

# Optical Current Sensors

Fiber



Optical Fiber Current Sensors (OCS) utilizing the Faraday Effect are used to measure AC power current. The OCS unit is a compact, lightweight, easy to install device with high insulation properties which are immune from electromagnetic noise. The OCS is capable of measuring large currents at high-speed response times for long distance signal transmissions. The OCS can be utilized in various fields such as electric power plants, cars, and railways. The OCS assembly consists of our polishing, optical thin film, and precise assembling technologies and processes.

## 1. Compact, lightweight, and non-insulating

The sensing element used is optical fiber which makes the OCS compact, lightweight, and non-insulating.

## 2. Easy to install

Installation to existing electric equipment is easy. The OCS does not require the need to cut electric wire because it consists of a reflective type optical circuit and the measurement location point can easily be changed.

## 3. Immunity from electromagnetic

OCS is immune to electromagnetic noise, because all parts except for the electronic circuit consist of optical components.

## 4. Measurement of large current

Measurement of large current is possible, because the OCS unit does not need the use of iron cores which cause magnetic saturation.

## 5. High-speed response

OCS detects and transmits current by using optics and due to this advantage, the response for high-speed sensing is more efficient than conventional current sensors.

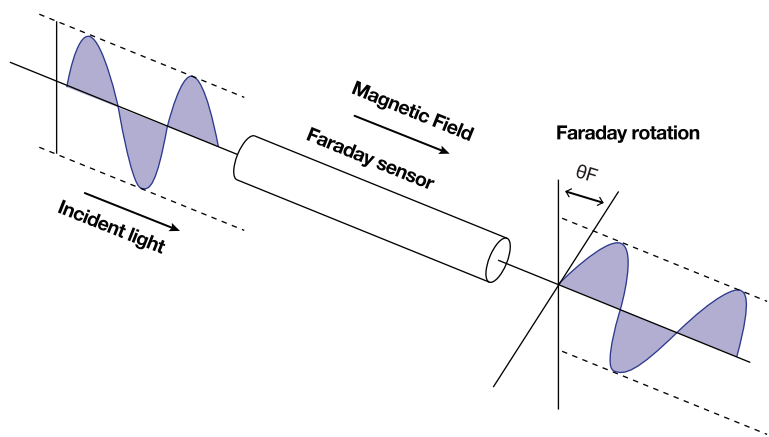
## 6. Long distance signal transmission

Long distance signal transmission is possible because waveform distortion and transmission loss are low.

## Applications

Electric power field	Portable type measurement device for large current, Current monitor for underground distribution cable lines, Fault section sensing and locating system, Fault point locating system, Protective relaying systems, Electric power metering device for purchasing.
Railroad	Inverter harmonic current measurement.
Automobile	Current waveform measurement for Motor, Capacitor, Inverter and IGBT.
FA	Current measurement for induction heater current, Refinement, Laser, Electron Beam, Welding machine, and Plasma.
Aviation / Vessel	Wire harness insulation deterioration diagnosis.
Other	Waveform measurement of impulse current such as Lightning current, Superconductive current measurement.

FEATURE



Fiber

Signal processor

Item	Specification
Model No.	D1550
Power supply	AC100V ~ 250V, 50Hz or 60Hz
Measurement range	~ 5kA rms
Frequency range	3Hz ~ 10kHz
Accuracy	JEC1201-1PS Class(at 2kA, 50Hz)
Output form	"Numeric display" and "Analog voltage output"
Operating temp, range	0 ~ 50°C
Size	W 180mm x D 308mm x H 50mm
Weight	1.8kg

Sensor Probe

Item	Specification
Product name	Reflective Type Sensor Probe
Sensor Fiber	LBF: Low Birefringence Fiber
Maximum Measurable Current	100kA (100kA Max.)
Sensor Fiber Length	5 meters or less
Transmission Fiber Length	10 meters or less
Wavelength	1550nm
Operating temp, range	-20 ~ 80°C