

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



### Key Commercial Data

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                 |
| GTIN         |  |
| GTIN         | 4055626539218                                                                        |

### Technical data

#### Dimensions

|        |         |
|--------|---------|
| Width  | 22.5 mm |
| Height | 85 mm   |
| Depth  | 70.4 mm |

#### Ambient conditions

|                                           |                                         |
|-------------------------------------------|-----------------------------------------|
| 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) |
| Maximum altitude                          | < 2000 m                                |
| Permissible humidity (operation)          | 5 % ... 95 % (non-condensing)           |
| Measuring coil degree of protection       | IP67 (not assessed by UL)               |
| Measuring transducer degree of protection | IP20                                    |

#### Measuring transducer supply

|                              |                         |
|------------------------------|-------------------------|
| 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                     |

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## Technical data

### Measuring coil input data

|                           |                    |
|---------------------------|--------------------|
| Frequency measuring range | 40 Hz ... 20000 Hz |
| Position error            | < 1 %              |
| Linearity error           | 0.1 %              |

### Measuring transducer input data

|                                                  |                                                     |
|--------------------------------------------------|-----------------------------------------------------|
| 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 °                                               |
| Rated power                                      | 1.5 VA                                              |
| Max. distances for copper cables at $P_{N \max}$ | 32 m (0.75 mm <sup>2</sup> (AWG 20))                |
|                                                  | 64 m (1.5 mm <sup>2</sup> (AWG 16))                 |
|                                                  | 107 m (2.5 mm <sup>2</sup> (AWG 14))                |

### Measuring transducer signal input

|                         |                                  |
|-------------------------|----------------------------------|
| Input signal (at 50 Hz) | 100 mV (1000 A)                  |
| Input impedance         | 27 kΩ (smallest measuring range) |

### Measuring coil signal output

|                                                   |                                                                                                          |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 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)) |

### Measuring transducer signal output

|                       |                |
|-----------------------|----------------|
| Current output signal | 0 A AC ... 1 A |
| Load                  | 0 Ω ... 1.5 Ω  |

### General data, measuring coil

|                                 |                                 |
|---------------------------------|---------------------------------|
| Length of measuring coil        | 450 mm                          |
| Diameter of measuring coil      | 8.3 mm ±0.2 mm                  |
| Length of signal cable          | 10000 mm                        |
| Conductor structure signal line | 2x 0.22 mm (Signal (tinned))    |
|                                 | 1x 0.22 mm (Shielding (tinned)) |
| Coil material                   | Elastollan                      |
| Housing material                | PC                              |
| 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                  | ≤± 0.21 %                       |
| UL, USA/Canada                  | UL 61010 Recognized             |

### General data for measuring transducer

|                 |                                    |
|-----------------|------------------------------------|
| Linearity error | < 0.5 % (From the range end value) |
|-----------------|------------------------------------|

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## Technical data

### General data for measuring transducer

|                            |                                                   |
|----------------------------|---------------------------------------------------|
| 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)                              |
| Housing material           | Polyamide                                         |
| Test voltage               | 1.5 kV AC (Supply/input and output: 50 Hz, 1 min) |
| UL, USA/Canada             | UL 508 Listed                                     |

### General data

|                          |                                                                                |
|--------------------------|--------------------------------------------------------------------------------|
| Standards/regulations    | IEC 61010-1                                                                    |
|                          | IEC 61010-2-032                                                                |
| Insulation               | double insulation                                                              |
| 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)  |
| Typical measuring error  | < 1 %                                                                          |

### Connection data

|                                  |                           |
|----------------------------------|---------------------------|
| Connection name                  | Measuring transducer side |
| Connection method                | Screw connection          |
| Stripping length                 | 7 mm                      |
| Screw thread                     | M3                        |
| Conductor cross section solid    | 0.2 mm² ... 2.5 mm²       |
| Conductor cross section flexible | 0.2 mm² ... 2.5 mm²       |
| Conductor cross section AWG      | 24 ... 14                 |
| Torque                           | 0.5 Nm ... 0.6 Nm         |

### Standards and Regulations

|                       |                                    |
|-----------------------|------------------------------------|
| Standards/regulations | IEC 61010-1                        |
|                       | IEC 61010-2-032                    |
| Insulation            | double insulation                  |
| Pollution degree      | 2                                  |
| Overvoltage category  | III (1000 V, to neutral conductor) |
|                       | IV (600 V, to neutral conductor)   |

### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

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## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27210902 |
| eCl@ss 4.0    | 27210900 |
| eCl@ss 4.1    | 27210900 |
| eCl@ss 5.0    | 27210900 |
| eCl@ss 5.1    | 27210900 |
| eCl@ss 6.0    | 27210900 |
| eCl@ss 7.0    | 27210902 |
| eCl@ss 8.0    | 27210902 |
| eCl@ss 9.0    | 27210902 |

### ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC002048 |
| ETIM 6.0 | EC002048 |
| ETIM 7.0 | EC002048 |

## Approvals

### Approvals

#### Approvals

#### EAC

#### Ex Approvals

### Approval details

|     |                                                                                     |                     |
|-----|-------------------------------------------------------------------------------------|---------------------|
| EAC |  | RU*DE*08.B.01187/19 |
|-----|-------------------------------------------------------------------------------------|---------------------|

## Accessories

### Accessories

#### Mounting material

#### Holder - PACT RCP-CLAMP - 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.

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### Accessories

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Holder - PACT RCP-CLAMP-5-10 - 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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