

⇒ Highlights

PP Patent Protection

- Accuracy up to 0.2 % in amplitude and 0.05 ° in phase
- No additional error for wire position
- Symmetric flexible shielding PP for excellent suppression of strange electric fields
- Symmetric sensor coil PP for excellent suppression of strange magnetic fields
- Low noise, dual gain, high CMRR amplifier with precision integrator PP
- Low output impedance
- Super flexible sensor cable Ø 6 mm
- Application tailored PP sensor cable sensitivity and frequency range (*optional*)

⇒ Description

Precision Flexible AC Current Probes SymmProFlex® FCP 2x21 are based on Rogowski principle designed to measure alternating current.

Current Probes SymmProFlex® FCP 2x21 series can be used as AC current sensors for multimeters, scopemeters, current and power measuring apparatus.



SymmProFlex® FCP 2321C

⇒ Available Models

Model	Phases	Class	Sensor Cable
FCP 2121C	1	0.2	Ø 6 mm
FCP 2121D	1	0.5	Ø 6 mm
FCP 2121P	1	1.0	Ø 6 mm

Model	Phases	Class	Sensor Cable
FCP 2321C	3	0.2	Ø 6 mm
FCP 2321D	3	0.5	Ø 6 mm
FCP 2321P	3	1.0	Ø 6 mm

⇒ Technical Specification

General Parameters	
Basic Frequency	40 Hz .. 70 Hz
Working Frequency (3dB) *	20 Hz .. 50 kHz
Gain *	1 mV/A
Measuring Range * (crest factor <1.5 @ Basic Frequency)	1A .. 10 kA
Output Voltage Range	± 15 V (No load)
Max.Current vs Frequency	see Derating Chart below
Operating / Test Voltage <i>Sensor Cable except coupling area</i>	600 V / 2 kV
Operating / Test Voltage <i>Signal Cable and coupling area</i>	600 V / 2 kV
Output to Earth Voltage	30 V max.
Safety	EN 610010-1, 600V
EMC	EN 61326:1998
Load Resistance	≥1 kΩ
Operating Temperature	-20 .. +60 °C
Storage Temperature	-20 .. +60 °C
Weight of electronics	Approx. 50g
Size of electronics (L x W x H)	65 x 65 x 27mm
Power Supply	External Voltage Source 9 – 36 V DC **
Consumption	<1.5W
Output Connection	Terminal Blocks

Accuracy Specifications	FCP 2x21C	FCP 2x21D	FCP 2x21P
Gain error ***	<0.2 %	<0.5 %	<1 %
Phase error ***	<0.05 °	<0.1 °	<0.2 °
Influence of Current outside closed Sensor Cable	<0.1 %	<0.3 %	<0.5 %
Gain TC	<0.005 %/K	<0.01 %/K	
Phase TC	<0.001 °/K		
Differential nonlinearity	<0.01 %		
Output DC Offset	<0.2 mV		
Influence of Potential of adjacent conductor (@50Hz)	<1 µA/V		
Noise (0.1 Hz<f<10 Hz)	<300 mA		

Measuring Head Parameters	
Sensor Cable Length *	500 mm
Sensor Cable Diameter / Minimum Bend Radius	6 mm / 50 mm
Signal Cable Diameter	4 mm
Signal Cable Length *	1000 mm

Options
• Special Cable Lengths and/or Gain on request

* Optional Customized Specification

** Power Supply should be Current limited for accidental polarity reversal / overvoltage to < 0.3 A

*** Basic Frequency Range @ 23 °C, current 0.002 * I_{max} to I_{max}

⇒ Ordering Information

p ... class : **C** (=0.2%/0.05°),
D (=0.5%/0.15°) or
P (=1%/0.3°)

SeCL sensor cable length [mm]

SiCL signal cable length [mm]

MaxCmaximal current [A]
(default: 6000A)

Default configuration:

FCP 2x21p /500 /1000 /6000

⇒ Derating Chart

