

PACT RCP-4000A-1A-D140-10M - Current transformer



1033483

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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: 10 m. The Rogowski coil measures the AC current of busbars and power lines.



Commercial data

Item number	1033483
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CK4A12
Catalog page	Page 222 (C-5-2019)
GTIN	4055626539218
Weight per piece (including packing)	598.5 g
Weight per piece (excluding packing)	440.3 g
Customs tariff number	85437090
Country of origin	DE

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Set consists of

PACT RCP-4000A-1A - Measuring transducer

2902990

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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.

PACT RCP-D140-10M - Coil

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Rogowski coil, The Rogowski coil measures the AC current of rails and power lines.

Technical data

Product properties

Product type	Current transformer
Data management status	
Article revision	06
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)
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 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
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	1.25 VA
Load	0 Ω ... 1.25 Ω
Max. distances for copper cables at $P_{N \max}$	16 m (0.75 mm ² (AWG 20))
	32 m (1.5 mm ² (AWG 16))
	55 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 rigid	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
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 $\pm$ 0.2 mm

Measuring coil when installed

Diameter	140 mm
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Signal line

Length	10 m
Width	22.5 mm
Height	85 mm
Depth	70.4 mm

Material specifications

Housing material	PC
	Polyamide
Coil material	Elastollan

Environmental and real-life conditions

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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)

Approvals

CE

Certificate	CE-compliant
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UKCA

Certificate	UKCA-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

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

Standards and regulations

Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Standards/regulations	IEC 61010-1
	IEC 61010-2-032

Mounting

Mounting type	DIN rail mounting
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Approvals

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EAC

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

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Classifications

ECLASS

ECLASS-11.0	27210902
ECLASS-13.0	27210902
ECLASS-12.0	27210902

ETIM

ETIM 9.0	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.)	Diboron trioxide(CAS: 1303-86-2)
	Lead monoxide (lead oxide)(CAS: 1317-36-8)
	Lead(CAS: 7439-92-1)
SCIP	2d360e54-0a05-498a-a03f-178dea0e04db

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Accessories

PACT RCP-CLAMP - Holder

2904895

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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.

PACT RCP-CLAMP-5-10 - Holder

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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