

## Current transformer - PACT RCP-4000A-1A-D140 - 2904922

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)

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.



RoHS

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 900959 |
| GTIN         | 4046356900959                                                                                           |

### Technical data

#### 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                     |

#### 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))                |

# Current transformer - PACT RCP-4000A-1A-D140 - 2904922

## Technical data

### 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          | 3000 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)                |
| 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) |
| Operating voltage display  | Green LED                                         |
| UL, USA/Canada             | UL 508 Listed                                     |

### General data

|                       |                   |
|-----------------------|-------------------|
| Standards/regulations | IEC 61010-1       |
|                       | IEC 61010-2-032   |
| Insulation            | double insulation |
| Degree of pollution   | 2                 |

# Current transformer - PACT RCP-4000A-1A-D140 - 2904922

## Technical data

### General data

|                          |                                                                                |
|--------------------------|--------------------------------------------------------------------------------|
| Overvoltage category     | III (1,000 V, to neutral conductor)                                            |
|                          | IV (600 V, to neutral conductor)                                               |
| 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 |
| Conductor cross section flexible min. | 0.2 mm²                   |
| Conductor cross section flexible max. | 2.5 mm²                   |
| Conductor cross section solid min.    | 0.2 mm²                   |
| Conductor cross section solid max.    | 2.5 mm²                   |
| Conductor cross section AWG min.      | 24                        |
| Conductor cross section AWG max.      | 14                        |
| Screw thread                          | M3                        |
| Connection method                     | Screw connection          |
| Stripping length                      | 7 mm                      |
| Torque                                | 0.5 Nm ... 0.6 Nm         |

### Dimensions

|        |          |
|--------|----------|
| Width  | 22.50 mm |
| Height | 85.00 mm |
| Depth  | 70.40 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                                |
| Measuring coil degree of protection       | IP67 (not assessed by UL)               |
| Measuring transducer degree of protection | IP20                                    |

### Standards and Regulations

|                       |                                     |
|-----------------------|-------------------------------------|
| Standards/regulations | IEC 61010-1                         |
|                       | IEC 61010-2-032                     |
| Insulation            | double insulation                   |
| Degree of pollution   | 2                                   |
| Overvoltage category  | III (1,000 V, to neutral conductor) |
|                       | IV (600 V, to neutral conductor)    |

### Environmental Product Compliance

## Current transformer - PACT RCP-4000A-1A-D140 - 2904922

### Technical data

#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Approvals

#### Approvals

#### Approvals

EAC

#### Ex Approvals

#### Approval details

|     |                                                                                     |                          |
|-----|-------------------------------------------------------------------------------------|--------------------------|
| EAC |  | RU C-<br>DE.A*30.B.01082 |
|-----|-------------------------------------------------------------------------------------|--------------------------|

Phoenix Contact 2018 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>