

multitek



POWERSIG

The M560 PowerSig is a complete 1 phase or 3 phase multifunction AC power transducer, providing up to 3 analogue outputs and the option of RS485 communication port. Most of the parameters measured by PowerSig can be assigned to the analogue outputs.

PARAMETERS MEASURED

- * Phase Voltage (V)
- * Line Voltage (V)
- * Phase Current (I)
- * Frequency (Hz)
- * Active Power per phase (W)
- * System Active Power (W)
- * Reactive Power per phase (VAr)
- * System Reactive Power (VAr)
- * Apparent Power per phase (VA)
- * System Apparent Power (VA)
- * Import Active Energy (W.h)
- * Export Active Energy (W.h)
- * Import Reactive Energy (VAr.h)
- * Export Reactive Energy (VAr.h)
- * Apparent Energy (VA.h)
- * Ampere Energy (A.h)
- * Power Factor per phase (P.F.)
- * System Power Factor (P.F.)
- * Amp Demand (Ad)
- * Watt Demand (Wd)
- * V A Demand (VAd)
- * Maximum Amp Demand (Max Ad)
- * Maximum Watt Demand Import (Max Wd)
- * Maximum Watt Demand Export (Max Wd)
- * Maximum VA Demand (Max VAd)
- * Neutral Current

ANALOGUE OUTPUTS

Up-to 3 fully isolated analogue outputs are available. Most of the parameters measured can be assigned to the outputs. Outputs can be either DC mA or DC volts.

If PowerSig is purchased without the option of RS485 the user must specify which parameter is required for each output when ordering.

OPTIONS

COMMUNICATION

PowerSig uses RS485 Modbus protocol.

This enables remote reading and programming of the PowerSig via a host computer.

The RS485 allows up to 32 PowerSigs to be connected in parallel, allowing them to be used with PC, PLC, RTU, Data loggers and Scada programs.

The PowerSig's communication port is auto-configurable meaning that when connected to an existing Modbus network it will automatically set Baud rate, Parity and Stop bits. A red LED is provided to indicate power is present, and the unit is communicating correctly.

Programming.

The following can be programmed via the RS485 port: CT and VT ratios, assigning parameters to outputs, pulse duration, relay divisor.

Software.

Set-up and monitoring software is available free from your Multitek distributor or visit the Multitek website www.multitek-ltd.com

PULSED OUTPUT

An option of pulsed output via a relay is offered. The pulsed output can be assigned to W.h, Var.h (import or export), A.h or VA.h. Optionally the relay can also be used as a control relay.

ORDERING INFORMATION

Information required	Example
Product Code	M560-AT9
Nominal input voltage	230 / 400V AC
Nominal input current	5A AC
System Frequency	50Hz
Auxiliary	230V
Output	3 x 4-20mA
Option	RS485 Modbus.

GENERAL SPECIFICATION

INPUT

Rated Un	Direct connected voltages between 57.8 and 600 V. Specify nominal.
Range	2-120% Un
Overload	1.5 x Un cont. 4 x Un for 1 sec
Rated In	1 or 5 amp
Range	0-120% In
Burden	0.5VA per phase Volts & Amps
Overload	4 x In continuous. 50 x In for 1sec
Frequency	50 / 60 Hz nominal range 45/65Hz

ACCURACY

Specified @ 23°C	10%-Un 10%-In
Parameters unless stated	Class 0.3% to IEC 688
Volts and Amps	Class 0.25% to IEC 688
Frequency	Class 0.1Hz to IEC 688
Power Factor	Class 1.0% to IEC 688
Active & Reactive Energy	1% of reading IEC1036

INSULATION

Test Voltage	4 kV RMS 50 Hz for 1 min
	Inputs/Case/Auxiliary/Output
	3kV RS485 / Outputs
	1.5kV Relay
	1kV between Outputs.
Impulse Test	EMC 5kV transient complying with IEC 801 / EN 55020 HF
Surge withstand	IEC 801 / EN55020
	ANSI C37.90A
Interference	EHF 2.5 kV 1Mhz complying with IEC 255-4
Protection Class	Class II complying with IEC348

APPLIED STANDARDS

General	IEC 688 BSEN60688, BS4889, IEC 359
EMC	Emissions EN61326-1
	Immunity EN61326-2
Safety	EN61010-1

AUXILIARY

AC voltage	115 or 230 or 277 volts (±15%)
DC voltage	12 / 24 / 48 / 110 / 125 volts (±15%)

ENVIRONMENTAL

Working Temperature	0 to +60 deg C
Storage Temperature	-30 to +65 deg C
Temperature Coefficient	0.01% per deg C

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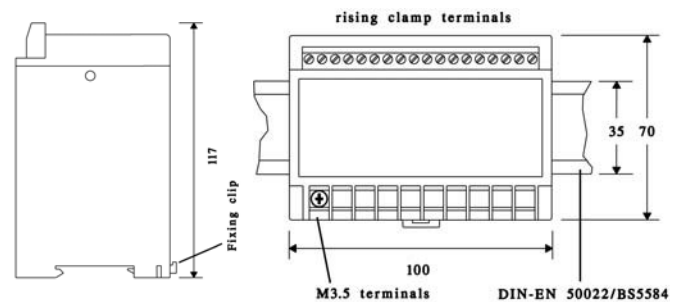
ANALOGUE OUTPUTS

3 outputs	Programmable to any 3 parameters (Apart from energy measurements)
Rated value	Specified @ 20mA
	0-1mA into <10 kOhm load
	0-5mA into <2 kOhm load
	0-10mA into <1 kOhm load
	0-20mA into <0.5 kOhm load
	4-20mA into <0.5 kOhm load
	0-10 volts > 1kOhm load
Load influence	<0.1%
Ripple	<0.5% peak-peak at full load
Response time	<400 msec for 0-99% at full load
Overload	<2 x rated value at full load
No load voltage	< 18 volts

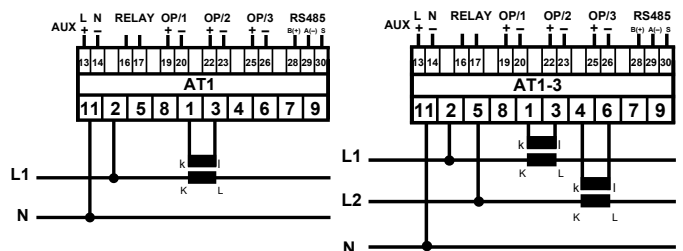
APPROVALS

UL, C-UL, CSA

CASE DIMENSIONS

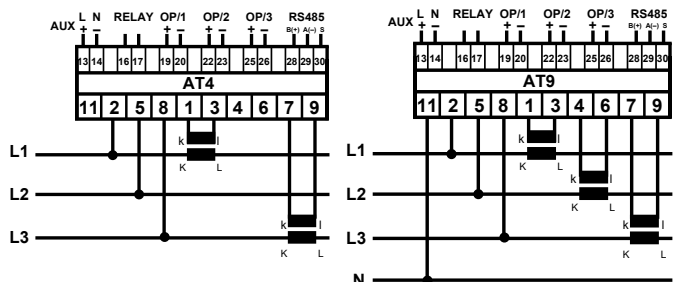


CONNECTION DIAGRAMS



Single Phase

Single Phase 3 Wire



3 Ph 3 W Unbalanced Load

3 Ph 4 W Unbalanced Load