

Current transformer - PACT RCP-4000A-1A-D190



2904923

<https://www.phoenixcontact.com/pc/products/2904923>

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Set consisting of a 1 A measuring transducer and a Rogowski coil with signal line. Length of Rogowski coil: 600 mm, diameter: 190 mm. Length of signal line: 3 m. The Rogowski coil measures the AC current of busbars and power lines.



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Commercial Data

Item number	2904923
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	CK4A12
Catalog Page	Page 222 (C-5-2019)
GTIN	4046356900935
Weight per Piece (including packing)	483.7 g
Weight per Piece (excluding packing)	411.3 g
Customs tariff number	85437090
Country of origin	DE

Technical Data

Product properties

Product type	Current transformer
Insulation characteristics	
Overvoltage category	III (1000 V, to neutral conductor) IV (600 V, to neutral conductor)
Pollution degree	2
Insulation	double insulation

Electrical properties

Typical measuring error	< 1 %
Protective circuit	Surge protection; 33 V suppressor diode
Temperature coefficients	0.005 %/K (+10 °C ... +70 °C, both components have the same ambient temperature) 0.07 %/K (-20 °C ... +10 °C, both components have the same ambient temperature)

Measuring coil

Length of measuring coil	600 mm
Diameter of measuring coil	8.3 mm ±0.2 mm
Length of signal cable	3 m
Conductor structure signal line	2x 0.22 mm (Signal (tinned)) 1x 0.22 mm (Shielding (tinned))
Insulation	double insulation
Rated insulation voltage	1000 V AC (rms CAT III) 600 V AC (rms CAT IV)
Test voltage	10.45 kV (DC / 1 min.)
Basic accuracy	<± 0.2 %

Measuring transducers

Linearity error	< 0.5 % (From the range end value)
Maximum transmission error	≤ 0.5 % (From the range end value)
Frequency range	45 Hz ... 65 Hz
Max. detectable harmonics	< 2 kHz
Current consumption	< 190 mA (at 19.2 V)
Test voltage	1.5 kV AC (Supply/input and output: 50 Hz, 1 min)

General

Can be calibrated	no
Class	1
Accuracy class	1
Converter type	Rogowski coil and 1 A measuring transducer

Supply: Measuring transducers

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Nominal supply voltage	24 V DC -20 % ... +25 %
Nominal supply voltage range	19.2 V DC ... 30 V DC
Max. current consumption	190 mA
Power consumption	4 W

Input data

Frequency

Designation	Measuring coil
Frequency measuring range	40 Hz ... 20000 Hz
Position error	<± 0.1 % (typical)
Linearity error	< 0.1 %

Signal

Input signal (at 50 Hz)	100 mV (1000 A)
Curve type	Sine
Input impedance	27 kΩ (smallest measuring range)

Current transformers

Configurable/programmable	Via DIP switches
Rated power	1.5 VA
Primary rated current I_{pn}	0 A AC ... 100 A AC
	0 A AC ... 250 A AC
	0 A AC ... 400 A AC
	0 A AC ... 630 A AC
	0 A AC ... 1000 A AC
	0 A AC ... 1500 A AC
	0 A AC ... 2000 A AC
	0 A AC ... 4000 A AC
Phase angle	< 1 °
Can be calibrated	no
Class	1
Accuracy class	1
Converter type	Rogowski coil and 1 A measuring transducer

Output data

Signal

Designation	Measuring coil
Output signal (at 50 Hz)	100 mV (no load, at 1,000 A)
Output voltage (in no-load operation)	$V_{OUT} = M \cdot dI/dt$
Output voltage (sinusoidal, in no-load operation)	100 mV ($V_{OUT} = 2 \cdot \pi \cdot M \cdot f \cdot I$ (M = 0.318 μH; example: At 50 Hz; I = 1,000 A))
Accuracy class	< 1

Signal

Designation	Measuring transducer
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Current output signal	0 A AC ... 1 A AC
Rated power	1.5 VA
Load	0 Ω ... 1.5 Ω
Max. distances for copper cables at $P_{N \max}$	32 m (0.75 mm ² (AWG 20))
	64 m (1.5 mm ² (AWG 16))
	107 m (2.5 mm ² (AWG 14))

Connection data

Measuring transducer side

Connection method	Screw connection
Stripping length	7 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14
Torque	0.5 Nm ... 0.6 Nm

LED signaling

Operating voltage display	Green LED
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Dimensions

Width	22.5 mm
Height	85 mm
Depth	70.4 mm

Material specifications

Coil material	Elastollan
Housing material	PC
	Polyamide

Environmental and real-life conditions

Ambient conditions

Measuring coil degree of protection	IP67 (not assessed by UL)
Measuring transducer degree of protection	IP20
Ambient temperature (operation)	-30 °C ... 80 °C (Measuring coil)
	-20 °C ... 70 °C (Measuring transducer)
Ambient temperature (storage/transport)	-40 °C ... 80 °C (Measuring coil)
	-25 °C ... 85 °C (Measuring transducer)
Altitude	< 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

Approval data

CE

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Certificate	CE-compliant
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CE

Certificate	UKCA-compliant
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CE

Certificate	CMIM-compliant
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CE

Identification	UL 61010 Recognized
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Note	Measuring coil
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CE

Identification	UL 508 Listed
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Note	Measuring transducer
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EMC data

Electromagnetic compatibility	Conformance with EMC directive
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Noise emission	EN 61000-6-4
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Noise immunity	EN 61000-6-3
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Standards and regulations

Standards/regulations	IEC 61010-1
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	IEC 61010-2-032
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Mounting

Mounting type	DIN rail mounting
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Approvals



EAC

Approval ID: RU*DE*08.B.01187/19

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Classifications

ECLASS

ECLASS-9.0	27210902
ECLASS-10.0.1	27210902
ECLASS-11.0	27210902

ETIM

ETIM 8.0	EC002048
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UNSPSC

UNSPSC 21.0	39121000
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

Holder

Holder - PACT RCP-CLAMP - 2904895

<https://www.phoenixcontact.com/pc/products/2904895>



The optional holding device ensures the Rogowski coil is securely seated on busbars with a thickness of 10 ... 15 mm. During installation, the coil housing is pushed onto the flange of the holding device and snaps in automatically.

Holder

Holder - PACT RCP-CLAMP-5-10 - 2907888

<https://www.phoenixcontact.com/pc/products/2907888>



The optional holding device ensures the Rogowski coil is securely seated on busbars that are 5 ... 10 mm thick. During installation, the coil housing is pushed onto the flange of the holding device and snaps in automatically.

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