Rogowski Coil Current Sensor with 333mV Output



- **Flexible split-core design** for convenient installation around large conductors and busbars
- Rated current options from **300A to 3000A**
- Standard **333mV AC output** for compatible PLANET smart power meters
- **Less than 1% typical accuracy** from 20% to 120% of rated current
- **No magnetic saturation, open-circuit danger or overload danger**
- Wide **1Hz to 100kHz bandwidth** and **IP65-rated coil**

Flexible High-current Measurement with Rogowski Coil Sensors

The PLANET RC Series Rogowski coil current sensors combine a flexible split-core coil with a compact integrator to provide reliable AC current measurement for high-current applications. Available with rated current options from **300A to 3000A** and a standard **333mV AC output**, the series is compatible with PLANET smart power meters featuring a Rogowski coil input. Its flexible construction simplifies installation around large conductors or busbars and in space-limited electrical panels, **while its wide dynamic current range, resistance to magnetic saturation and IP65-rated coil** make it suitable for power monitoring, industrial equipment, electrical furnaces and distributed energy measurement systems.

Applications

Applying Rogowski Coil Sensors to High-current Power Monitoring

The PLANET RC Series Rogowski coil current sensors can be connected to PLANET smart power meters with a **333mV Rogowski coil input**, including the SPM-D01-R and SPM-D05/D10 Series. Their flexible coil design enables convenient installation around large conductors and busbars where conventional rigid current transformers may be difficult to install. With rated current options from **300A to 3000A**, the series is well suited for monitoring electrical furnaces, industrial machinery, main distribution feeders and other high-current equipment in energy management and power-monitoring applications.

Specifications

Model	RC-300A-395	RC-500A-395	RC-800A-525	RC-1000A-525
Hardware Specifications				
Sensor Type	Flexible Rogowski coil with integrator			
Primary Rated Current	300A	500A	800A	1000A
Rated Output	333mV RMS			
Accuracy	Less than 1% typical at 20% to 120% of rated current, average conductor position at 25 degrees C			
Linearity Error	+/-0.2% of reading at 20% to 100% of range			
Phase Error	0.5 degree maximum			
Bandwidth	1Hz to 100kHz (-3dB)			
Power Requirements	6 to 12V DC			
Coil Length	395mm		525mm	
Window Size (A x B)	135 x 100mm		165 x 150mm	
Coil Outside Diameter	151mm		181mm	
Coil Diameter	8mm			
Lead Length	2m			
Integrator Dimensions (W x D x H)	27 x 47.5 x 17mm			
Coil and Cable Material	UL 94 V-0 flame-retardant thermoplastic rubber			
Locking Connector Material	ABS and PC			
Shielding	100% coil and 100% output cable shielding			
Protection Rating	IP65			
Environmental Specifications				
Operating Temperature	-30 to 80 degrees C			
Safety and Regulatory Compliance				
EMC	EN 61326-1:2006			
Output Cable Insulation Voltage	3000V			
Dielectric Strength	1000V			
Measurement Category	1000V CAT III / 600V CAT IV			

Model	RC-1500A-525	RC-2000A-525	RC-3000A-525
Hardware Specifications			
Sensor Type	Flexible Rogowski coil with integrator		
Primary Rated Current	1500A	2000A	3000A
Rated Output	333mV RMS		
Accuracy	Less than 1% typical at 20% to 120% of rated current, average conductor position at 25 degrees C		
Linearity Error	+/-0.2% of reading at 20% to 100% of range		
Phase Error	0.5 degree maximum		
Bandwidth	1Hz to 100kHz (-3dB)		
Power Requirements	6 to 12V DC		
Coil Length	525mm		
Window Size (A x B)	165 x 150mm		
Coil Outside Diameter	181mm		
Coil Diameter	8mm		
Lead Length	2m		
Integrator Dimensions (W x D x H)	27 x 47.5 x 17mm		
Coil and Cable Material	UL 94 V-0 flame-retardant thermoplastic rubber		
Locking Connector Material	ABS and PC		
Shielding	100% coil and 100% output cable shielding		
Protection Rating	IP65		
Environmental Specifications			
Operating Temperature	-30 to 80 degrees C		
Safety and Regulatory Compliance			
EMC	EN 61326-1:2006		
Output Cable Insulation Voltage	3000V		
Dielectric Strength	1000V		
Measurement Category	1000V CAT III / 600V CAT IV		

Ordering Information

RC-300A-395	300A Rogowski Coil Current Sensor with 333mV Output
RC-500A-395	500A Rogowski Coil Current Sensor with 333mV Output
RC-800A-525	800A Rogowski Coil Current Sensor with 333mV Output
RC-1000A-525	1000A Rogowski Coil Current Sensor with 333mV Output
RC-1500A-525	1500A Rogowski Coil Current Sensor with 333mV Output
RC-2000A-525	2000A Rogowski Coil Current Sensor with 333mV Output
RC-3000A-525	3000A Rogowski Coil Current Sensor with 333mV Output

Related Products

SPM-D01-R	DIN-rail Single-circuit Modbus Smart Power Meter with Rogowski Coil Input
SPM-D01-M	DIN-rail Single-circuit Modbus Smart Power Meter with 333mV CT Input
SPM-D05	DIN-rail 5-circuit Modbus Smart Power Meter
SPM-D05E	DIN-rail 5-circuit Modbus RTU/TCP Smart Power Meter
SPM-D10	DIN-rail 10-circuit Modbus Smart Power Meter
SPM-D10E	DIN-rail 10-circuit Modbus RTU/TCP Smart Power Meter
CT-60A-16	60A Split-Core Current Transformer with 333mV Output
CT-100A-16	100A Split-Core Current Transformer with 333mV Output
CT-200A-24	200A Split-Core Current Transformer with 333mV Output
CT-400A-35	400A Split-Core Current Transformer with 333mV Output
CT-600A-35	600A Split-Core Current Transformer with 333mV Output

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