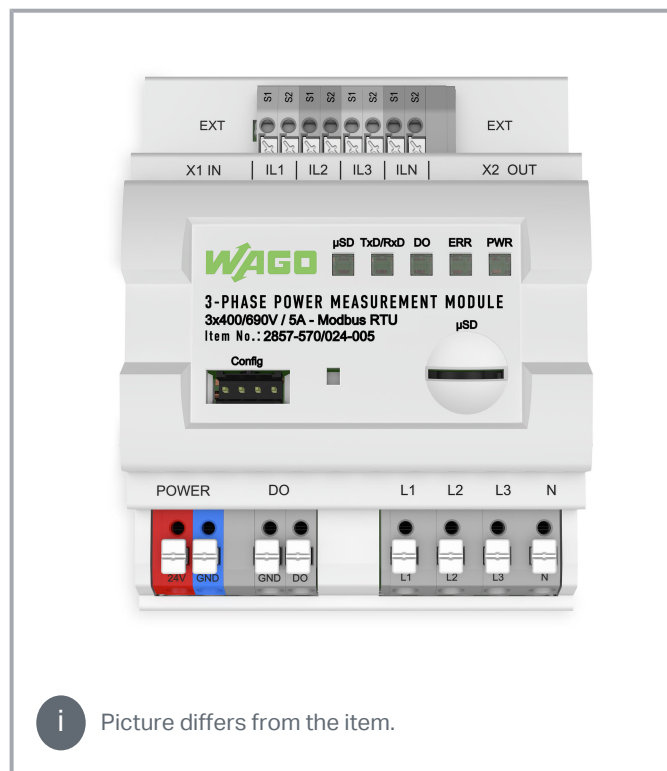


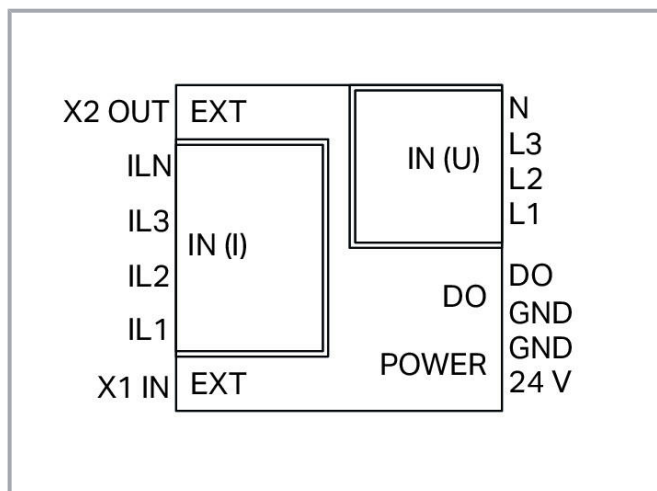
Data sheet | Item number: 2857-570/024-000

3-Phase Power Measurement Module; 3x400/690 V/RC; Modbus RTU; Digital output; Configuration via software; Supply voltage: 24 VDC

www.wago.com/2857-570/024-000



 Picture differs from the item.



Item description

Short description:WAGO's 3-Phase Power Measurement Module in a DIN-rail-mount enclosure measures electrical data in three-phase supply networks – remotely from the control level.

Measured variables such as active/apparent/reactive power, energy consumption, power factor, phase angle and frequency can be accessed via Modbus[®] interface. In addition, the measured variables can be stored on a microSD card.

Features:

- Current measurement via Rogowski Coils RC xxx
- Mobile measurement and storage of measured values on microSD card
- Configuration and display of measured values during operation via configuration interface
- Compact device in DIN-rail-mount enclosure saves space used for building technology
- Communication of measured values via Modbus[®] interface
- Configurable digital signal output as pulse output

Subject to changes. Please also observe the further product documentation!

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Data Notes

Note	Additional setting options via the WAGO Interface Configuration Software
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Technical data

Configuration

Configuration options	WAGO Interface Configuration Software
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Input

Input signal type	Voltage Current
Network configuration	3-phase power measurement with N-conductor (4-conductor) 3-phase power measurement without N-conductor (3-conductor)
Input signal (voltage)	AC 400 V (U_{LN}); AC 690 V (U_{LL}); AC 90 mV (WAGO Rogowski Coils RC xxx)
Sensitivity	22.5 mV/kA (WAGO Rogowski Coils RC xxx)
Measurement range (current)	4 x AC 4000 A (WAGO Rogowski Coils RC xxx) ()
Frequency range	45 ... 65 Hz (Harmonics analysis: 0 ... 3.3 kHz)

Output – MODBUS

Number of devices (max.)	32
Addressing	via interface configuration software
Pluggable connectors	2 x RJ-45 (daisy chain configuration)

Output – digital

Switching voltage (DO) (max.)	Supply voltage (applied)
Continuous current (DO) (max.)	100 mA (no internal restriction)
Configurable functions (DO)	Threshold value switch Pulse output (S0 interface)

Communication

Communication	Modbus® RTU
Interface	RS-485 (2-wire) via RJ-45
Number of devices (max.)	32

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Addressing

Via Interface configuration software

Signal processing

Measurement method	True RMS measurement (measured value acquisition with 8 kHz)
Measured variables (calculated)	Line-to-line voltage Outputs Energy sources Power factors Mains frequency Harmonics analysis (up to 41st harmonic) Total harmonic distortion (THD)
Signal form	Any periodic signals (considering the threshold frequencies)
Limit frequency	15.9 kHz
Memory card type	WAGO 758-879/000-3102 (microSD; 2 GB)

Measurement error

Transmission error (max.)	≤ 0.5 % for current and voltage (of the full scale value)
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Supply

Power supply type	24 VDC
Nominal supply voltage U_S	DC 24 V (SELV)
Supply voltage range	±30 %
Power consumption at nominal supply voltage	≤ 50 mA (+ I_{DO})

Safety and protection

Line-to-neutral conductor voltage	AC / DC 600 V
Overvoltage category	III
Pollution degree	2
Safe isolation	Input/supply and communication per EN 61010-1
Requirement (N input)	Shall not be dangerously active
Requirement (IL_x input)	Coils/converters with basic insulation
Protection type	IP20

Test voltage

Test voltage (input/output/supply)	AC 3.51 kV; 50 Hz; 1 min
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Connection data

Connection type (1)	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 804 Series
Solid conductor	0.25 ... 2.5 mm² / 20 ... 12 AWG
Fine-stranded conductor	0.25 ... 2.5 mm² / 22 ... 12 AWG
Strip length	10 ... 11 mm / 0.39 ... 0.43 inch
Connection type 2	Current/Power supply/DO
Connection technology 2	Push-in CAGE CLAMP®
WAGO Connector 2	WAGO 805 Series
Solid conductor 2	0.2 ... 1.5 mm² / 24 ... 16 AWG
Fine-stranded conductor 2	0.2 ... 1.5 mm² / 24 ... 16 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inch
Connection type (3)	Modbus® communication
Pluggable connectors	2 x RJ-45 (daisy chain configuration)

Physical data

Width	72 mm / 2.835 inch
Height	90 mm / 3.54 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.54 inch
Depth from upper edge of DIN-rail	55 mm / 2.165 inch

Mechanical data

Mounting type	DIN-35 rail
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Material data

Fire load	0.047 MJ
Weight	117.6 g

Environmental requirements

Surrounding air temperature (operation)	-40 ... 70 °C
Surrounding air temperature (storage)	-40 ... 85 °C
Relative humidity	5 ... 95 % (non-condensing)

Subject to changes. Please also observe the further product documentation!



Standards and specifications

Conformity marking	CE
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-3
Standards/Specifications	EN 61010-1

Commercial data

PU (SPU)	1 Stück
Packaging type	box
Country of origin	DE
GTIN	4055143829199
Customs tariff number	85437090300

Approvals / Certificates

Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	DNV GL Det Norske Veritas, Germanischer Lloyd	-	TAA00001ZY

Optional accessories

Power supplies

Power supply	
 Item no.: 787-2850 Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 1.25 A output current	www.wago.com/787-2850

Current transformers

Rogowski coil	
 Item no.: 855-9150/2000-1251 Rogowski coil; Primary rated current 4000 A; Output signal 22.5 mV per kA; Cable length: 1.5 m; Feedthrough for measurement conductor 125 mm	www.wago.com/855-9150/2000-1251
 Item no.: 855-9150/2000-1751 Rogowski coil; Primary rated current 4000 A; Output signal 22.5 mV per kA; Cable length: 1.5 m; Feedthrough for measurement conductor 175 mm	www.wago.com/855-9150/2000-1751
 Item no.: 855-9150/2000-701 Rogowski coil; Primary rated current 4000 A; Output signal 22.5 mV per kA; Cable length: 1.5 m; Feedthrough for measurement conductor 70 mm	www.wago.com/855-9150/2000-701

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**Item no.: 855-9450/2000-1251**

Rogowski coil; Primary rated current 4000 A; Output signal 22.5 mV per kA; Cable length 4.5 m; Feedthrough for measurement conductor 125 mm

www.wago.com/855-9450/2000-1251

**Item no.: 855-9450/2000-1751**

Rogowski coil; Primary rated current 4000 A; Output signal 22.5 mV per kA; Cable length 4.5 m; Feedthrough for measurement conductor 175 mm

www.wago.com/855-9450/2000-1751

**Item no.: 855-9450/2000-701**

Rogowski coil; Primary rated current 4000 A; Output signal 22.5 mV per kA; Cable length 4.5 m; Feedthrough for measurement conductor 70 mm

www.wago.com/855-9450/2000-701

Tool

Operating tool

**Item no.: 210-720**

Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft; multicoloured

www.wago.com/210-720

Interface module

Interface module

**Item no.: 289-175/790-108**

Interface module; RJ-45; PCB terminal blocks, double-row; Cat. 5; in mounting carrier; with shield connection; with shield clamping saddle

www.wago.com/289-175/790-108

**Item no.: 289-176**

Interface module; RJ-45; with power jumper contacts; RJ-45; Cat. 5; in mounting carrier

www.wago.com/289-176

Cables and pluggable connectors

Connector plug

**Item no.: 750-978/000-011**

Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief

www.wago.com/750-978/000-011

Communication cable

**Item no.: 750-923**

Configuration cable; USB connector; Length: 2.5 m

www.wago.com/750-923

**Item no.: 750-923/000-001**

Configuration cable; USB connector; Length: 5 m

www.wago.com/750-923/000-001

Memory card

Memory card

**Item no.: 758-879/000-3102**

Memory Card SD Micro; 2 GByte

www.wago.com/758-879/000-3102

Subject to changes. Please also observe the further product documentation!

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Downloads Documentation

Manual

3-Phase Power Measurement Module	V 1.0.0	pdf 16.4 MB	Download
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Bid Text

2857-570/024-000 X81 - Datei	2019. 7. 15.	xml 8.7 kB	Download
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2857-570/024-000 docx - Datei	2019. 7. 15.	docx 20.3 kB	Download
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Instruction Leaflet

3-Phasen-Leistungsmessmodul	V 1.1.0	pdf 1.2 MB	Download
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Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download
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Libraries

Library

Library for the Wago 3-Phase Powertransducer module 2857-570 WAGO-I/O-PRO Library for 2857-0570/0024-000x 3-Phase Powertransducer modules	1.0.0 2019. 2. 28.	zip 2.2 MB	Download
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Engineering-Software

Software for Interface-Products

WAGO Interface Configuration Software G2 FULL The full setup, in addition to the WAGO Interface Configuration Software G2, includes the installation for the Microsoft .NET Framework.	1.0.7.9 2021. 4. 8.	exe 114.0 MB	Download
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WAGO Interface Configuration Software G2 SMALL	1.0.7.9	exe	Download
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The full setup only includes the WAGO Interface Configuration Software G2. 2021. 4. 8. 30.0 MB

CAD/CAE-Data

CAD data

2D/3D Models 2857-570/024-000	URL	Download
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CAE data

ZUKEN Portal 2857-570/024-000	URL	Download
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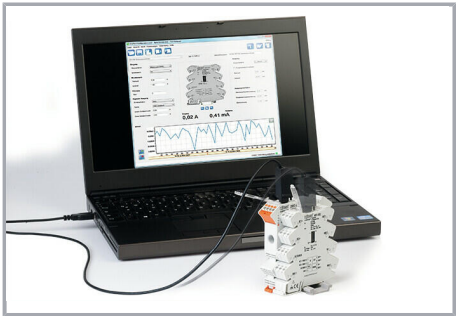
Environmental Product Compliance

Compliance Search

Environmental Product Compliance 2857-570/024-000	URL	Download
3-Phase Power Measurement Module; 3x400/690 V/RC; Modbus RTU; Digital output; Configuration via software; Supply voltage: 24 VDC		

Installation Notes

Configuration



Configuration via WAGO Interface
Configuration Software

Subject to changes. Please also observe the further product documentation!