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
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)	448 g
Customs tariff number	85437090
Country of origin	DE

Technical data

Product properties

Product type	Current transformer

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_{OUT} = 20 mA, 9.6 V DC, 600 Ω load)

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	> 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 * dI/dt
Output voltage (sinusoidal, in no-load operation)	100 mV (V_{OUT} = 2 * π * M * f * 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)

	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_{PP}
	< 20 mV_{PP}

Connection data

Measuring transducer side

Connection method	Screw connection
Stripping length	10 mm
Screw thread	M3
Conductor cross section rigid	0.2 mm² ... 1.5 mm²
Conductor cross section flexible	0.2 mm² ... 1.5 mm²
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

Signal line

Length	3 m
Width	6.2 mm
Height	110.5 mm
Depth	120.5 mm

Material specifications

Housing material	PC
	PBT
Coil material	Elastollan

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

UKCA

Certificate	UKCA-compliant

CMIM

Certificate	CMIM-compliant

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

Mounting type	DIN rail mounting

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