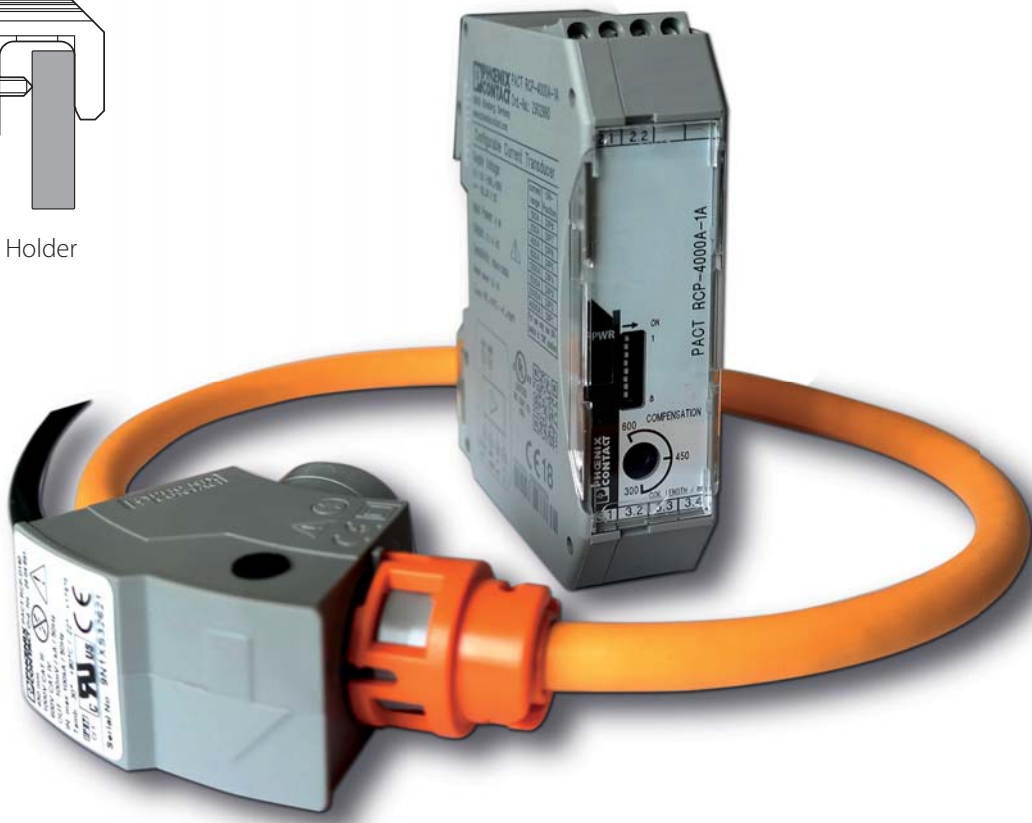


Rogowski Holder



## Rogowski current transformer 4000/1A Configurable current transformer for retrofitting

The Rogowski coil is used to measure AC current and is primarily intended for subsequent installation in existing plants - either on power rails or power cables.

Subsequent installation around the conductor is possible because you can separate out the measuring line of the Rogowski coil.

The device consists of two components.

The output signal of the Rogowski coil is directed to a measuring transducer that issues an AC current of max.

1 A with phase fidelity on the output.

With the measuring transducer, you can choose between eight current measurement ranges from 100 A AC to 4000 A AC. You can define the current measurement ranges using DIP switches.

The PACT RPC-CLAMP mounting device is available as an optional accessory.

You can use the measuring transducer in conjunction with the energy meters in the EMpro product range.

### Features

- Fast installation
- Short shutdown times
- Eight current measuring ranges
- Flexible measuring coil lengths of 300 mm, 450 mm, 600 mm
- Large bandwidth of 40 Hz ... 20,000 Hz
- Rated insulation voltage: 1000 V AC (rms CAT III), 600 V AC (rms CAT IV)

## Technical data

Input Measuring coil	
Frequency measuring range	40 Hz ... 20000 Hz
Position error	< 1 %
Linearity error	0,1 %

Signal output Measuring coil	
Output signal (at 50 Hz)	100 mV (no load, at 1,000 A)
Output voltage (in no-load operation)	$V_{OUT} = M * dl/dt$
Output voltage (sinusoidal, in no-load operation)	100 mV ( $V_{OUT} = 2 * \pi * M * f * I$ (M = 0,318 $\mu$ H; example: At 50 Hz; I = 1,000 A))

Measuring coil, signal cable	
Measuring coil 300 mm, signal cable 3 m	PACT RCP-4000A-1A-D95
Measuring coil 450 mm, signal cable 3 m	PACT RCP-4000A-1A-D140
Measuring coil 600 mm, signal cable 3 m	PACT RCP-4000A-1A-D190
Measuring coil 600 mm, signal cable 3 m	PACT RCP-4000A-1A-D190-3M-UV
Measuring coil 300 mm, signal cable 5 m	PACT RCP-4000A-1A-D95-5M
Measuring coil 300 mm, signal cable 10 m	PACT RCP-4000A-1A-D95-10M
Measuring coil 450 mm, signal cable 10 m	PACT RCP-4000A-1A-D140-10M
Measuring coil 600 mm, signal cable 10 m	PACT RCP-4000A-1A-D190-10M

General data, measuring coil	
Length of measuring coil	300 mm , 450 mm , 600 mm
Diameter of measuring coil	8,3 mm $\pm$ 0,2 mm
Conductor structure signal line	2x 0,22 mm (Signal (tinned)) 1x 0,22 mm (Shielding (tinned))
Max. measurement current	100 kA (50 Hz)
Coil material	Elastollan
Housing material	PC
Insulation	double insulation
Degree of pollution	2
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	< $\pm$ 0,21 %
Ambient temperature range Operation	-30 °C ... 80 °C
Ambient temperature range Storage/transport	-40 °C ... 80 °C

Input data Measuring transducers	
Measuring ranges (current)	100 A, 250 A, 400 A, 630 A, 1000 A, 1500 A, 2000 A, 4000 A
Configurable/programmable	Via DIP switches
Phase angle	< 1 °

Signal input Measuring transducers	
Input signal (at 50 Hz)	100 mV (1000 A)
Curve type	Sine
Input impedance	27 k $\Omega$ (smallest measuring range)

Signal output Measuring transducer	
Load	0 $\Omega$ ... 1,5 $\Omega$
Operating voltage display	Green LED
Max. current consumption	190 mA

Miscellaneous data for measuring transducer	
Nominal supply voltage	24 V DC -20 % ... +25 %
Nominal supply voltage range	19,2 V DC ... 30 V DC
Power consumption	4 W
Linearity error	< 0,5 % (From the range end value)
Maximum transmission error	$\leq$ 0,5 % (From the range end value)
Frequency range	45 Hz ... 65 Hz
Current consumption	< 190 mA (at 19,2 V)
Housing material	Polyamide
Degree of protection	IP20
Test voltage, input/output/supply	1,5 kV AC (Supply/input and output: 50 Hz, 1 min)
Overvoltage category	III (1,000 V, to neutral conductor) IV (600 V, to neutral conductor)
Degree of pollution	2
Dimensions W/H/D	22,50 mm / 70,40 mm / 85,00 mm
Ambient temperature range Operation	-20 °C ... 70 °C
Ambient temperature range Storage/transport	-25 °C ... 85 °C
Altitude	< 2000 m
Humidity non-condensing	5 % ... 95 %

System data (coil and measuring transducer)	
Temperature coefficients	0.005 %/K (+10°C ... +70°C; both components have the same ambient temperature)
Temperature coefficients	0.07 %/K (-20°C ... +10°C; both components have the same ambient temperature)
Typical measuring error	< 1 %

Approvals/conformities	
Standards/regulations Measuring coil	IEC 61010-1 IEC 61010-2-032
UL, USA / Canada	UL 508 Listed (Measuring transducers) UL 61010 Recognized (Measuring coil)

## Order table

Item-no.	Rogowskicoil and a measuring transducer	Primary current	Secondary current
19128	<b>PACT RCP-4000A-1A-D95</b> Length of measuring coil 300 mm, Ø 95 mm, Length of signal cable: 3000 mm	4000 A	1 A
19129	<b>PACT RCP-4000A-1A-D140</b> Length of measuring coil 450 mm, Ø 140 mm, Length of signal cable: 3000 mm	4000 A	1 A
19130	<b>PACT RCP-4000A-1A-D190</b> Length of measuring coil 600 mm, Ø 190 mm, Length of signal cable: 3000 mm	4000 A	1 A
23721	<b>PACT RCP-4000A-1A-D95-5M</b> Length of measuring coil 300 mm, Ø 95 mm, Length of signal cable: 5000 mm	4000 A	1 A
23722	<b>PACT RCP-4000A-1A-D95-10M</b> Length of measuring coil 300 mm, Ø 95 mm, Length of signal cable: 10000 mm	4000 A	1 A
23723	<b>PACT RCP-4000A-1A-D140-10M</b> Length of measuring coil 450 mm, Ø 140 mm, Length of signal cable: 10000 mm	4000 A	1 A
23028	<b>PACT RCP-4000A-1A-D190-10M</b> Length of measuring coil 600 mm, Ø 190 mm, Length of signal cable: 10000 mm	4000 A	1 A

## UV protection for permanent outdoor use

Set consisting of one 1 A measuring transducer and one UV-resistant Rogowski coil with signal line.

23724	<b>ACT RCP-4000A-1A-D190-3M-UV</b> Length of measuring coil 600 mm, Ø 190 mm, Length of signal cable: 3000 mm, one 1 A measuring transducer and one UV-resistant Rogowski coil with signal line	4000 A	1 A
-------	--	--------	-----

**Accessories:** The optional holding device ensures the Rogowski coil is securely seated on busbars. During installation, the coil housing is pushed onto the flange of the holding device and snaps in automatically

Holder	item-no..
for busbars with a thickness of 5 ... 10 mm	<b>23720</b>
for busbars with a thickness of 10 ... 15 mm	<b>19131</b>

