

# PACT RCP-4000A-1A-D140 - Current transformer



2904922

<https://www.phoenixcontact.com/us/products/2904922>

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Set consisting of one 1 A measuring transducer and one Rogowski coil with signal line. Length of Rogowski coil: 450 mm, diameter: 140 mm. Length of signal line: 3 m. The Rogowski coil measures the AC current of busbars and power lines.



## Commercial data

Item number	2904922
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C444
Product key	CMMA12
GTIN	4046356900959
Weight per piece (including packing)	312.2 g
Weight per piece (excluding packing)	390.8 g
Customs tariff number	85437090
Country of origin	DE

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## Set consists of

### PACT RCP-4000A-1A - Measuring transducer

2902990

<https://www.phoenixcontact.com/us/products/2902990>



This is an individual product; please order the complete set. The measuring transducer processes the mV signal of the upstream Rogowski coil. The measuring transducer has 8 current measuring ranges (100 A ... 4000 A AC) which can be set; max. output current of 1 A AC.

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### PACT RCP-D140 - Coil

2904891

<https://www.phoenixcontact.com/us/products/2904891>



450 mm long Rogowski coil. The measuring coil diameter when installed is 140 mm. The Rogowski coil is used for AC current measurement for busbars and power lines.

## Technical data

### Product properties

Product type	Current transformer
Product family	Rogowski coil and 1 A measuring transducer

### Insulation characteristics

Insulation	double insulation
Overvoltage category	III (1000 V, to neutral conductor)
	IV (600 V, to neutral conductor)
Pollution degree	2

### Electrical properties

Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
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

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 (60 s)
Accuracy class	0.2 (IEC 61869-10: A1)

### 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
Converter type	Rogowski coil and 1 A measuring transducer

### Supply: Measuring transducers

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

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Power consumption	4 W
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## Input data

### Frequency

Designation	Measuring coil
Frequency measuring range	40 Hz ... 20000 Hz

### Signal

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

### Current transformer

Configurable/programmable	Via DIP switches
Rated power	1.25 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
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))

### Signal

Designation	Measuring transducer
Current output signal	0 A AC ... 1 A AC
Rated power	1.25 VA
Load	0 Ω ... 1.25 Ω
Max. distances for copper cables at $P_{N \max}$	16 m (0.75 mm <sup>2</sup> (AWG 20))
	32 m (1.5 mm <sup>2</sup> (AWG 16))
	55 m (2.5 mm <sup>2</sup> (AWG 14))

## Connection data

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## Measuring transducer side

Connection method	Screw connection
Stripping length	7 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 14
Tightening torque	0.5 Nm ... 0.6 Nm

## Signaling

Operating voltage display	Green LED
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## Dimensions

### Item dimensions

Width	22.5 mm
Height	85 mm
Depth	70.4 mm

### Measuring coil

Length	450 mm
Diameter	8.3 mm ±0.2 mm

### Measuring coil when installed

Diameter	140 mm
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### Signal line

Length	3 m
Width	22.5 mm
Height	85 mm
Depth	70.4 mm

## Material specifications

Housing material	PC
	PA
Coil material	Elastollan

## Environmental and real-life conditions

### Ambient conditions

Measuring coil degree of protection	IP54 (not assessed by UL)
Measuring transducer degree of protection	IP20
Ambient temperature (operation) (Measuring coil)	-30 °C ... 80 °C (Measuring coil)
Ambient temperature (operation) (Measuring transducer)	-20 °C ... 70 °C (Measuring transducer)
Ambient temperature (storage/transport)	-40 °C ... 80 °C (Measuring coil)
	-25 °C ... 85 °C (Measuring transducer)

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Altitude	< 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

## Approvals

### CE

Certificate	CE-compliant
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### CMIM

Certificate	CMIM-compliant
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### UL, USA/Canada

Identification	UL 61010 Recognized
Note	Measuring coil

### UL, USA/Canada

Identification	UL 508 Listed
Note	Measuring transducer

## EMC data

Electromagnetic compatibility	Conformance with EMC directive
Noise immunity	EN 61000-6-3

### Noise emission

Standards/regulations	EN 61000-6-4
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## Standards and regulations

Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Standards/regulations	IEC 61010-2-030
	IEC 61869-10

## Mounting

Mounting type	DIN rail mounting
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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2904922>



**EAC**

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

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## Classifications

### ECLASS

ECLASS-13.0	27210902
ECLASS-15.0	27210902

### ETIM

ETIM 10.0	EC002048
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### UNSPSC

UNSPSC 21.0	39121000
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	217e3d38-35bd-4709-8dbc-0924b999b109

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