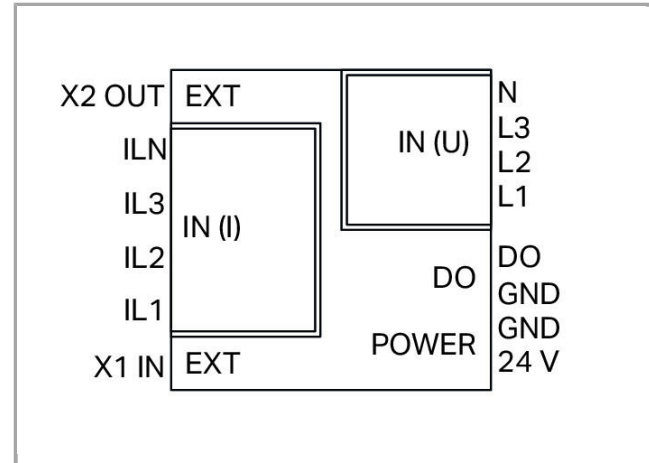
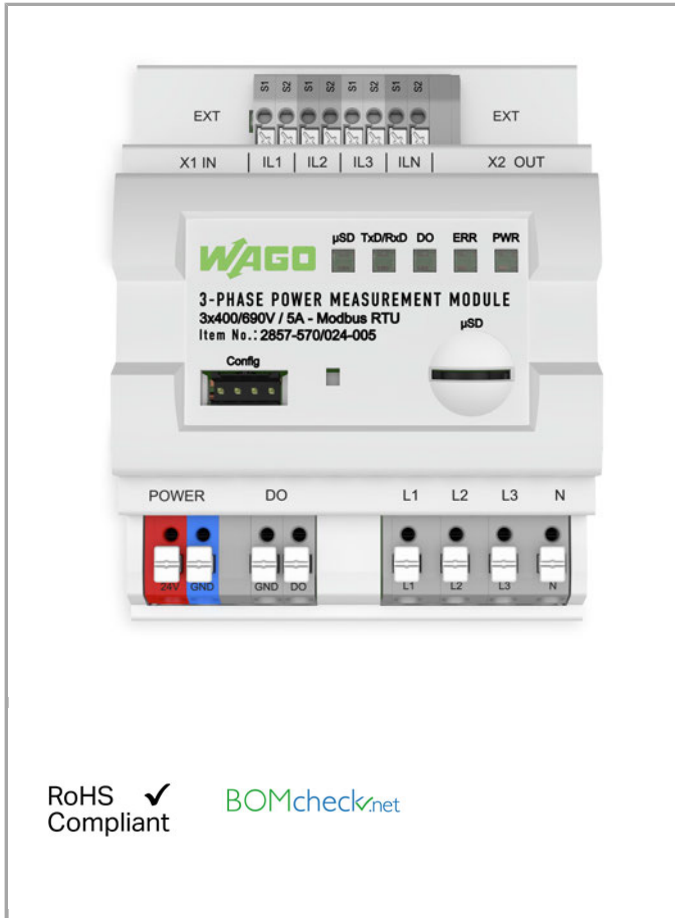


Data sheet | Item number: 2857-570/024-001

3-Phase Power Measurement Module; 3x400/690 V/1 A; Modbus RTU;
Digital output; Configuration via software; Supply voltage: 24 VDC



2857-570_024-001



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 1A 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[®] 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})
Input signal, current	4 x AC 1 A; (Current transformer)
Frequency range	45 – 65 Hz (Harmonics analysis: 0 – 3.3 kHz)
Input resistance (input/current)	22 m Ω
Input resistance (input/voltage)	1.5 M Ω
Max. input current	1 ACA
Max. input voltage	400 VAC (U_{LN}); 690 VAC (U_{LL})
Response threshold	10 mA
Resolution	10 mA

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	117.5 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	4055143827539
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

current transformer

	Item no.: 855-1001/2500-1001 Plug-in current transformer; Primary rated current: 2500 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1	/ 2500-1001	855-1001
	Item no.: 855-2701/035-001 Plug-in current transformer; Primary rated current: 35 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1	/ 035-001	855-2701
	Item no.: 855-2701/064-001 Plug-in current transformer; Primary rated current: 64 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1	/ 064-001	855-2701
	Item no.: 855-3001/060-003 Split-core current transformer; Primary rated current: 60 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 3; Cable length: 3 m	/ 060-003	855-3001
	Item no.: 855-3001/100-003 Split-core current transformer; Primary rated current: 100 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 3; Cable length: 3 m	/ 100-003	855-3001
	Item no.: 855-3001/200-001 Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m	/ 200-001	855-3001
	Item no.: 855-3001/250-001 Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m	/ 250-001	855-3001
	Item no.: 855-301/050-103 Plug-in current transformer; Primary rated current: 50 A; Secondary rated current: 1 A; Rated power: 1.25 VA; Accuracy class: 3	/ 050-103	855-301
	Item no.: 855-301/060-101 Plug-in current transformer; Primary rated current: 60 A; Secondary rated current: 1 A; Rated power: 1.25 VA; Accuracy class: 1	/ 060-101	855-301
	Item no.: 855-301/075-201 Plug-in current transformer; Primary rated current: 75 A; Secondary rated current: 1 A; Rated power: 2.5 VA; Accuracy class: 1	/ 075-201	855-301
	Item no.: 855-301/100-201		

	Plug-in current transformer; Primary rated current: 100 A; Secondary rated current: 1 A; Rated power: 2.5 VA; Accuracy class: 1	/ 100-20 I	855-301
	Item no.: 855-301/150-501 Plug-in current transformer; Primary rated current: 150 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1	/ 150-50 I	855-301
	Item no.: 855-301/200-501 Plug-in current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1	/ 200-50 I	855-301
	Item no.: 855-301/250-501 Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1	/ 250-50 I	855-301
	Item no.: 855-301/400-1001 Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1	/ 400-100 I	855-301
	Item no.: 855-301/600-1001 Plug-in current transformer; Primary rated current: 600 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1	/ 600-100 I	855-301
	Item no.: 855-4001/100-001 Split-core current transformer; Primary rated current: 100 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m	/ 100-00 I	855-4001
	Item no.: 855-4001/150-001 Split-core current transformer; Primary rated current: 150 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m	/ 150-00 I	855-4001
	Item no.: 855-4001/200-001 Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m	/ 200-00 I	855-4001
	Item no.: 855-401/250-501 Plug-in current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1	/ 250-50 I	855-401
	Item no.: 855-401/400-501 Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1	/ 400-50 I	855-401
	Item no.: 855-401/600-501 Plug-in current transformer; Primary rated current: 600 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1	/ 600-50 I	855-401
	Item no.: 855-4101/200-001 Split-core current transformer; Primary rated current: 200 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m	/ 200-00 I	855-4101
	Item no.: 855-4101/250-001 Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 1; Cable length: 3 m	/ 250-00 I	855-4101
	Item no.: 855-4101/400-001 Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 1 A; Rated		

	power: 0.2 VA; Accuracy class: 1; Cable length: 3 m		855-4101
		/400-001	
	Item no.: 855-5001/1000-000 Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m		855-5001
		/1000-000	
	Item no.: 855-5001/250-001 Split-core current transformer; Primary rated current: 250 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 1; Cable length: 5 m		855-5001
		/250-001	
	Item no.: 855-5001/400-000 Split-core current transformer; Primary rated current: 400 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m		855-5001
		/400-000	
	Item no.: 855-5001/600-000 Split-core current transformer; Primary rated current: 600 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m		855-5001
		/600-000	
	Item no.: 855-501/1000-1001 Plug-in current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1		855-501
		/1000-1001	
	Item no.: 855-501/400-1001 Plug-in current transformer; Primary rated current: 400 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1		855-501
		/400-1001	
	Item no.: 855-501/600-1001 Plug-in current transformer; Primary rated current: 600 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1		855-501
		/600-1001	
	Item no.: 855-501/800-1001 Plug-in current transformer; Primary rated current: 800 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1		855-501
		/800-1001	
	Item no.: 855-5101/1000-000 Split-core current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 0.5 VA; Accuracy class: 0.5; Cable length: 5 m		855-5101
		/1000-000	
	Item no.: 855-601/1500-501 Plug-in current transformer; Primary rated current: 1500 A; Secondary rated current: 1 A; Rated power: 5 VA; Accuracy class: 1		855-601
		/1500-501	
	Item no.: 855-801/1000-1001 Plug-in current transformer; Primary rated current: 1000 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1		855-801
		/1000-1001	
	Item no.: 855-801/2000-1001 Plug-in current transformer; Primary rated current: 2000 A; Secondary rated current: 1 A; Rated power: 10 VA; Accuracy class: 1		855-801
		/2000-1001	
memory card			
	Item no.: 758-879/000-3102 Memory Card SD Micro; 2 GByte		758-879
		/000-3102	
tools			



Item no.: 210-720
Operating tool; Blade: 3.5 x 0.5 mm; with a partially insulated shaft

210-720

wiring and connectors



Item no.: 750-978/000-011
Connector ETHERNET; RJ-45; Cat. 6A; straight; Code T568A; AWG 22; Strain relief

/000-011

750-978

General accessories



Item no.: 2007-8874
Compact terminal block; for current and voltage transformers; 6,00 mm²; multicoloured

2007-8874



Item no.: 2007-8877
Compact terminal block; for current transformer circuit; 6,00 mm²; multicoloured

2007-8877



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.: 855-1851/350-000
Current and voltage tap up to 185 mm²; Primary rated current: 350 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; fused

/350-000

855-1851



Item no.: 855-501/150-000
Current and voltage tap up to 50 mm²; Primary rated current: 150 A; Secondary rated current: 1 A; Rated power: 0.2 VA; Accuracy class: 0.5; fused

/150-000

855-501



Item no.: 855-8001
Power tap; with fuse; 2,5 mm² (12 AWG) - 6 mm² (10 AWG); Phase

855-8001



Item no.: 855-8002
Power tap; without fuse; 2,5 mm² (12 AWG) - 6 mm² (10 AWG); N-conductor

855-8002



Item no.: 855-8003
Power tap; with fuse; 10 mm² (8 AWG) - 16 mm² (6 AWG); Phase

855-8003



Item no.: 855-8004
Power tap; without fuse; 10 mm² (8 AWG) - 16 mm² (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

Item no.: 855-951/250-000



Current and voltage tap up to 95 mm²; Primary rated current: 250 A; Secondary rated current: 1 A;
Rated power: 0.2 VA; Accuracy class: 0.5; fused

855-951

/ 250-000

power supply
**Item no.: 787-2850**

Switched-mode power supply; Compact; 1-phase; 24 VDC output voltage; 1.25 A output current

787-2850

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	V 1.0.0	zip	Download
WAGO-I/O-PRO Library for 2857-0570/0024-000x 3-Phase Powertransducer modules	Feb 28, 2019	2.2 MB	

Engineering-Software**Software for Interface-Products**

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

Interface-Konfigurationssoftware SMALL	1.6.2.11	exe	Download
Das Small-Setup beinhaltet nur die WAGO-Interface-Konfigurations-Software.	Jan 14, 2019	47.1 MB	



Subject to changes.
