Introduction

Series FCS AC current transducers for Furison were ideal choice for monitoring all kinds of AC current in the circuit to produce 0 to 5V, 0 to 10V or 4 to 20mA DC analog signal to send to all kinds of AD interfaces to make up of a digital data collection system, or to send to PLC to form an automatic control system, or to send to digital or analog meter to measure the AC current .The input current for 521 models is 10A, 20A, or 50A, and for 2151 models is 100A, 150A and 200A The solid-core and split-core designed make it safe and reliable for user. The transducers can be use for collecting data, converting signal, and distributing DCS in power, telecommunications, petrochemical or other fields.

Features

- Standard 0 to5V, 0 to10V or 4 to 20mA analog output.
- Solid-core and split-core design
- Easy for installation.
- The shell is made up of ABS (UL 94V-0).
- Designed to meet UL, CSA, Rohs and CE approval.
- Isolation voltage up to 2000V makes it safe and reliable.

Working Principle

Modulation and demodulation isolation principle were used in the circuit to monitor AC current in real-time. Induced current will be produced as long as the AC current changes in the circuit. And then convert it into standard voltage and current signal to be sent to other device. AC current will be induced by coil in the transducer to output a verbal current or voltage signal.

Typical Applications

- Monitor AC current.
- Motor overload protection.
- Act as an electronic switch in automatic control system.
- Apply in lighting circuits act as an electronic switch.
- Electrical heaters protection.

Naming Rules

FCS521- ¯ P-420E

Output style: 10V— 0-5V DC output; 5V— 0-5V DC output; 420E— 4-20mA DC output; 420T— 4-20mA DC RMS output.

Enclosure styles : SP— Split-core; SD— Solid-core.

FCS521/FCS2151—Series FCS521/FCS2151 AC current transducer.

521—The input current is 10A/20A/50A;

2151—The input current is 100A/150A/200A.

Notice

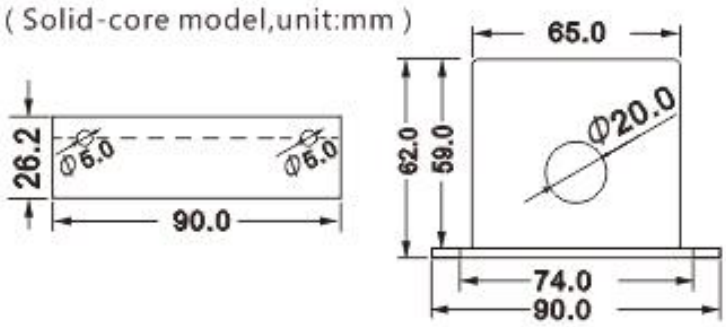
The D series DC sensing transducers are intended to provide an input signal to equipment under normal operating conditions. Where failure or malfunction of the current switch could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the control systems. Incorporate and maintain other devices such as supervisory or alarm systems or safety or limit controls intended to warn of, or protect against, failure or malfunction of the D series DC sensing transducers. The adjustment should be turned slightly clockwise past a certain point to ensure normal line current variations do not cause false conditions. All power sources should be cut off before any installation and electricity connection to avoid electric shock. And the installation should be completed by professional who hold the electricity certification with the special skill.

Specifications

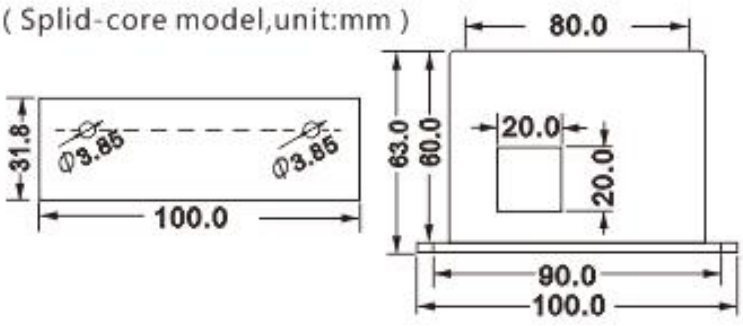
Power-supply	24V DC（±10%）
Amperage Range	10A/20A/50A (521model) 100A/150A/200A (2151model)
Dimension	61.5×90×26mm hole size：20mm（solid-core model） 63×100×32.2mm hole size：20mm（split-core model）
Output signal	0-5V/10V（output voltage） 4-20mA/4-20mA RMS（output current）
Frequency	10-200Hz
Hysteresis	≤ 1%FS
Accuracy	10%
Repeatability	**100%**
Power consumption	≤ 1W
Response time:	<200ms
Leakage current	≤ 1mA
Temperature limit	32 to 122℉ (0 to 50℃)
Humidity limits	10 to 95% RH (none-condensing).
Enclosure Rating	UL 94V-0 flammability rated ABS, insulation class 600 V.
Maximum overload	200% (< 200% of the rated input current).

Dimension

(Solid-core model,unit:mm)



(Splid-core model,unit:mm)



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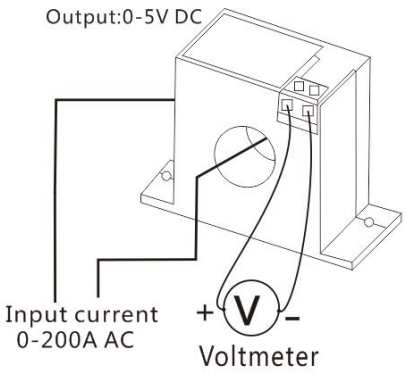
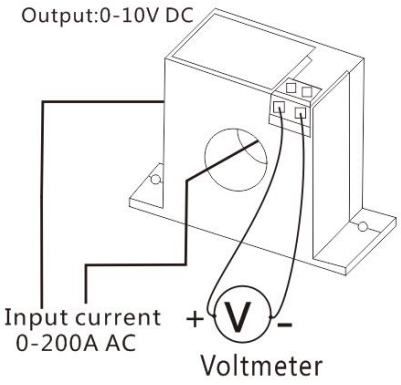
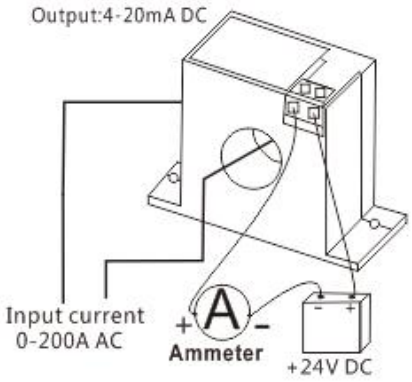
Typical Wiring







Installation

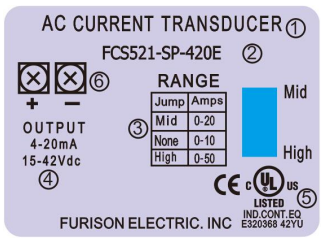
① Mount the switch in a suitable location using the two mounting holes in the base of the unit. If using ties, make sure ties are securely fastened and that the unit is stable. If using crews, tightly screw in one screw at a time into each hole.
② Ensure that the power supply to the circuit is off.
③ Disconnect the circuit line, slide the power conductor cable through the sensing hole of the current switch, and reconnect the circuit line. Notice that the direction of the measured current is from the side with "×" to the other side.
④ Connect the output circuit, notice that the first terminal block connect to the anode of the output device and the second connect to the cathode of the output device.
⑤ Connect the power-supply circuit, notice that the third terminal block connect to the cathode of the power-supply and the fourth connect to the anode of the power-supply.
⑤ Turn circuit back on.
⑥ The DC current transducer is working now.

Trouble Shooting

Question:
There is DC power to the unit, but there is not any signal to the output.

Solution:
①Verify that the DC current to the unit is normal, notice that the DC sensing transducer will stop working as long as the DC current is too low to be induced, and the DC current exceed the rated levels will damage the DC current transducer.
②Verify the 24V power-supply to the DC sensing transducer is normal, and the power-supply connection in wrong way will be damage the DC sensing transducer.
③Verify the connection between the output terminal block and the next device.

Label Introduction



① Switch style.
② Switch model.
③ Input AC current.
④ Output style.
⑤ Product UL certification.
⑥ Wiring introduction.

Ordering Information

Series product	Input current	Output styles	Enclosure styles	Model
FCS521	0-10A 0-20A 0-50A	0-5V	FD	FCS521-FD-5V
			FP	FCS521-FD-5V
		0-10V	FD	FCS521-FD-10V
			FP	FCS521-FP-10V
		4-20mA	FD	FCS521-FD-420E
			FD	FCS521-FD-420T
			FP	FCS521-FP-420E
			FP	FCS521-FP-420T
FCS2151	0-100A 0-150A 0-200A	0-5V	FD	FCS2151-FD-5V
			FP	FCS2151-FP-5V
		0-10V	FD	FCS2151-FD-10V
			FP	FCS2151-FP-10V
		4-20mA	FD	FCS2151-FD-420E
			FD	FCS2151-FD-420T
			FP	FCS2151-FP-420E
			FP	FCS2151-FP-420T