Pin	Function
1	+15 V
2	-15 V
3	OUTPUT
4	GND

This product needs  $\pm 15V$  (+15V and -15V DC bi-polar power supply) as operating power supply. Even if the case of detecting current with only plus direction, it still  $\pm 15V$  needs. In any case, it is not possible to operate with only +15V

### Safety & Danger Notes



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

- $I_o$  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  $100^{\circ}C(212^{\circ}F)$ .
- Dynamic performances (di/dt and delay time) are the best with a single bar when the primary hole is completely filled.