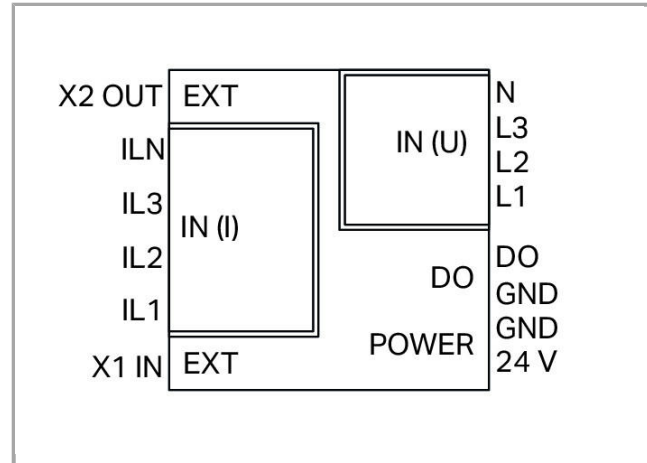
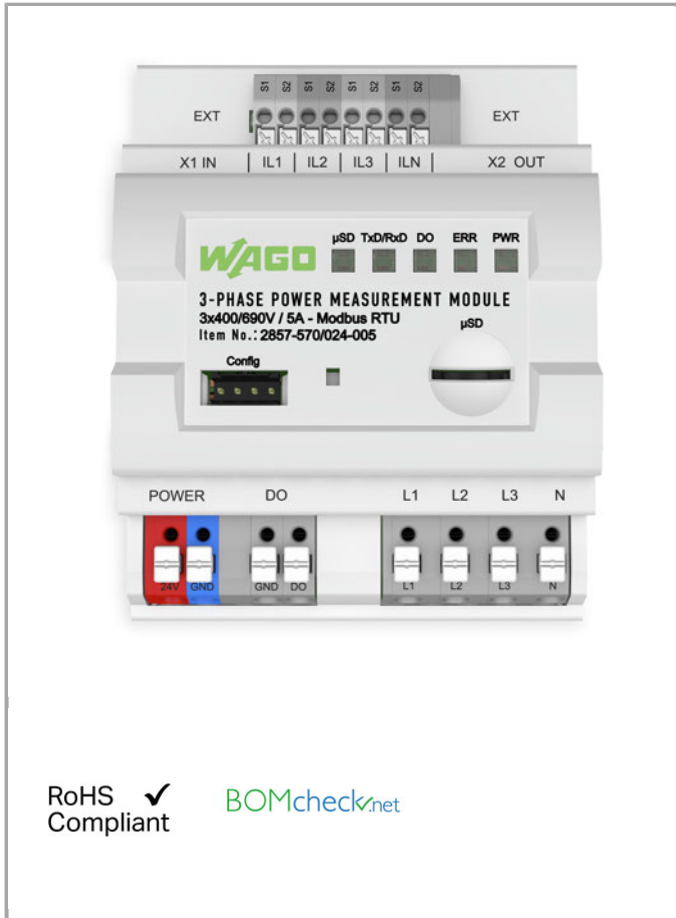


Data sheet | Item number: 2857-570/024-000

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



2857-570_024-000



RoHS Compliant

[BOMcheck.net](https://www.bomcheck.net)

Item description

Short description:

WAGO's 3-phase power measurement module in a DIN-railmount 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

Note:

Additional setting options via interface configuration software

In the present network, ensure that the neutral conductor is not dangerously active!

Data**Technical Data****Configuration**

Configuration options	Interface configuration software
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Input

Input signal type	Voltage Current
Mains type	3-phase power measurement with N-conductor (4 conductors) 3-phase power measurement with N-conductor (3 conductors)
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 – Digital

Max. switching voltage (DO)	Supply voltage applied
Max. continuous current (DO)	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 participants (max.)	32
Addressing	Via Interface configuration software

Signal processing

Measuring procedure	True RMS measurement (measured value acquisition with 8 kHz)
Calculated measured variables	Line-to-line voltage Power output Energy Power factors

	Mains frequency
	Harmonic analysis (up to the 41st harmonic)
	Total harmonic distortion (THD)
Max. operating frequency	15.9 kHz
Type of memory card	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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Power supply

Type of power supply	24 VDC
Nominal supply voltage U_S	DC 24 V (SELV)
Supply voltage range	±30 %
Current consumption at supply voltage	≤ 50 mA (+ I_{DO})

Safety and protection:

Test voltage (input/output/supply)	AC 3.51 kV; 50 Hz; 1 min
Overvoltage category	III
Pollution degree	2
Safe isolation	Input/supply and communication per EN 61010-1
Protection class	IP20

Connection data

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

Geometrical Data

Width	72 mm / 2.835 inch
Height from upper-edge of DIN-35 rail	55 mm / 2.165 inch
Depth	90 mm / 3.54 inch

Mechanical data

Type of mounting	DIN-35 rail
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Material Data

Fire load	0.047 MJ
Weight	117.1 g

Environmental Requirements

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

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

Country of origin	DE
GTIN	4055143829199
Customs Tariff No.	85437090300














Approvals / Certificates

Ship Approvals

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

Compatible products

power supply

	Item no.: 787-2850 Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 1.25 A output current		787-2850
General accessories			
	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	790-108	289-175
	Item no.: 289-176 Interface module; RJ-45; with power jumper contacts; RJ-45; Cat. 5; in mounting carrier		289-176
	Item no.: 750-923 Configuration cable; USB connector; Length: 2.5 m; black		750-923
	Item no.: 750-923/000-001 Configuration cable; USB connector; Length: 5 m	000-001	750-923
	Item no.: 855-8001 Power tap; with fuse; 2,5 mm ² (12 AWG) - 6 mm ² (10 AWG); Phase		855-8001
	Item no.: 855-8002 Power tap; without fuse; 2,5 mm ² (12 AWG) - 6 mm ² (10 AWG); N-conductor		855-8002
	Item no.: 855-8003 Power tap; with fuse; 10 mm ² (8 AWG) - 16 mm ² (6 AWG); Phase		855-8003
	Item no.: 855-8004 Power tap; without fuse; 10 mm ² (8 AWG) - 16 mm ² (6 AWG); N-conductor		855-8004
	Item no.: 855-8006 Power tap; for busbar; with fuse; Mounting screw M6		855-8006
	Item no.: 855-8008 Power tap; for busbar; with fuse; Mounting screw M8		855-8008
	Item no.: 855-8015 Power tap; for busbar; with fuse; Clamping connection		855-8015
memory card			
	Item no.: 758-879/000-3102 Memory Card SD Micro; 2 GByte	000-3102	758-879
wiring and connectors			



Item no.: 750-978/000-011

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

750-978

/000-011

current transformer



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; Accuracy class: 1; Feedthrough for measurement conductor 125 mm

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; Accuracy class: 1; Feedthrough for measurement conductor 175 mm

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; Accuracy class: 1; Feedthrough for measurement conductor 70 mm

855-9150

/2000-701



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; Accuracy class: 1; Feedthrough for measurement conductor 125 mm

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; Accuracy class: 1; Feedthrough for measurement conductor 175 mm

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

855-9450

/2000-701

tools



Item no.: 210-720

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

210-720

Downloads

Documentation

Manual

3-Phase Power Measurement Module	V 1.0.0	pdf 16.4 MB	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	V 1.0.0 Feb 28, 2019	zip 2.2 MB	Download
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Engineering-Software

Software for Interface-Products

Interface-Konfigurationssoftware SMALL Das Small-Setup beinhaltet nur die WAGO-Interface-Konfigurations-Software.	1.6.2.11 Jan 14, 2019	exe 47.1 MB	Download
Interface-Konfigurationssoftware FULL Das Full-Setup beinhaltet neben der WAGO-Interface-Konfigurations-Software zusätzlich die Installation für das Microsoft .NET Framwork.	1.6.2.11 Jan 14, 2019	exe 97.5 MB	Download

Subject to changes.
