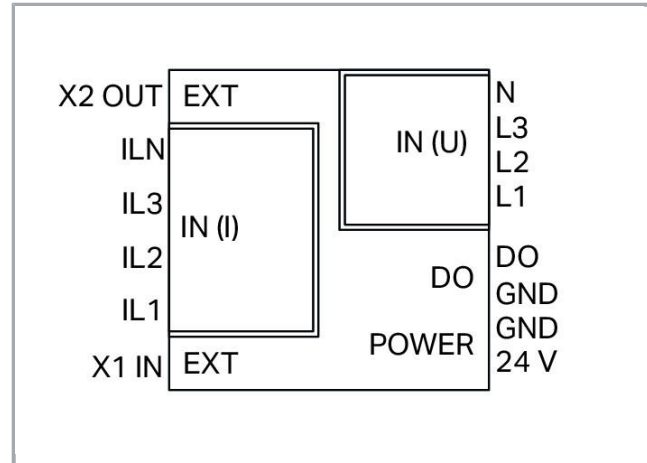
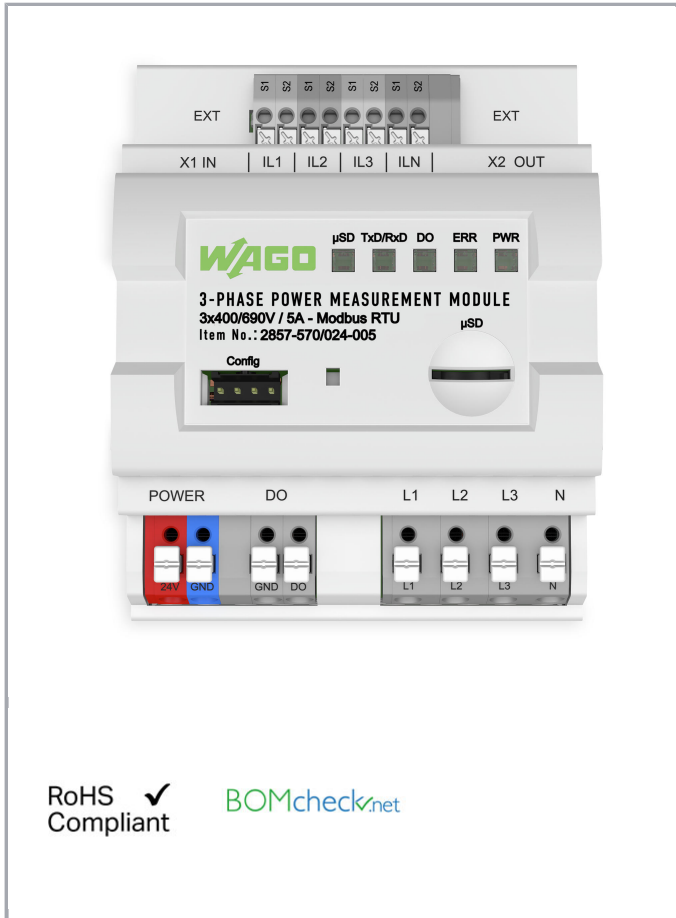


## Data sheet | Item number: 2857-570/024-000

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



### 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<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

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

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- 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

**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	WAGO interface configuration software
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**Input**

Input signal type	Voltage Electricity
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 – 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

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



## 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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## Power 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:

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
Requirement (N input)	Shall not be dangerously active
Requirement ( $I_{L_x}$ input)	Coils/converters with basic insulation
Protection type	IP20

## Connection data

Connection type (1)	Voltage
Connection technology	Push-in CAGE CLAMP®
WAGO Connector	WAGO 804 Series

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



Solid conductor	0,25 ... 2,5 mm <sup>2</sup> / 20 ... 12 AWG
Fine-stranded conductor	0,25 ... 2,5 mm <sup>2</sup> / 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 <sup>®</sup>
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 inch
Connection type (3)	Modbus <sup>®</sup> communication
Pluggable connectors	2 x RJ-45 (daisy chain configuration)

### Geometrical Data

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

### Mechanical data

Mounting type	DIN-35 rail
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### Material Data

Weight	117.1 g
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### Environmental Requirements

Surrounding air temperature (operation)	-40 ... 70 °C
Surrounding air 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

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## Commercial data

Packaging type	BOX
Country of origin	DE
GTIN	4055143829199
Customs tariff number	85437090300

## Approvals / Certificates





### Ship Approvals

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

## Counterpart

## Compatible products

### current transformer

	<b>Item no.: 855-9150/2000-1251</b> 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	<a href="http://www.wago.com/855-9150/2000-1251">www.wago.com/855-9150/2000-1251</a>
	<b>Item no.: 855-9150/2000-1751</b> 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	<a href="http://www.wago.com/855-9150/2000-1751">www.wago.com/855-9150/2000-1751</a>
	<b>Item no.: 855-9150/2000-701</b> 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	<a href="http://www.wago.com/855-9150/2000-701">www.wago.com/855-9150/2000-701</a>
	<b>Item no.: 855-9450/2000-1251</b> 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	<a href="http://www.wago.com/855-9450/2000-1251">www.wago.com/855-9450/2000-1251</a>

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**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](http://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](http://www.wago.com/855-9450/2000-701)

**transfer 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)

**wiring and connectors**



**Item no.: 750-923**

Configuration cable; USB connector; Length: 2.5 m; black

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



**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)

**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)

**tools**



**Item no.: 210-720**

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

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

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

**General accessories**



**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.: 855-8003**

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)

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	<b>Item no.: 855-8004</b> Power tap; without fuse; 10 mm <sup>2</sup> (8 AWG) - 16 mm <sup>2</sup> (6 AWG); N-conductor	<a href="http://www.wago.com/855-8004">www.wago.com/855-8004</a>
	<b>Item no.: 855-8006</b> Power tap; for busbar; with fuse; Mounting screw M6	<a href="http://www.wago.com/855-8006">www.wago.com/855-8006</a>
	<b>Item no.: 855-8008</b> Power tap; for busbar; with fuse; Mounting screw M8	<a href="http://www.wago.com/855-8008">www.wago.com/855-8008</a>
	<b>Item no.: 855-8015</b> Power tap; for busbar; with fuse; Clamping connection	<a href="http://www.wago.com/855-8015">www.wago.com/855-8015</a>

## Downloads Documentation

Manual			
3-Phase Power Measurement Module	V 1.0.0	pdf 16.4 MB	Download
Bid Text			
2857-570/024-000 GAEB docx - Datei	Jul 15, 2019	docx 20.3 kB	Download
2857-570/024-000 GAEB X81 - Datei	Jul 15, 2019	xml 8.7 kB	Download
Instruction Leaflet			
3-Phasen-Leistungsmessmodul	V 1.1.0	pdf 1.2 MB	Download
Additional Information			
Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 265.8 kB	Download

## 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

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

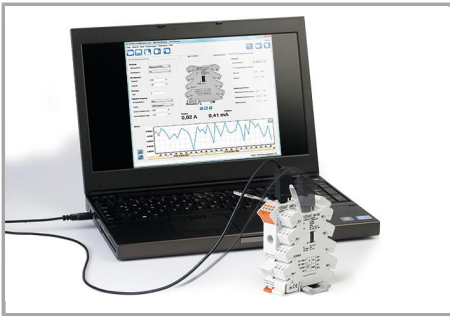
## Engineering-Software

### Software for Interface-Products

WAGO Interface Configuration Software SMALL	1.6.3.7	exe	Download
The full setup only includes the WAGO Interface Configuration Software.	Sep 17, 2019	48.0 MB	
WAGO Interface Configuration Software FULL	1.6.3.7	exe	Download
The full setup, in addition to the WAGO Interface Configuration Software, includes the installation for the Microsoft .NET Framework.	Sep 17, 2019	98.5 MB	

## Handling Instructions

### Configuring



Configuration via WAGO interface configuration software

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