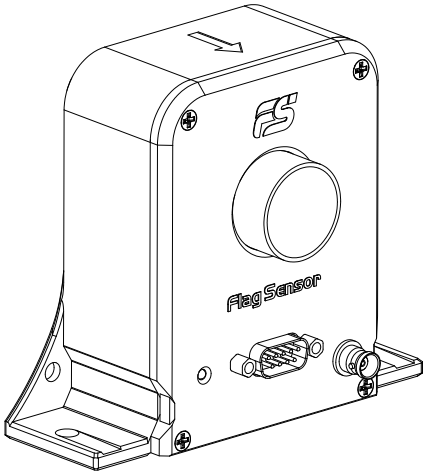
Features

High precision
Ultra stable zero flux technology
Reliable and consistent performance
Ruggedized design
9-pin D-Sub male connector
Standard BNC output connector



Advantages

Nominal measuring current up to 600A
DC and AC measurement
±0.01% accuracy
DC-300kHz bandwidth
Low noise

Applications

EV and new energy test bench
Control stable power supply
Precision current measuring
Power analysis

Description

ZFxxxU-xxV is a high precision DC current transducer that can continuously measure DC current up to ±600A. In addition, ZFxxxU-xxV also can measure AC current. This current transducer consists of two parts, one is the zero flux current transducer and the other is the voltage output module. ZFxxxU-xxV measures current values of conductor, outputs the corresponding voltage with a fixed ratio. ZFxxxU-xxV has many advantages, such as small size, high precision, and low output noise.

Specifications

Electrical				
Parameter	**Test conditions**	**Minimum**	**Typical values**	**Maximum**
Accuracy	@ 25°C		±0.01% of range	
Linearity error				10ppm
Small signal bandwidth(-3dB)	1% of I_{PN}		300kHz	
Response time				2.5us
Output offset voltage	@ 25°C	-0.01mV		0.01mV
Offset drift				3uV/K
Offset changes with time changes				0.2uV/month
Offset changes with supply voltage changes				0.4uV/V
Output noise(reference to secondary)				$20uV_{PP}$
Power supply voltage			±15V	
Power dissipation		10W		

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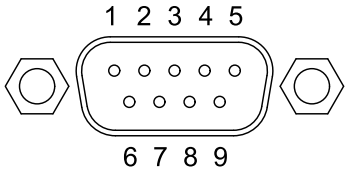
Typical ranges of ZFxxxU-xxV (other ranges and output voltage can be made on demand)						
Nominal primary DC current	±100A	±200A	±300A	±400A	±500A	±600A
Nominal primary AC current (RMS)	70A	141A	212A	282A	353A	424A
Rated output voltage(standard type)	±10V	±10V	±10V	±10V	±10V	±10V

Insulation parameter	
Primary and secondary insulation voltage (1min)	±5kV

Environmental and mechanical characteristics	
Operation temperature	-40°C ~ 85°C
Storage temperature	-40°C ~85°C
Weight	600g
Hot swapping	Not supported
Output valid indicator	LED (pure green)

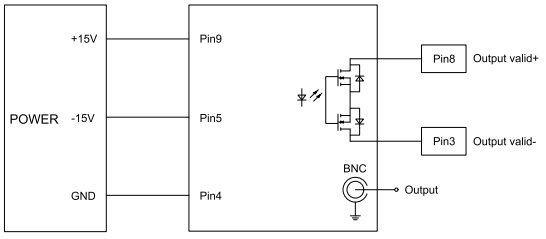
D-Sub Interface



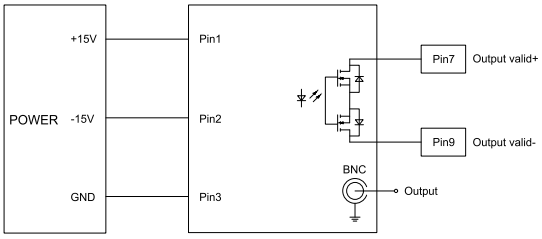
D-sub-9 Connector Male Pinout

Type A (default)									
Pin number	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	Pin9
definition	0V	NC	Output Valid-	0V	-15V	NC	NC	Output Valid+	+15V

Type B (on request)									
Pin number	Pin1	Pin2	Pin3	Pin4	Pin5	Pin6	Pin7	Pin8	Pin9
definition	+15V	-15V	0V	NC	NC	NC	Output Valid+	NC	Output Valid-



Type A (default)



Type B (on request)

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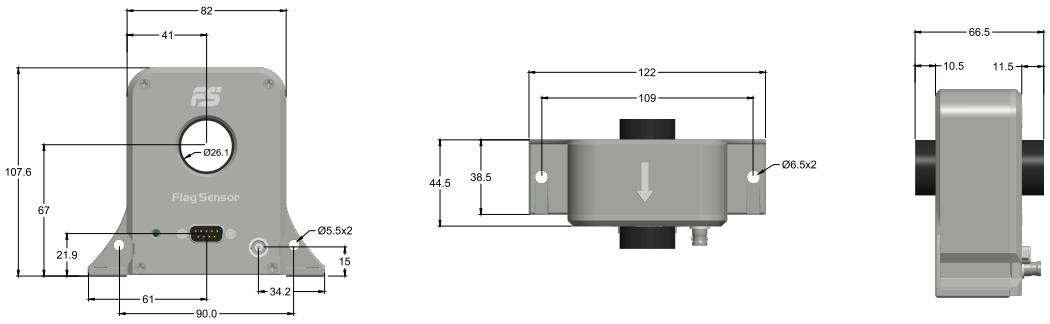
Testing Setup

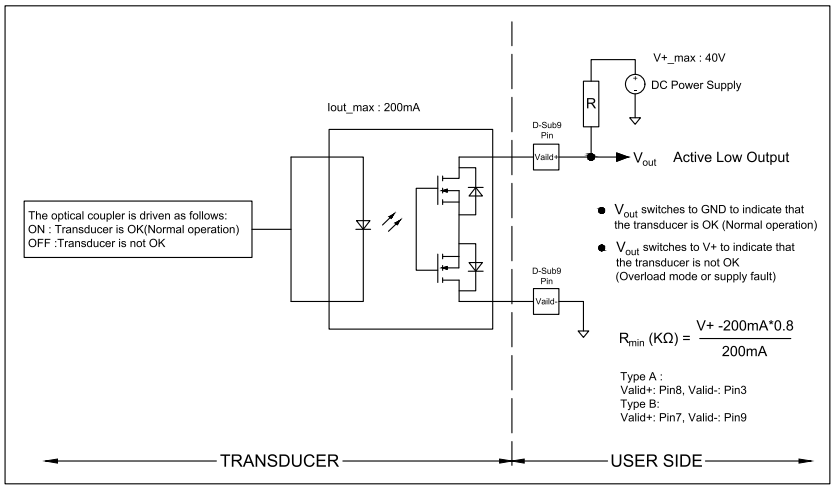
1. Connect the output voltage to the DAQ/instrument, the ground must be well grounded. The transducer status line is connected to the detection device.
2. Connect DC linear power supply to power it on.
3. The tested current conductor passes through the aperture of transducer, make sure the tested current is off before connecting. Positive current direction identified by an arrow on the top of housing.
4. Turn the tested current on.

Disassemble

Ensure that the tested current source is turned off, then remove the tested current wire. Disconnect the transducer from power, and remove the output and grounding wires.

Dimensions (in mm)





ransducer status table		
Value of Vout	Status of LED	Status of transducer
<0.2V	on	operate normally
V+	off	operate abnormally

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Ordering Code

Product name	Output voltage
ZFxxxU-xxV	±10V or customized

E.g. **ZF600U-1V** (600: the nominal primary DC current is 600A, 1V: rated output voltage is ±1V.)
If you have queries regarding the ZFxxxU-xxV or require specifications outside standard ranges, please do not hesitate to contact us.

CAUTION

Do not connect or disconnect sensor or test leads in operation.
To avoid fire or shock hazard, observe all ratings and markings on the product carefully.
If you suspect there is damage to this product, have it inspected by qualified service personnel.
Do not touch exposed connections and components in operation.
Do not operate in wet/damp conditions.
Do not operate in an explosive atmosphere.
Keep product surfaces clean and dry.

Warning

The service instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety contents prior to performing service.

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