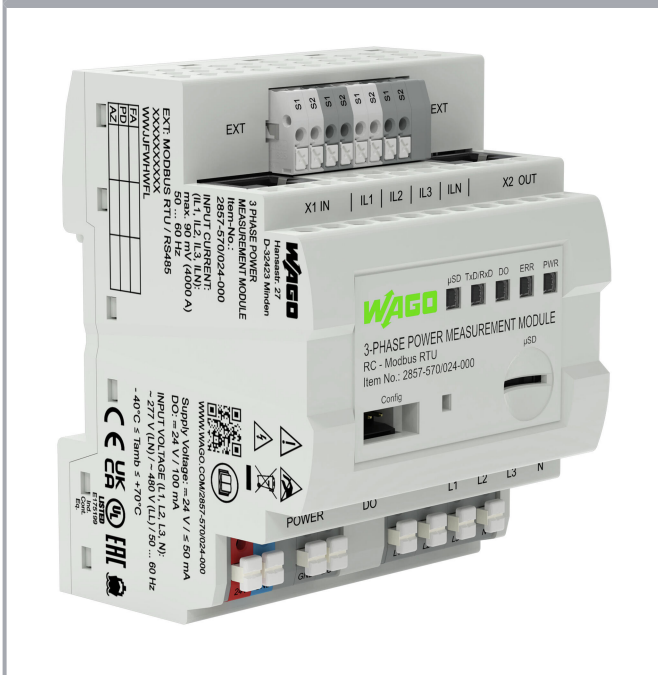
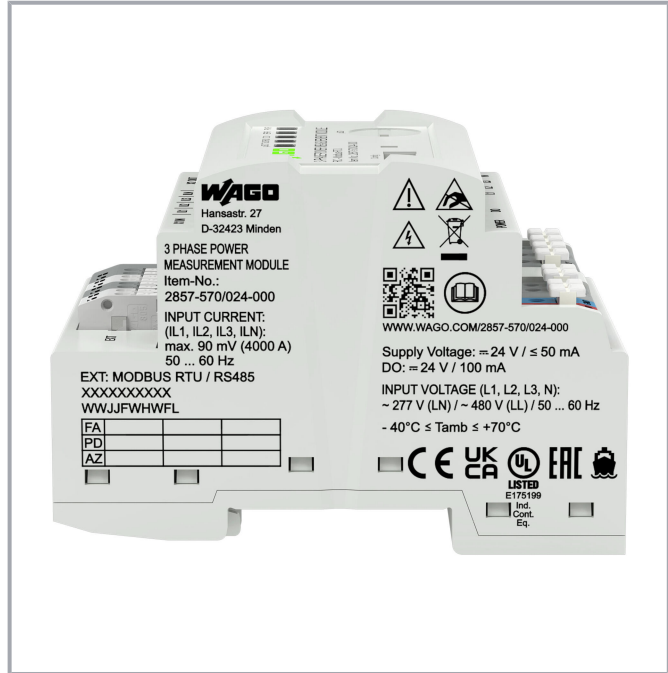
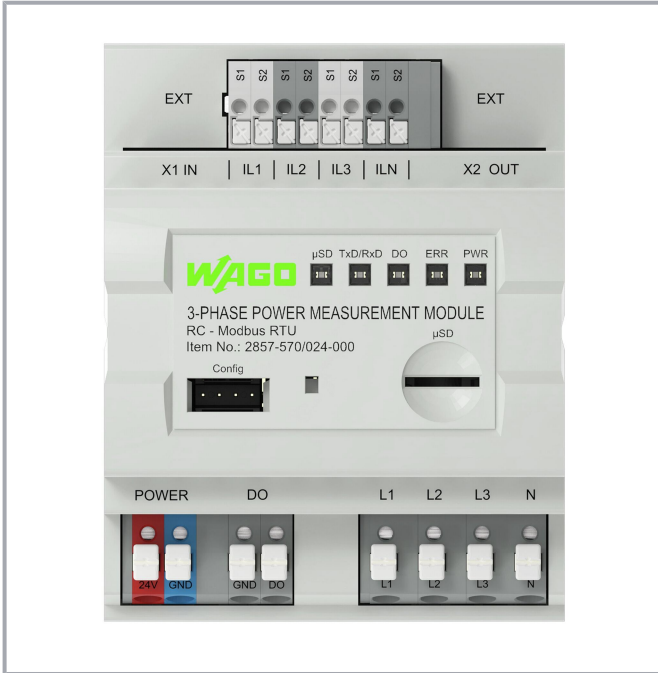


Data sheet | Item number: 2857-570/024-000

3-Phase Power Measurement Module; 3x277/480 V/RC; Modbus RTU; Digital output; Configuration via software; Supply voltage: 24 VDC



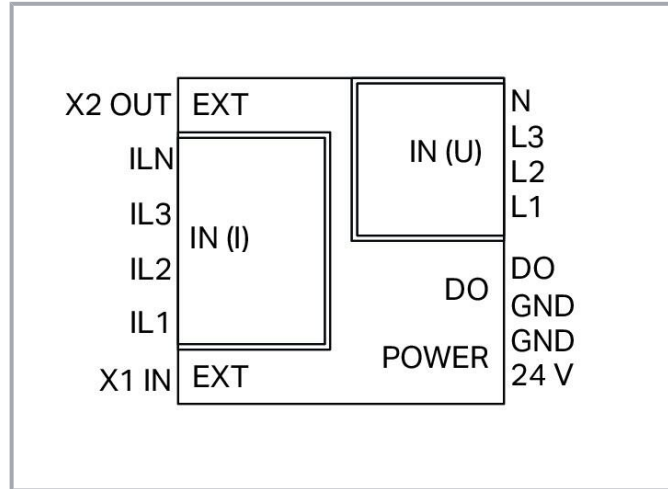
[www.wago.com/2857-570/024-000](http://www.wago.com/2857-570/024-000)



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## 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<sup>®</sup> 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<sup>®</sup> interface
- Configurable digital signal output as pulse output

## Data

### Notes

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

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



## Configuration

Configuration options	WAGO Interface Configuration Software
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## Input

Input signal type	Voltage Current RTD sensors
Network configuration	3-phase power measurement with N-conductor (4-conductor) 3-phase power measurement without N-conductor (3-conductor)
Input signal (voltage)	AC 277 V ( $U_{LN}$ ); AC 480 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	50 ... 60 Hz (Harmonics analysis: 0 ... 3.3 kHz)

## Output Modbus

Number of devices (max.)	32
Addressing	Via interface configuration software
Connector	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
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

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



Energy sources  
Power factors  
Mains frequency  
Harmonics analysis (up to 41st harmonic)  
Total harmonic distortion (THD)

Limit 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)
---------------------------	---

## Supply

Power supply type	24 VDC
Nominal supply voltage $U_S$	DC 24 V (SELV)
Supply voltage range	±30 %
Current consumption at nominal supply voltage	≤ 50 mA (+ $I_{D0}$ )

## Safety and protection

Rated voltage	600 V
Overvoltage category	III
Pollution degree	2
Safe isolation	Input/supply and communication per EN 61010-1
Requirement (N input)	Neutral conductors as part of the mains circuit, shall be considered hazardous live.
$IL_x$ input requirement	Coils/converters with basic insulation
Protection type	IP20

## Test voltage

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

## Connection data

Connection type 1	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO connector	WAGO 804 Series
Solid conductor	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG
Fine-stranded conductor	0.25 ... 2.5 mm <sup>2</sup> / 24 ... 14 AWG

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Strip length	10 ... 11 mm / 0.39 ... 0.43 inches
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 mm <sup>2</sup> / 24 ... 16 AWG
Fine-stranded conductor 2	0.2 ... 1.5 mm <sup>2</sup> / 24 ... 16 AWG
Strip length 2	9 ... 10 mm / 0.35 ... 0.39 inches
Connection type 3	Modbus® communication
Connector	2 x RJ-45 (daisy chain configuration)

### Physical data

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

### Mechanical Data

Mounting type	DIN-35 rail
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### Material Data

Fire load	0.044 MJ
Weight	117.5 g

### Environmental requirements

Ambient temperature (operation)	-40 ... +70 °C
Ambient temperature (storage)	-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

eCl@ss 10.0	27-21-01-24
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eCl@ss 9.0	27-21-01-24
ETIM 8.0	EC002476
ETIM 7.0	EC002476
PU (SPU)	1 pcs
Packaging type	box
Country of origin	DE
GTIN	4055143829199
Customs tariff number	85437090300

## Environmental Product Compliance


RoHS Compliance Status	Compliant, No Exemption
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## Approvals / Certificates


### General approvals

Logo	Approval	Additional Approval Text	Certificate name
	EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC_Certificate_RU_C-DE.AM02.B.00115_19
	EAC Brjansker Zertifizierungsstelle	TP TC 004/2011	EAC RU C-DE.AM02.B.00122/19

### Declarations of conformity and manufacturer's declarations

Logo	Approval	Additional Approval Text	Certificate name
	EU-Declaration of Conformity WAGO GmbH & Co. KG	-	-

### Approvals for marine applications

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

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## Optional accessories

### 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](http://www.wago.com/750-978/000-011)

#### Communication cable



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

Configuration cable; USB connector; Length: 5 m

[www.wago.com/750-923/000-001](http://www.wago.com/750-923/000-001)

### 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](http://www.wago.com/210-720)

### Communication

#### Communication cable



**Item no.: 750-923**

Configuration cable; USB connector; Length: 2.5 m

[www.wago.com/750-923](http://www.wago.com/750-923)

### Current transformers

#### Rogowski coil



**Item no.: 855-9150/2000-1251**

Rogowski coil; Primary rated current 1000 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](http://www.wago.com/855-9150/2000-1251)



**Item no.: 855-9150/2000-1751**

Rogowski coil; Primary rated current 1000 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](http://www.wago.com/855-9150/2000-1751)



**Item no.: 855-9150/2000-701**

Rogowski coil; Primary rated current 1000 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](http://www.wago.com/855-9150/2000-701)



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

Rogowski coil; Primary rated current 1000 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](http://www.wago.com/855-9450/2000-1251)



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

Rogowski coil; Primary rated current 1000 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](http://www.wago.com/855-9450/2000-1751)



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

Rogowski coil; Primary rated current 1000 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](http://www.wago.com/855-9450/2000-701)

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## Memory card

### Memory card



**Item no.:** 758-879/000-3102  
Memory Card SD Micro; 2 GByte

[www.wago.com/758-879/000-3102](http://www.wago.com/758-879/000-3102)

## Power supplies

### Power supply unit



**Item no.:** 787-2850  
Power supply; Compact; 1-phase; 24 VDC output voltage; 1.25 A output current

[www.wago.com/787-2850](http://www.wago.com/787-2850)

## 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](http://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](http://www.wago.com/289-176)

## Voltage tap

### Power tap



**Item no.:** 855-8001  
Power tap; with fuse; 2,5 mm<sup>2</sup> (12 AWG) - 6 mm<sup>2</sup> (10 AWG); Phase

[www.wago.com/855-8001](http://www.wago.com/855-8001)



**Item no.:** 855-8002  
Power tap; without fuse; 2,5 mm<sup>2</sup> (12 AWG) - 6 mm<sup>2</sup> (10 AWG); N-conductor

[www.wago.com/855-8002](http://www.wago.com/855-8002)



**Item no.:** 855-8004  
Power tap; without fuse; 10 mm<sup>2</sup> (8 AWG) - 16 mm<sup>2</sup> (6 AWG); N-conductor

[www.wago.com/855-8004](http://www.wago.com/855-8004)



**Item no.:** 855-8003  
Power tap; with fuse; 10 mm<sup>2</sup> (8 AWG) - 16 mm<sup>2</sup> (6 AWG); Phase

[www.wago.com/855-8003](http://www.wago.com/855-8003)



**Item no.:** 855-8006  
Power tap; for busbar; with fuse; Mounting screw M6

[www.wago.com/855-8006](http://www.wago.com/855-8006)



**Item no.:** 855-8008  
Power tap; for busbar; with fuse; Mounting screw M8

[www.wago.com/855-8008](http://www.wago.com/855-8008)



**Item no.:** 855-8015  
Power tap; for busbar; with fuse; Clamping connection

[www.wago.com/855-8015](http://www.wago.com/855-8015)

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## Downloads Documentation

### Manual

Product 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 Jul 15	xml 8.7 kB	Download
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2857-570/024-000 docx - Datei	2019 Jul 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 and Recycling Electrical and electronic equipment, Batteries, Packaging	V 1.1.0 2022 Aug 18	pdf 2.2 MB	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 Feb 28	zip 2.2 MB	Download
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## Engineering-Software

### Configuration and Commissioning Software

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.	1.00.10.01 2022 Jan 20	exe 114.9 MB	Download
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### WAGO Interface Configuration Software G2 SMALL

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The full setup only includes the WAGO Interface Configuration Software G2.

1.00.10.01  
2022 Jan 20

exe  
31.0 MB

[Download](#)

## Runtime Software

### Firmware

2857-0570/024-xxx, 3-Phasen-Leistungsmessumformer  
WAGO\_FW2857-0570\_024-000\_V020107\_IX03\_H

V 03  
2022 Jun 14

zip  
515.5 kB

[Download](#)

## CAD/CAE-Data

### CAD data

2D/3D Models 2857-570/024-000

[URL](#)

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### CAE data

ZUKEN Portal 2857-570/024-000

[URL](#)

[Download](#)

EPLAN Data Portal 2857-570/024-000

[URL](#)

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## Environmental Product Compliance

### Compliance Search

Environmental Product Compliance 2857-570/024-000

[URL](#)

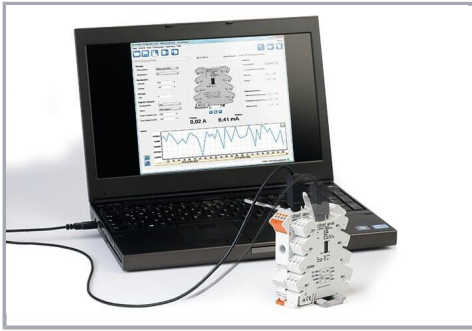
[Download](#)

3-Phase Power Measurement Module; 3x277/480 V/RC; Modbus RTU; Digital output;  
Configuration via software; Supply voltage: 24 VDC

## Installation Notes

### Configuring

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Configuration via WAGO Interface  
Configuration Software

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