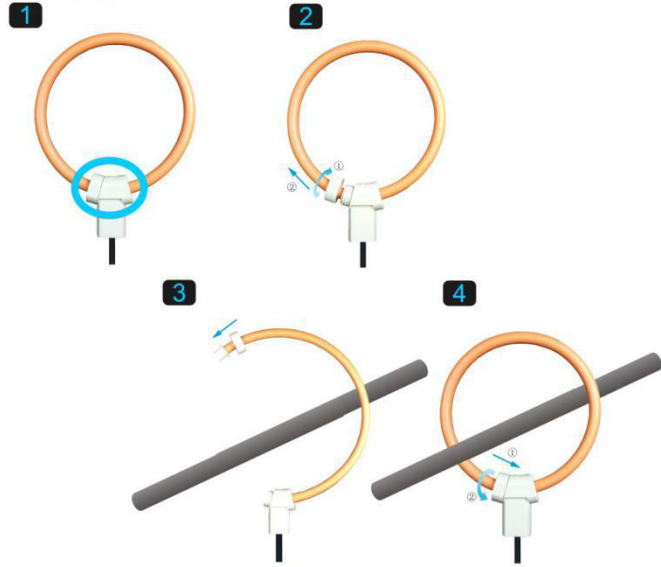




How to use



RFST

Ø8 Flexible Rogowski coil

- High linearity from 1A to 100kA
- Wide dynamic range
- Very useful with large size or awkward shaped conductors or in places with limited access
- No danger from open-circuited secondary
- Not damaged by large overloads
- Non-intrusive, no power drawn from the main
- Measurement uniformity at any position of the conductor inside the coil
- Excellent degree of rejection to the external current conductor

Advantage

- Calibrated to 0.5%
- 8mm section easy to install
- Two layers shielded
- Lower zero drift down to 0.1mV

Related Products

S1 D1 S9 SW A01 A05 ME631 ME432

Applications

- Measuring devices, lab instrumentation
- Power monitoring & control systems
- DC ripple measurement
- Harmonics and transients monitoring
- Power meter, Power analyzer sensor

Specification

MODEL	RFST-50-85	RFST-100-85	RFST-150-85	RFST-240-50
Coil length	200mm	350mm	510mm	800mm
Window size	50mm	100mm	150mm	240mm
Weight	110g	120g	130g	150g
Reference Rated current	600A	1000A	3000A	6000A
Ratio	Calibrated	85mV/kA@50Hz/100mV/kA@50Hz		50mV/kA@50Hz
	Uncalibrated	110mV/kA@50Hz		
Read Accuracy	Calibrated <0.5% (central position, 25°C) Uncalibrated < 5% tolerance (central position, 25°C)			
Maximum current measurable	100kA			
Coil Resistance	from 100 to 250 Ω			
Coil Section	8mm			
Lead length	2meter			
Temperature	Uncalibrated 200ppm/C			
	Calibrated 400ppm/C			
Position Error	± 1% maximum			
Output on 0A (zero drift)	≤0.1mV			
Phase error	≤0.5°			
Linearity	±0.2% of reading			
Bandwidth	1Hz to 100kHz(-3dB)			
Operating temperature	-30°C to 80°C			
Storage temperature	-40°C to 90°C			
Other requirements, please contact us to Email				



Position sensitivity

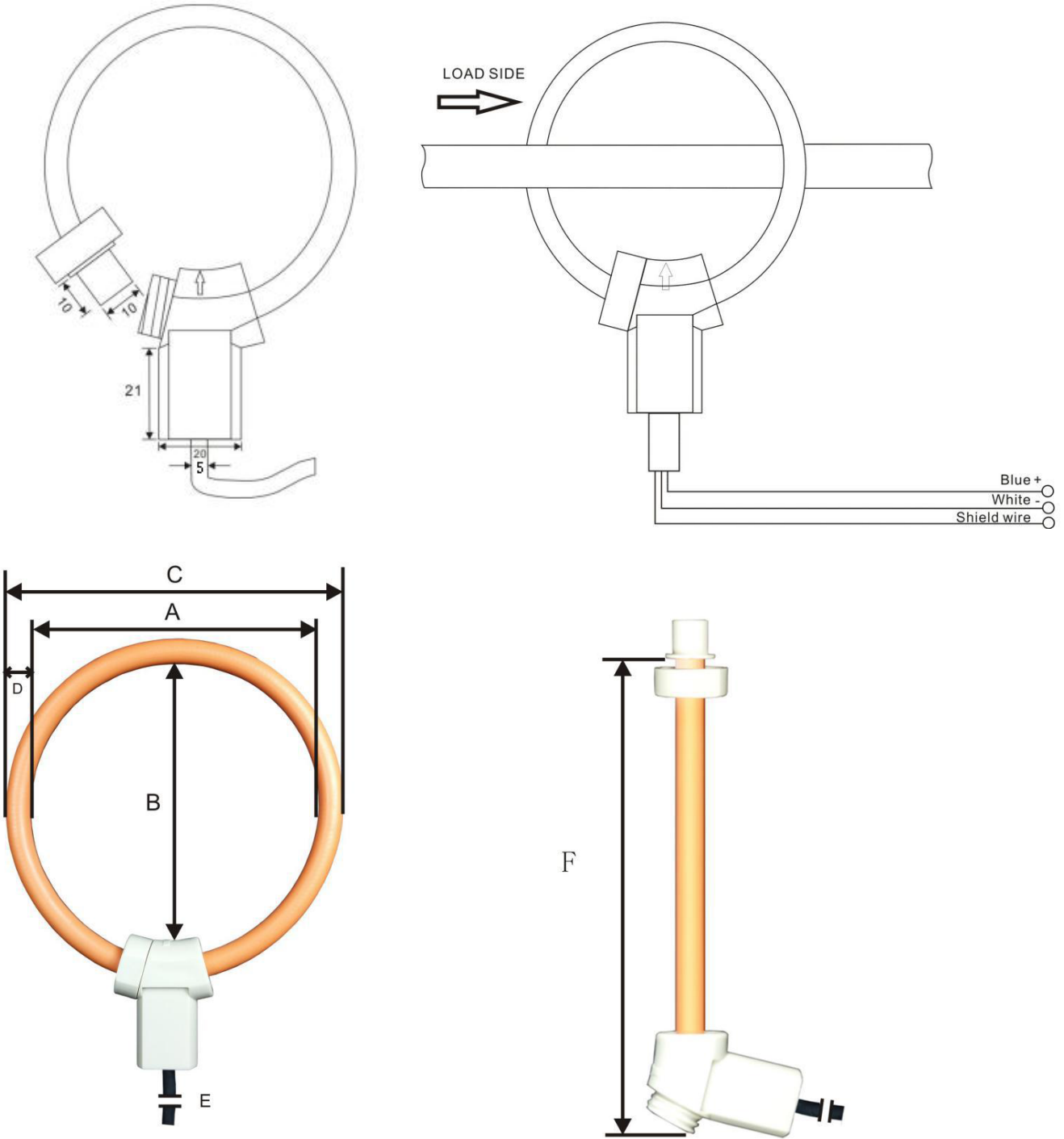
Conductor Position	Typical Error(%)
● Central in the rogowski loop	0.2%
● Adjacent to the inside coil edge	<0.8%
● Adjacent to the clip together mechanism	<1%

Materials

Coil & cable	Thermoplastic rubber flame retardant UL 94 V-0 rated
Couplings	PA6 UL 94 V-O rated
Color(coil)	Black, Yellow, Red, Green, Blue
Shielded	100% coil, 100% output cable

Safety

Certifications	CE marked
	Complies with EMC EN 61326-1 2006
	IP67
Voltage insulation	Coil: 3000V
	Signal cable:1000V
Safety	1000V CATIII ,600V CATIV



Dimensions tolerance:
A,B,C,F: ±5mm, D: ±0.2mm, E: ±10mm

Dimensions(mm)	RFST-50-85	RFST-100-85	RFST-150-85	RFST-240-85
A.Windows size A	50	105	155	245
B.Windows size B	60	100	150	240
C.Coil O.D.	66	121	171	261
D.Coil section	8			
E.Lead Cable Total Length	2000			
F:Coil length	200	350	510	800

Safety and warning notes

In order to guarantee safe operation of the transducer and to be able to make proper use of all features and functions, please read these instructions thoroughly! Safe operation can only be guaranteed if the transducer is used for the purpose it has been designed for and within the limits of the technical specifications. Ensure you get up-to-date technical information that can be found in the latest associated datasheet under www.poweruc.pl

Caution! Risk of danger

Ignoring the warnings can lead to serious injury and/or cause damage!

The electric measuring transducer may only be installed and put into operation by qualified personnel that have received an appropriate training. The corresponding national regulations shall be observed during installation and operation of the transducer and any electrical conductor. The transducer shall be used in electric/electronic equipment the respect to applicable standards and safety requirements and in accordance with all the related systems and components manufacturers' operating instructions.

Caution! Risk of electrical shock

When operating the transducer, certain parts of the module may carry hazardous live voltage (e.g. primary conductor). The user shall ensure to take all measures necessary to protect against electrical shock. The transducer is a build-in device containing conducting parts that shall not be accessible after installation. A protective enclosure or additional insulation barrier may be necessary. 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.

Safe and trouble-free operation of this transducer can only be guaranteed if transport, storage and installation are carried out correctly and operation and maintenance are carried out with care.

WARNING!

Do not stress the coil by applying any kind of mechanical force (ie. twisting, puncturing, excessive pressure, tight bending, etc.) which will dramatically degrade the device's accuracy.

Order code

Coil:

Coil Model	Coil length (mm)	Output ratio and tolerance	Signal cable length
Code:RFST (without integrator)	Code:200 (Typical rated 500A) Code:350 (Typical rated 1500A)	Code:105 105mV/kA@50Hz±5%	Code:-2m Code:-5m Code:-10m Code:-20m
		Code:100 100mV/kA@50Hz±0.5%	
	Code:510 (Typical rated 3kA)	Code:95 95mV/kA@50Hz±5%	
		Code:85 85mV/kA@50Hz±0.5%	
	Code:800 (Typical rated 10kA)	Code:50 50mV/kA@50Hz±5%	
		Code:30 30mV/kA@50Hz±0.5%	
RFSY	Code:16 (Typical rated 100A) Code:24 (Typical rated 300A) Code:36 (Typical rated 600A)	Code:50 50mV/kA@50Hz±0.5%	Code:-2m Code:-5m Code:-10m Code:-20m
		Code:60 60mV/kA@50Hz±5%	
RFSZ	Code:100 (Typical rated 1kA) Code:150 (Typical rated 3kA) Code:200 (Typical rated 6kA)	Code:105 105mV/kA@50Hz±5%	Code:-2m Code:-5m Code:-10m Code:-20m
		Code:100 100mV/kA@50Hz±0.5%	
Other requirement could be OEM			

Integrator:

Integrator	Output form	Output value	Rated current	Power supply
Code:D1 (DIN-RAIL integrator)	Code: .1 (AC voltage output) Code: .2 (DC voltage output)	Code: -333 (333mV) Code: -1 (1V) Code: -3 (3V) Code: -5 (5V)	Code: -500A Code: -1kA Code: -3kA Code: -10kA	Code: -12 (12V DC) Code: -24 (24V DC)
	Code: .3 (4-20mA output)	N/A		
Code:S9 (mini integrator)	Code: .1 (AC voltage output) Code: .2 (DC voltage output)	Code: -333 (333mV) Code: -1 (1V) Code: -3 (3V)	Code: -500A Code: -1kA Code: -3kA Code: -10kA	Code: -12 (6-12V DC) Code: -24 (24V DC)
Code:S1 (high accuracy integrator)	Code: .1 (AC voltage output) Code: .2 (DC voltage output) Code: .3 (4-20mA output)	Code: -333 (333mV) Code: -1 (1V) Code: -3 (3V) Code: -10 (10V)	Code: -500A Code: -1kA Code: -3kA Code: -10kA	Code: -12 (4-12V DC) Code: -24 (24V DC)
Code:TP (three phase integrator)	Code: .1 (AC voltage output) Code: .2 (DC voltage output)	Code: -333 (333mV) Code: -1 (1V) Code: -3 (3V) Code: -10 (10V)	Code: -500A Code: -1kA Code: -3kA Code: -10kA	Code: -12 (4-12V DC) Code: -24 (24V DC)
Code:A01 (1A output integrator)	N/A(0-1A)	N/A	Code: -500A Code: -1kA Code: -3kA Code: -10kA	N/A(85-265V AC DC)
Code:A05 (5A output integrator)	N/A(0-5A)	N/A	Code: -500A Code: -1kA Code: -3kA Code: -10kA	N/A(85-265V AC DC)
Code:SW (welding integrator)	N/A(0-10VDC)	N/A	Code: -10kA Code: -50kA Code: -100kA Code: -500kA	Code: -12 (4-12V DC) Code: -24 (24V DC)
Code:HF (high frequency integrator)	N/A(0-10VAC peak)	N/A	Code: -1kA (1kA/1V) Code: -10kA (10kA/1V)	N/A(4-12V DC)
Code:M2 (Integrator module)	N/A(0-5VAC peak)	Code: -333 (333mV) Code: -1 (1V)	Code: -100A Code: -500A Code: -1kA Code: -3kA	Code: -3.3 (±3.3V DC) Code: -5 (±5V DC)
Other requirement could be OEM				

Final Code=Integrator+Output form+Output value+Rated current+Power supply

For example:

D1.1-1-500A-12 is D1 integrator,AC voltage output,500A rated,output 1V,power supply 12V DC

A01-1kA is A01 integrator,rated 1kA,output 1A,power supply 85-265V AC DC