

**Data sheet | Item number: 750-493/000-001**

3-Phase Power Measurement; 480 VAC, 5 A

[www.wago.com/750-493/000-001](http://www.wago.com/750-493/000-001)**Item description**

The 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 the root mean square values into the process image without requiring high computing power from the controller. For each phase, the effective power (P) and the energy consumption (W) are calculated by the 3-phase power measurement module using the root mean square values for all measured voltages (V) and currents (I). For example, both the apparent power (S) and phase shift angle ( $\phi$ ) can be easily derived from these values.

Therefore, the 3-phase power measurement module provides comprehensive network analysis via fieldbus. Metrics, such as effective and apparent power consumption or load condition, enable the operator to optimize supply to a drive or machine. This can protect the installation from damage and failure.

**Data****Technical data**

Number of measurement inputs	6 (3 voltage measurement inputs, 3 current measurement inputs)
Signal type	Power measurement
Signal form	Any (taking the maximum frequency into account)
Resolution [bit]	16 Bit
Data width	2 x 48-bit data; 2 x 24-bit control/status (optional)
Voltage path input resistance (typ.)	1071 k $\Omega$
Current path input resistance (typ.)	5 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.)	5 A
Measurement voltage (max.)	500 VAC, 3 phases
Measurement cycle time	Adjustable measuring cycle time for Min_Max_Values
Frequency range with activated DC filter	10 ... 2000 Hz
Frequency range with deactivated DC filter	0 ... 2000 Hz
Frequency range (mains frequency)	45 ... 65 Hz
Limit frequency	7.2 kHz

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

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Rated voltage	$U_{LN} = 277 \text{ V AC/DC}; U_{LL} = 480 \text{ VAC}$
Calculated values	Active power, active energy, grid frequency, $\cos \varphi$
Measurement components	Evaluating
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	0.877 MJ
Weight	48 g
Conformity marking	CE

**Environmental requirements**

Surrounding air temperature (operation)	0 ... 55 °C
Surrounding air temperature (storage)	-40 ... 85 °C

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Protection type	IP20
Pollution degree (5)	2 per IEC 61131-2
Operating altitude	0 ... 2000 m
Mounting position	horizontal (standing/lying); vertical
Relative humidity (without condensation)	95 %
Vibration resistance	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

**Commercial data**

Packaging type	BOX
Country of origin	DE
GTIN	4055143374422
Customs tariff number	85389099990

**Approvals / Certificates****Ex-Approvals**

Logo	Approval	Additional Approval Text	Certificate name
	<b>ATEX</b> TUEV Nord Cert GmbH	EN 60079-0	TÜV 07 ATEX 554086 X en.
	<b>CCCEX</b> CQST/CNEx	CNCA-C23-01	2020312310000215
	<b>INMETRO</b> TÜV Rheinland do Brasil Ltda.	IEC 60079	BR-Ex_TÜV 12.1297 X
	<b>UL</b> Underwriters Laboratories Inc. (HAZARDOUS LOCATIONS)	UL 121201	E198726 Sec.1

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**Country specific Approvals**

Logo	Approval	Additional Approval Text	Certificate name
☐	<b>KC</b> National Radio Research Agency	Article 58-2, Clause 3	MSIP- REM-W43- AIM750

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**UL-Approvals**

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

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