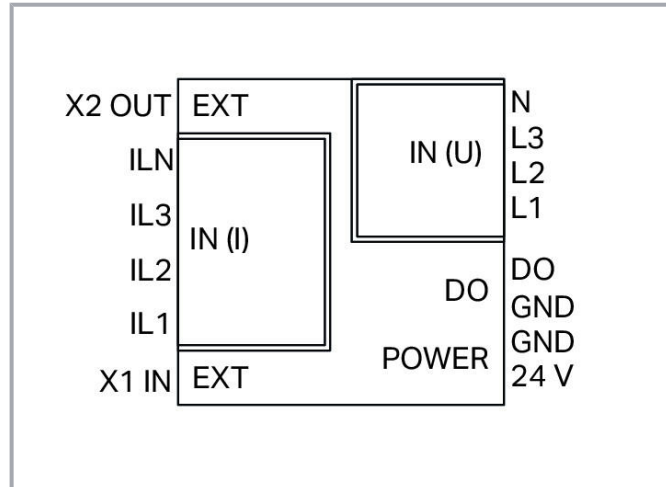
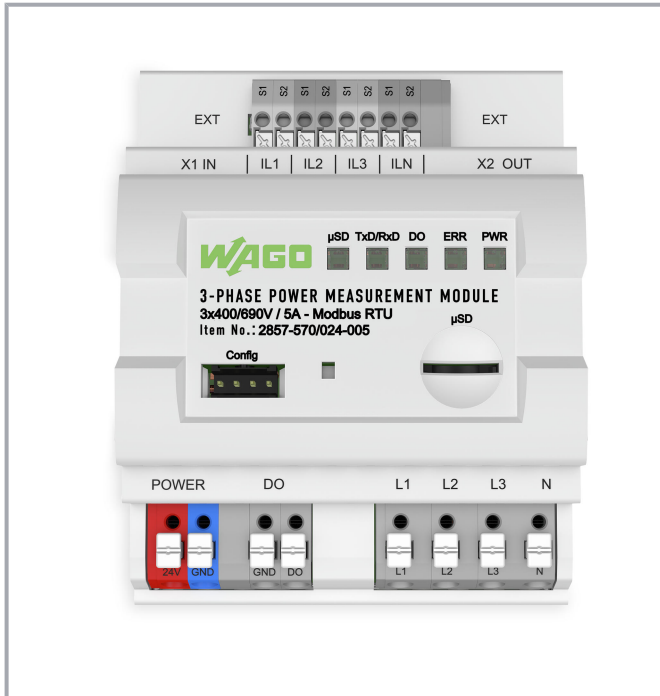


## Data sheet | Item number: 2857-570/024-005

3-Phase Power Measurement Module; 3x400/690 V/5 A; Modbus RTU;  
Digital output; Configuration via software; Supply voltage: 24 VDC



[www.wago.com/2857-570/024-005](http://www.wago.com/2857-570/024-005)



### 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 5A current transformer
- 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

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

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)
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 ( $U_{LL}$ )
Input signal (current)	AC 5 A (Current transformer)
Frequency range	45 ... 65 Hz (Harmonics analysis: 0 ... 3.3 kHz)
Input resistance (current input)	22 m $\Omega$
Input resistance (voltage input)	1.5 M $\Omega$
Input current (max.)	5 AAC
Input voltage (max.)	400 VAC ( $U_{LN}$ ); 690 VAC ( $U_{LL}$ )
Response threshold	5 mA
Resolution (current)	0.15 mA
Communication	Modbus <sup>®</sup> RTU
Interface	RS-485 (2-wire) via RJ-45
Number of devices (max.)	32
Addressing	Via Interface configuration software
Configuration options	WAGO Interface Configuration Software
Power supply type	24 VDC
Nominal supply voltage $U_S$	DC 24 V (SELV)
Supply voltage range	$\pm 30$ %
Power consumption at nominal supply voltage	$\leq 50$ mA (+ $I_{DO}$ )
Transmission error (max.)	$\leq 0.5$ % for current and voltage (of the full scale value)
Measurement method	True RMS measurement (measured value acquisition with 8 kHz)
Measured variables (calculated)	Line-to-line voltage Outputs Energy sources

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



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

### 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 <sub>x</sub> input)	Coils/converters with basic insulation
Protection type	IP20
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> / 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®
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® communication
Pluggable connectors	2 x RJ-45 (daisy chain configuration)

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



## 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	115.6 g

## 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

## Commercial data

PU (SPU)	1 Stück
Packaging type	box
Country of origin	DE
GTIN	4055143827461
Customs tariff number	85437090300

## Approvals / Certificates

### Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
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DNV GL

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## Optional accessories

### 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)

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

[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)

### 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)

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

### Terminal blocks

Current transformer terminal block



Item no.: 2007-8874  
Compact terminal block; for current and voltage transformers; 6,00 mm<sup>2</sup>; multicoloured

[www.wago.com/2007-8874](http://www.wago.com/2007-8874)














Item no.: 2007-8877  
Compact terminal block; for current transformer circuit; 6,00 mm<sup>2</sup>; multicoloured

[www.wago.com/2007-8877](http://www.wago.com/2007-8877)

### Current transformers

Split-core current transformer

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

	<b>Item no.: 855-4105/250-101</b> Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m	<a href="http://www.wago.com/855-4105/250-101">www.wago.com/855-4105/250-101</a>
	<b>Item no.: 855-4105/400-101</b> Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m	<a href="http://www.wago.com/855-4105/400-101">www.wago.com/855-4105/400-101</a>
	<b>Item no.: 855-5005/1000-000</b> Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 m	<a href="http://www.wago.com/855-5005/1000-000">www.wago.com/855-5005/1000-000</a>
	<b>Item no.: 855-5005/400-001</b> Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 1; Cable length: 3 m	<a href="http://www.wago.com/855-5005/400-001">www.wago.com/855-5005/400-001</a>
	<b>Item no.: 855-5005/600-000</b> Split-core current transformer; Primary rated current: 600 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 m	<a href="http://www.wago.com/855-5005/600-000">www.wago.com/855-5005/600-000</a>
	<b>Item no.: 855-5105/1000-000</b> Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 3 m	<a href="http://www.wago.com/855-5105/1000-000">www.wago.com/855-5105/1000-000</a>
	<b>Item no.: 855-4005/150-101</b> Split-core current transformer; Primary rated current: 150 A; Secondary rated current: 5 A; Rated power: 1 VA; Accuracy class: 1; Cable length: 0.5 m	<a href="http://www.wago.com/855-4005/150-101">www.wago.com/855-4005/150-101</a>
<b>Plug-in current transformer</b>		
	<b>Item no.: 855-305/050-103</b> Plug-in current transformer; Primary rated current: 50 A; Secondary rated current: 5 A; Rated power: 1.25 VA; Accuracy class: 3	<a href="http://www.wago.com/855-305/050-103">www.wago.com/855-305/050-103</a>
	<b>Item no.: 855-305/060-101</b> Plug-in current transformer; Primary rated current: 60 A; Secondary rated current: 5 A; Rated power: 1.25 VA; Accuracy class: 1	<a href="http://www.wago.com/855-305/060-101">www.wago.com/855-305/060-101</a>
	<b>Item no.: 855-305/075-201</b> Plug-in current transformer; Primary rated current: 75 A; Secondary rated current: 5 A; Rated power: 2.5 VA; Accuracy class: 1	<a href="http://www.wago.com/855-305/075-201">www.wago.com/855-305/075-201</a>
	<b>Item no.: 855-305/100-201</b> Plug-in current transformer; Primary rated current: 100 A; Secondary rated current: 5 A; Rated power: 2.5 VA; Accuracy class: 1	<a href="http://www.wago.com/855-305/100-201">www.wago.com/855-305/100-201</a>

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



**Item no.: 855-305/150-501**

Plug-in current transformer; Primary rated current: 150 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

[www.wago.com/855-305/150-501](http://www.wago.com/855-305/150-501)



**Item no.: 855-605/1500-501**

Plug-in current transformer; Primary rated current: 1500 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

[www.wago.com/855-605/1500-501](http://www.wago.com/855-605/1500-501)



**Item no.: 855-805/2000-1001**

Plug-in current transformer; Primary rated current: 2000 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

[www.wago.com/855-805/2000-1001](http://www.wago.com/855-805/2000-1001)



**Item no.: 855-1005/2500-1001**

Plug-in current transformer; Primary rated current: 2500 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

[www.wago.com/855-1005/2500-1001](http://www.wago.com/855-1005/2500-1001)



**Item no.: 855-505/1000-1001**

Plug-in current transformer; Primary rated current: 1000 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

[www.wago.com/855-505/1000-1001](http://www.wago.com/855-505/1000-1001)



**Item no.: 855-505/600-1001**

Plug-in current transformer; Primary rated current: 600 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

[www.wago.com/855-505/600-1001](http://www.wago.com/855-505/600-1001)



**Item no.: 855-505/400-1001**

Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

[www.wago.com/855-505/400-1001](http://www.wago.com/855-505/400-1001)



**Item no.: 855-505/800-1001**

Plug-in current transformer; Primary rated current: 800 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1

[www.wago.com/855-505/800-1001](http://www.wago.com/855-505/800-1001)



**Item no.: 855-305/200-501**

Plug-in current transformer; Primary rated current: 200 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

[www.wago.com/855-305/200-501](http://www.wago.com/855-305/200-501)



**Item no.: 855-305/250-501**

Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

[www.wago.com/855-305/250-501](http://www.wago.com/855-305/250-501)



**Item no.: 855-305/300-501**

Plug-in current transformer; Primary rated current 300 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1

[www.wago.com/855-305/300-501](http://www.wago.com/855-305/300-501)

**Item no.: 855-305/400-1001**

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Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1 [www.wago.com/855-305/400-1001](http://www.wago.com/855-305/400-1001)



**Item no.: 855-305/600-1001**  
 Plug-in current transformer; Primary rated current: 600 A; Secondary rated current: 5 A; Rated power: 10 VA; Accuracy class: 1 [www.wago.com/855-305/600-1001](http://www.wago.com/855-305/600-1001)



**Item no.: 855-405/250-501**  
 Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1 [www.wago.com/855-405/250-501](http://www.wago.com/855-405/250-501)



**Item no.: 855-405/400-501**  
 Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1 [www.wago.com/855-405/400-501](http://www.wago.com/855-405/400-501)



**Item no.: 855-405/750-501**  
 Plug-in current transformer; Primary rated current 750 A; Secondary rated current: 5 A; Rated power: 5 VA; Accuracy class: 1 [www.wago.com/855-405/750-501](http://www.wago.com/855-405/750-501)

**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)

**Downloads**

**Documentation**

**Manual**

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

2857-570/024-005 docx - Datei	Jul 15, 2019	docx 20.4 kB	Download
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**Instruction Leaflet**

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

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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 Feb 28, 2019	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 Apr 8, 2021	exe 114.0 MB	Download
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WAGO Interface Configuration Software G2 SMALL The full setup only includes the WAGO Interface Configuration Software G2.	1.0.7.9 Apr 8, 2021	exe 30.0 MB	Download
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**CAD/CAE-Data**

**CAD data**

2D/3D Models 2857-570/024-005	URL	Download
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**CAE data**

ZUKEN Portal 2857-570/024-005	URL	Download
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**Environmental Product Compliance**

**Compliance Search**

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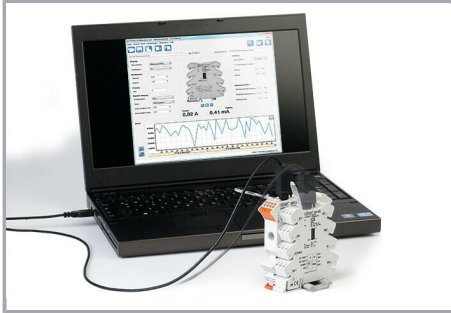
Subject to changes. Please also observe the further product documentation!

3-Phase Power Measurement Module; 3x400/690 V/5 A; Modbus RTU; Digital output;  
Configuration via software; Supply voltage: 24 VDC

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## Installation Notes

### Configuration



Configuration via WAGO Interface  
Configuration Software

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