

**Data sheet | Item number: 750-494**

3-Phase Power Measurement; 480 VAC, 1 A

[www.wago.com/750-494](http://www.wago.com/750-494)**Item description**

The 750-494 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 via current transformers.

The 3-phase power measurement module transmits all metrics (e.g., reactive/apparent/effective power, energy consumption, power factor, phase angle, frequency, over-/undervoltage) directly to 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. These metrics enable the operator to optimize supply to a drive or machine, protecting the system from damage and failure. The four-quadrant display indicates the load type (inductive, capacitive) and whether it is an energy consumer or producer.

**Data****Technical data**

Number of measurement inputs	6 (3 voltage measurement inputs, 3 current measurement inputs)
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.)	1072 k $\Omega$
Current path input resistance (typ.)	22 m $\Omega$
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.)	1 A
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
Rated voltage	$U_{LN} = 277$ V AC/DC; $U_{LL} = 480$ 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

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

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Measurement method	True RMS measurement
Supply voltage (system)	5 VDC; via data contacts
Power consumption (5 V system supply)	100 mA
Isolation	4 kV system/field
Rated surge voltage	4 kV

**Connection data**

Connection technology: inputs/outputs	8 x CAGE CLAMP®
Connection type (1)	Inputs/Outputs
Solid conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Fine-stranded conductor	0.08 ... 2.5 mm <sup>2</sup> / 28 ... 14 AWG
Strip length	8 ... 9 mm / 0.31 ... 0.35 inch

**Physical data**

Width	12 mm / 0.472 inch
Height	100 mm / 3.937 inch
Depth	67.8 mm / 2.669 inch
Depth from upper edge of DIN-rail	60.6 mm / 2.386 inch

**Mechanical data**

Mounting type	DIN-35 rail
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**Material data**

Color	light gray
Housing material	Polycarbonate; polyamide 6.6
Fire load	0.88 MJ
Weight	49.6 g
Conformity marking	CE

**Environmental requirements**

Surrounding air temperature (operation)	0 ... 55 °C
Surrounding air temperature (storage)	-40 ... 85 °C
Protection type	IP20
Pollution degree (5)	2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying); vertical

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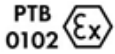
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Relative humidity (without condensation)	95 %
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	per EN 61000-6-2
EMC emission of interference	per EN 61000-6-3
Exposure to pollutants	Per IEC 60068-2-42 and IEC 60068-2-43
Permissible H <sub>2</sub> S contaminant concentration at a relative humidity 75 %	10 ppm
Permissible SO <sub>2</sub> contaminant concentration at a relative humidity 75 %	25 ppm

## Approvals / Certificates

## Ex-Approvals

Logo	Approval	Additional Approval Text	Certificate name
 Ex nA IIC T4 Gc	<b>CCCEX</b> CQST/CNEx	CNCA-C23-01	2020312310000215 (Ex nA IIC T4 Gc)
	<b>EAC</b> Brjansker Zertifizierungsstelle	TP TC 012/2011	EAC RU C-DE.AM02. B.00163/19 (2Ex nA IIC T4 Gc X)
	<b>IECEX</b> TUEV Nord Cert GmbH	IEC 60079-0	IECEX TUN 09.0001 X
	<b>INMETRO</b> TÜV Rheinland do Brasil Ltda.	IEC 60079	BR-Ex_TÜV 12.1297 X
	<b>TUEV Nord</b> TUEV Nord Cert GmbH	EN 60079-0	TÜV 07 ATEX 554086 X en.

## Ship Approvals

Logo	Approval	Additional Approval Text	Certificate name
	<b>PRS</b> Polski Rejestr Statków	-	TE/2236 /880590/19
	<b>RINA</b>	-	ELE066419XG

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RINA Germany GmbH

## UL-Approvals

Logo	Approval	Additional Approval Text	Certificate name
	UL UL International Netherlands B.V. (ORDINARY LOCATIONS)	UL 508	E175199 Sec.1

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