



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 750-494 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 an 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. The 4-quadrant display indicates the type of load (inductive, capacitive) and whether it is an energy consumer or producer.

Description	Item No.	Pack. Unit
3-Phase Power Measurement Module (480V/1A)	750-494	1
3-Phase Power Measurement Module (480V/5A)	750-494/000-001	1
3-Phase Power Measurement Module (480V/1A)/T Extended temperature range: -20 °C ... +60 °C	750-494/025-000	1
3-Phase Power Measurement Module (480V/5A)/T Extended temperature range: -20 °C ... +60 °C	750-494/025-001	1
Accessories	Item No.	Pack. Unit
Miniature WSB Quick marking system		
plain	248-501	5
with marking	see Section 11	
Approvals		
Conformity marking	CE	
Marine applications	DNV GL	
UL 508		
ANSI/ISA 12.12.01	Class I, Div. 2, Grp. ABCD, T4	
TÜV 07 ATEX 554086 X	I M2 Ex d I Mb, II 3 G Ex nA IIC T4 Gc, II 3 D Ex tc IIIC T135°C Dc	
IECEx TUN 09.0001 X	Ex d I Mb, Ex nA IIC T4 Gc, Ex tc IIIC T135°C Dc	
Technical Data		
Wire connection	CAGE CLAMP®	
Cross sections	0.08 mm² ... 2.5 mm² / AWG 28 ... 14	
Strip lengths	8 ... 9 mm / 0.33 in	
Width	12 mm	
Weight	50.5 g	
EMC immunity of interference	acc. to EN 61000-6-2	
EMC emission of interference	acc. to EN 61000-6-3	

Technical Data	
Number of measurement inputs	6 (3 voltage measurement inputs, 3 current measurement inputs)
Rated voltage	V _{IN} = 277 V AC/DC; V _{UL} = 480 V AC
Input resistance voltage path (typ.)	1072 kΩ
Measuring current (max.)	1 A (750-494, 750-494/025-000) 5 A (750-494/000-001, 750-494/025-001)
Input resistance current path (typ.)	22 mΩ (750-494, 750-494/025-000) 5 mΩ (750-494/000-001, 750-494/025-001)
Resolution	24 bits
Frequency range, power supply frequency	45 Hz ... 65 Hz
Frequency range, harmonics analysis	
Max. operating frequency	0 Hz ... 3300 Hz
Signal form	15.9 kHz
Measuring error for current and voltage	any periodic signals (taking the maximum frequency into account)
	AC: Max. 0.5 %; DC: 1.0 % (of the upper range value); DC measurement (2 channels only)
Measuring procedure	True RMS measurement
Measuring cycle time	Adjustable for arithmetic mean value, Min_Max_Values
Measured values	Line-to-line voltage, power output, energy, power factors, mains frequency, harmonic analysis (up to the 41st harmonic), THD via system voltage internal bus (5 V)
Power supply	
Current consumption (internal)	100 mA
Rated surge voltage	4 kV
Bit width	2 x 128 bits data 2 x 64 bits control/status