

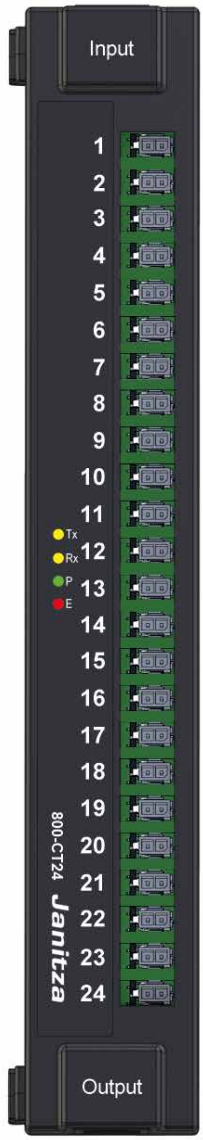
Current measuring module 800-CT24

Data sheet

Doc. no.: 2.053.214.1.a Status: 12/2023

Janitza®

Current measuring module 800-CT24



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(Suitable for basic devices of the 800 series -
suitable basic devices see user manual of the module)

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The German version is the original version of the documentation.

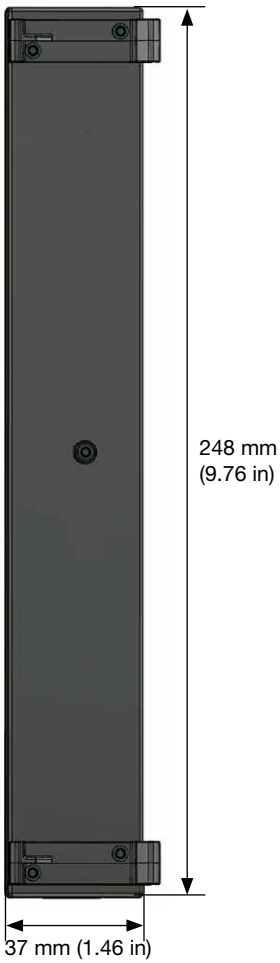
Subject to technical changes

The content of our documentation has been compiled with the utmost care and is based on the latest information available to us. Nevertheless, we would like to point out that the updating of this document cannot always be performed simultaneously with the further technical development of our products. Information and specifications can be changed at any time.
Please consult www.janitza.com for information on the current version.

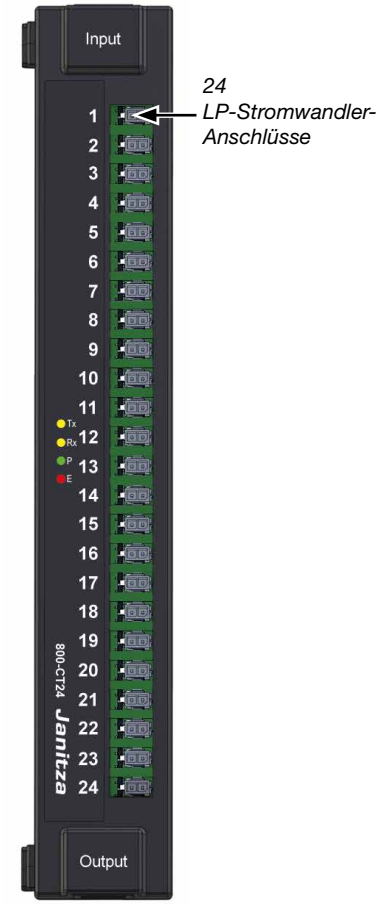
Device views

- The figures serve as illustrations and are not true to scale.
- Dimensions in mm (in).

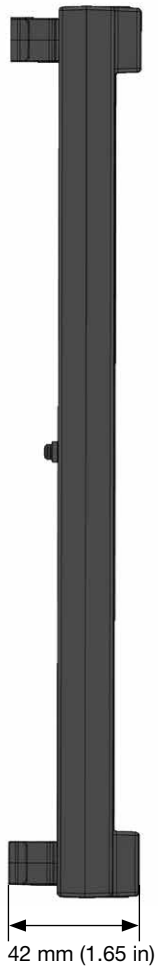
Rear view



Front view



View from the left

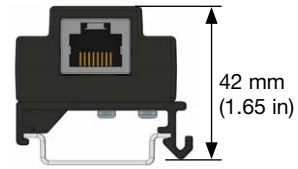


View from below



Output side
(on DIN rail)

View from above



Input side
(on DIN rail)

Technical data

General information	
Net weight	120 g (0.26 lb)
Device dimensions	B = 248 mm (w = 9.76 in), H = 42 mm (h = 1.65 in) , T = 37 mm (d = 1.46 in)
Installation position discretionary	discretionary
Mounting/assembly - suitable DIN rails (35 mm / 1.38 in	TS 35/7,5 according to EN 60715 TS 35/10 TS 35/15 x 1,5
Protection against foreign matter and water	IP20 according to EN60529
Impact resistance	IK07 according to IEC 62262

Transport and storage The following information applies to devices which are transported and stored in the original packaging.	
Free fall	1 m (39.37 in)
Temperature	K55: -25 °C (-13 °F) to +70 °C (158 °F)
Relative humidity	0 to 95% at 25 °C (77 °F) non-condensing

Ambient conditions during operation	
The module · only operate with suitable basic devices (see user manual of the module). · must be used in a weather-protected, stationary application. · fulfills the operating conditions according to DIN IEC 60721-3-3. · possesses protection class II according to IEC 60536 (VDE 0106, Part 1), a ground wire connection is not required!	
Measurement temperature range	-10 °C (14 °F).. +55 °C (131 °F)
Relative humidity	5 to 95% at 25 °C (77 °F) non-condensing
Pollution degree	2
Ventilation	No external ventilation required.

Current measurement	
Nominal voltage for the low-power current transformers	333 mV
Channels	24
Measuring range	0 ... 400 mV
Crest-Faktor	1,8
Overload for 1 s	1 V
Resolution	16 Bit
Sampling frequency	6.8 kHz
Frequency of the fundamental oscillation	40 Hz .. 70 Hz
Harmonics	1 .. 15. (odd only)

Interface and energy supply	
RJ45 interface (In/Out)	JanBus (proprietary) via RJ45 cable (patch cable RJ45).
Supply voltage (via JanBus interface)	24 V
JanBus (proprietary) - Max. bus lengths/cable lengths of the RJ45 cables	Cat 7/7a = 100 m (109.36 yd) (AWG 22: Ø = 0.64 mm, Querschnittsfläche = 0.33 mm^2)
	Cat 6/6a = 75 m (82.02 yd) (AWG 23: Ø = 0.57 mm, Querschnittsfläche = 0.26 mm^2)
	Cat 5/5e = 60 m (65.62 yd) (AWG 24: Ø = 0.51 mm, Querschnittsfläche = 0.21 mm^2)
Current sensor/LP current transformer interface	Micro Mate-N-Lok Connector

Module LEDs	
Tx (send data)	Flash “orange” during operation and indicate cyclic data exchange.
Rx (receive data)	
P (power - power supply)	Lights up “green” when the power supply via the JanBus interface is correct.
E (error - initialization and malfunction)	Lights up “red” when initializing/starting the device and in the event of a fault.

Performance characteristics of functions

(only valid in connection with UMG 801 as basic device!)

Function	Symbol	Accuracy class - 333 mV nominal voltage	Measuring range	Display range
Total active power	P	0.5 (IEC61557-12)	0 .. 12.6 kW	0 .. 999 GW
Total reactive power	QA, Qv	1 (IEC61557-12)	0..16.6 kvar	0 .. 999 Gvar
Total apparent power	SA, Sv	0.5 (IEC61557-12)	0 .. 12.6 kVA	0 .. 999 GVA
Total active energy	Ea	0.5 (IEC61557-12) 0.5S (IEC62053-22)	0 .. 999 GWh	0 .. 999 GWh
Total reactive energy	ErA, ErV	1 (IEC61557-12)	0 .. 999 Gvarh	0 .. 999 Gvarh
Total apparent energy	EapA, EapV	0.5 (IEC61557-12)	0 .. 999 GVAh	0 .. 999 GVAh
Phase current	I	0.5 (IEC61557-12)	0 .. 424 mVeff	0 .. 999 kA
Power factor	PFA, PFV	1 (IEC61557-12)	0.00 .. 1.00	0.00 .. 1.00
Current harmonics	Ih	Cl. 1 (IEC61000-4-7)	1. .. 15. (only odd)	0 A .. 999 kA
THD of the current	THD_I	1.0 (IEC61557-12)	0 .. 999 %	0 .. 999 %

ⓘ *INFORMATION*

Detailed information on the functions and data of the basic device can be found in the usage information included with the basic device or available for download at www.janitza.com!
Furthermore, observe the usage information of the modules integrated in your measuring device and module topology! All usage information can also be found as a download at www.janitza.com.

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