

The 750-495 3-Phase Power Measurement Module measures electrical data in a three-phase supply network. The voltage is measured via network connection to L1, L2, L3 and N. The current of the three phases is fed to IL1, IL2, IL3 and IN (two clamping points each +,-) via current transformers. The 750-495 Module transmits metrics (e.g., reactive/apparent/effective power, energy consumption, power factor, phase angle, frequency, over-/undervoltage) directly into the process image, without requiring high computing power from the controller. Both comprehensive metrics and harmonic analysis up to the 41st harmonic permit extensive network analysis via the fieldbus. Metrics allow the operator to optimize the supply to a drive or machine, protecting the system from damage and failure. Insulation failures can be detected and prevented via current measurement performed in the neutral conductor. The 4-quadrant display indicates the type of load (inductive, capacitive) and whether it is an energy consumer or producer.

Technical data	
Number of measurement inputs	7 (3 Spannungsmesseingänge, 4 differenzielle Strommesseingänge)
Signal type	Power measurement
Signal form	Any periodic signals (considering the threshold frequencies)
Resolution [bit]	24 bits
Data width	2 x 128-bit data; 2 x 64-bit control/status
Voltage path input resistance (typ.)	1429 kΩ
Current path input resistance (typ.)	44 kΩ
Reference for measurement error	AC current/voltage
Measurement error (reference temperature)	25 °C
Measurement error, deviation (max.) from the upper-range value	0.5 %
Measurement current (max.)	Rogowski Coils RT500/RT2000
Measurement cycle time	Adjustable for arithmetic mean value, Min_Max_Values
Frequency range (mains frequency)	45 ... 65 Hz
Frequency range (harmonics analysis)	0 ... 3300 Hz
Limit frequency	15.9 kHz

Technical data

Rated voltage	$V_{LN} = 400 \text{ VAC}; V_{LL} = 690 \text{ VAC}$
Calculated values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD
Measurement components	Evaluating
Measurement method	True RMS measurement
Configuration options	WAGO-I/O-CHECK CODESYS Library e!COCKPIT
Supply voltage (system)	5 VDC; via data contacts
Current consumption (5 V system supply)	100 mA
Isolation	6 kV system/field
Rated surge voltage	6 kV

Connection data

Connection technology: inputs/outputs	16 x CAGE CLAMP®
Connection type 1	Inputs/outputs
Solid conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm ² / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inches

Physical data

Width	24 mm / 0.945 inches
Height	100 mm / 3.937 inches
Depth	67.8 mm / 2.669 inches
Depth from upper-edge of DIN-rail	60.6 mm / 2.386 inches

Mechanical data

Mounting type	DIN-35 rail
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Material data

Housing material	Polycarbonate; polyamide 6.6
Fire load	1.947 MJ
Weight	98.1 g
Conformity marking	CE

Environmental requirements

Ambient temperature (operation)	0 ... +55 °C
Surrounding air temperature (storage)	-25 ... +85 °C
Protection type	IP20
Pollution degree (5)	2
Operating altitude	0 ... 2000 m / 0 ... 6562 ft
Mounting position	horizontal (standing/lying); vertical
Relative humidity (without condensation)	95 %
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2
EMC emission of interference	per EN 61000-6-3
Exposure to pollutants	per IEC 60068-2-42 and IEC 60068-2-43
Permissible H ₂ S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO ₂ contaminant concentration at a relative humidity 75 %	25 ppm

Commercial data

eCl@ss 10.0	27-24-26-05
eCl@ss 9.0	27-24-26-05
ETIM 8.0	EC001601
ETIM 7.0	EC001601
PU (SPU)	1 Stück
Packaging type	Box
Country of origin VKOrg Germany	DE
GTIN	4050821841593
Customs tariff number VKOrg Germany	8538909990

Approvals and certificates

Country specific Approvals



Approval	Standard	Certificate name
EAC Brjansker Zertifizierungsstelle	TP TC 020/2011	EAC RU C-DE.AM02. B.00087/19
EAC Brjansker Zertifizierungsstelle	TP TC 004/2011	EAC RU C-DE.AM02. B.00088_19
KC National Radio Research Agency	Article 58-2, Clause 3	MSIP-REM-W43-AIM750

Ship Approvals



Approval	Standard	Certificate name
BSH Bundesamt fuer Seeschifffahrt und Hydrographie	-	1104
PRS Polski Rejestr Statków	-	TE/2236/880590/19
RINA RINA Germany GmbH	-	ELE343521XG001

Downloads

Environmental Product Compliance




Compliance Search

Environmental Product Compliance
750-495/000-002





Documentation

Manual

System Manual WAGO I/O System 750 / 753	V 3.1.0 11.05.2022	pdf 8495.90 KB	
System Manual Series 750/753			
3-Phase Power Measurement Module	V 1.2.0	pdf 18741.98 KB	

System Description

750/753 Series I/O-System – General Product Information	pdf 953.35 KB	
Overview on WAGO-I/O-SYSTEM 750 approvals	pdf 770.48 KB	

Additional Information

Disposal; Electrical and electronic equipment, Packaging	V 1.0.0	pdf 259.56 KB	↓
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Bid Text

750-495/000-002	20.10.2017	doc 30.50 KB	↓
750-495/000-002	19.02.2019	xml 6.41 KB	↓

CAD/CAE-Data

CAD data	CAE data
2D/3D Models 750-495/000-002 ↓	EPLAN Data Portal 750-495/000-002 ↓
	WSCAD Universe 750-495/000-002 ↓
	ZUKEN Portal 750-495/000-002 ↓

Libraries

Library			
Function block description PowerMeasurement_495_02.lib	2.1.0 23.01.2017	zip 1579.43 KB	↓