

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



2906232

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Set consisting of a 4-way signal conditioner with screw connection technology and a Rogowski coil 450 mm in length/140 mm in diameter for AC current measurement on busbars and power lines.

The signal conditioner outputs 8 different standard signals on the output side and has one switching output.

## Commercial data

Item number	2906232
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C444
Product key	CK4A12
Catalog page	Page 223 (C-5-2019)
GTIN	4055626048291
Weight per piece (including packing)	422.45 g
Weight per piece (excluding packing)	422.45 g
Customs tariff number	85437090
Country of origin	DE

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## Technical data

### Product properties

Product type	Current transformer
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### Insulation characteristics

Overvoltage category	II
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
Step response (0–99%)	110 ms
Rated insulation voltage	300 V

### 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

Maximum transmission error	≤ 0.5 % (From the range end value)
Frequency range	16 Hz ... 1000 Hz
Test voltage	3 kV (50 Hz, 1 min.)

### General

Can be calibrated	no
Class	1
Accuracy class	1
Converter type	Rogowski coil and 4-way signal conditioner

### Supply: Measuring transducers

Nominal supply voltage	24 V DC
Nominal supply voltage range	9.6 V DC ... 30 V DC
Power consumption	≤ 1 W (at I <sub>OUT</sub> = 20 mA, 9.6 V DC, 600 Ω load)

## Input data

### Frequency

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

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Position error	<± 0.1 % (typical)
Linearity error	< 0.1 %

## Signal

Input signal (at 50 Hz)	100 mV (1000 A)
Curve type	Sine
Input impedance	> 100 kΩ

## Current transformers

Configurable/programmable	Via DIP switches
Rated frequency: Standard converter	40 Hz ... 20000 Hz
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
Can be calibrated	no
Class	1
Accuracy class	1
Converter type	Rogowski coil and 4-way signal conditioner

## Output data

### Switching: Transistor

Number of outputs	1
Contact switching type	1 N/O contact
Minimum switching voltage	1 V
Maximum switching voltage	30 V DC
Min. switching current	100 μA
Max. switching current	100 mA (at 30 V)

### 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
Configurable/programmable	Yes
Voltage output signal	0 V ... 10 V (via DIP switch)
	2 V ... 10 V (via DIP switch)

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	0 V ... 5 V (via DIP switch)
	1 V ... 5 V (via DIP switch)
	0 V ... 10.5 V (can be set via software)
Max. voltage output signal	≈  V
Current output signal	0 mA ... 20 mA (via DIP switch)
	4 mA ... 20 mA (via DIP switch)
	0 mA ... 10 mA (via DIP switch)
	2 mA ... 10 mA (via DIP switch)
	0 mA ... 21 mA (can be set via software)
Max. current output signal	24.6 mA
Load/output load voltage output	≥ 10 kΩ
Load/output load current output	≤ 600 Ω (20 mA)
Ripple	< 20 mV <sub>PP</sub>
	< 20 mV <sub>PP</sub>

## Connection data

### Measuring transducer side

Connection method	Screw connection
Stripping length	10 mm
Screw thread	M3
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	26 ... 16
Tightening torque	0.5 Nm ... 0.6 Nm

## Dimensions

### Item dimensions

Width	6.2 mm
Height	110.5 mm
Depth	120.5 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	6.2 mm
Height	110.5 mm
Depth	120.5 mm

## Material specifications

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Coil material	Elastollan
Housing material	PC
	PBT

## 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)
	-40 °C ... 70 °C (Measuring transducer)
Ambient temperature (storage/transport)	-40 °C ... 80 °C (Measuring coil)
	-40 °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 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.
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

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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 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

### 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.

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### PACT RCP-CLAMP-5-10 - Holder

2907888

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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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