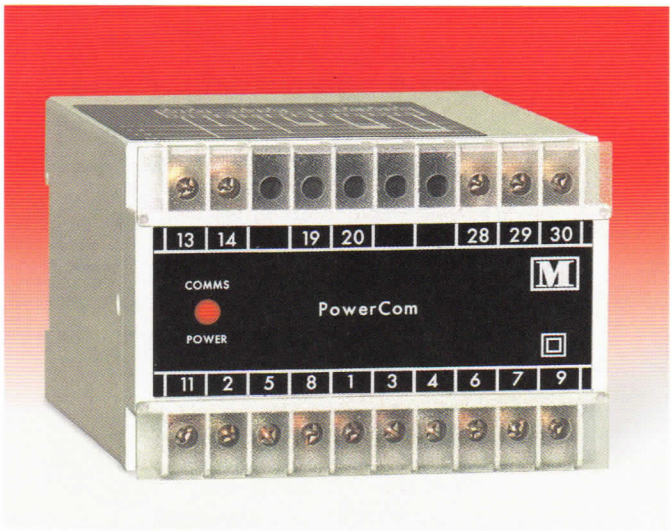
HOBUT



POWERCOM

The M550 PowerCom is a complete 1 phase or 3 phase multifunction AC power transducer packaged in a standard 100mm DIN enclosure. The M550 is fully programmable through the communication port.

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

ACCURACY

The accuracy of the M550 is Class 0.2 to IEC 688 over the range 10% to 120%.
For Active and Reactive energy the accuracy is 1% of reading to IEC 1036.

MEMORY

All data including energy registers, current and voltage ratios and calibration data is stored in a non volatile eeprom.

COMMUNICATIONS

PowerCom uses RS485 Modbus protocol.
This enables remote reading and programming of the PowerCom via a host computer.
The RS485 allows up to 32 PowerComs to be connected in parallel, allowing them to be used with PC, PLC, RTU, Data loggers and Scada programs.
The PowerCom'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.

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.

PROGRAMMING

CT and VT ratios, demand time, assigning relay to different parameters, pulse duration etc. can all be programmed via the RS485 port.
Set-up and monitoring software is available free from your Multitek distributor or visit the Multitek website www.multitek-ltd.com

ORDERING INFORMATION

Information required	Example
Product Code	M550-CT9
Nominal input voltage	230 / 400V AC
Nominal input current	5A AC
System Frequency	50Hz
Auxiliary	230V
Options	Pulsed Output

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 0.2% to IEC688
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 3kV RS485 / 1.5kV Relay
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 II	complying with IEC348

APPLIED STANDARDS

General	IEC 688 BSEN60688, BS4889, IEC 359
EMC	Emissions BSEN50081/1 Immunity BSEN50082/2
Safety	IEC 1010, BSEN601010

AUXILIARY

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

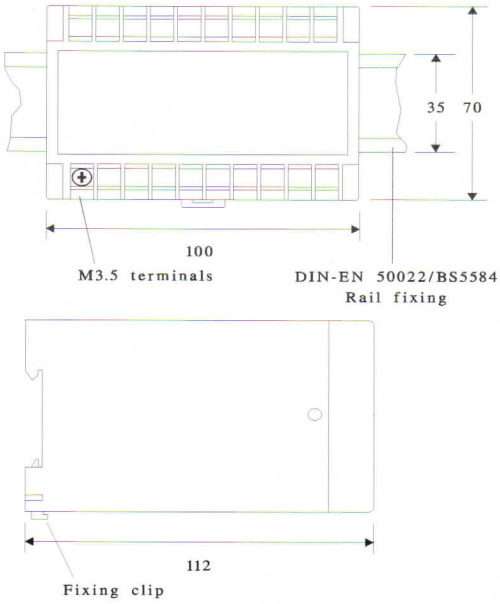
ENVIRONMENTAL

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

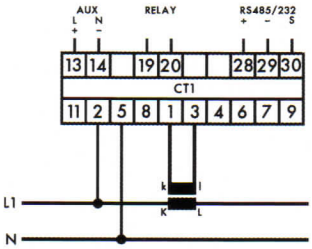
APPROVALS

UL, C-UL, CSA	Pending

CASE DIMENSIONS

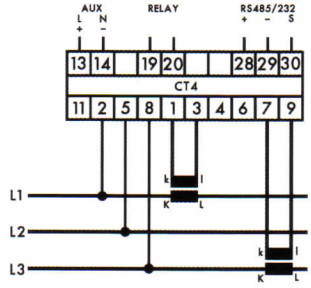


CASE CONNECTION DIAGRAMS



Single Phase

Single Phase 3 Wire



3 Phase 3 Wire Unbalanced Load

3 Phase 4 Wire Unbalanced Load

Our policy is one of continuous development and therefore specifications may change without notice.

HOWARD BUTLER LTD
CROWN WORKS, LINCOLN ROAD
WALSALL WS1 2EB, ENGLAND
Tel: 01922 640003 Fax: 01922 723626
E-Mail: sales@hobut.co.uk Web: www.hobut.co.uk

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 II complying with IEC348

APPLIED STANDARDS

General	IEC 688 BSEN60688, BS4889, IEC 359
EMC	Emissions BSEN50081/1 Immunity BSEN50082/2
Safety	IEC 1010, BSEN601010

AUXILIARY

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

ENVIRONMENTAL

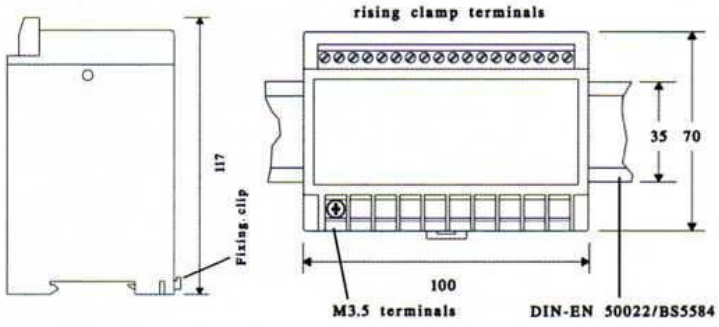
Working Temperature	0 to +60 deg C
Storage Temperature	-30 to +65 deg C
Temperature Coefficient	0.01% per deg C

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

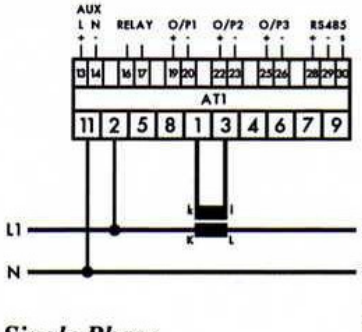
APPROVALS

UL, C-UL, CSA

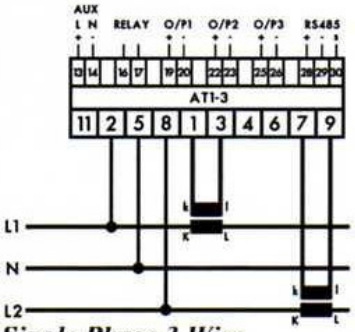
CASE DIMENSIONS



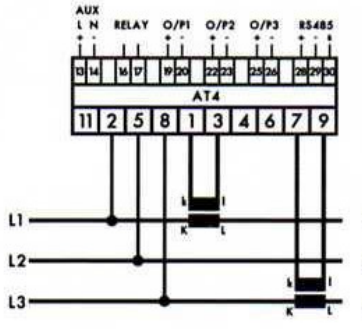
CONNECTION DIAGRAMS



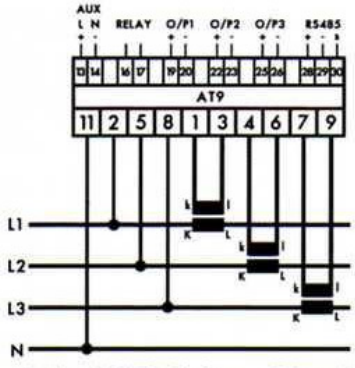
Single Phase



Single Phase 3 Wire



3 Ph 3 W Unbalanced Load



3 Ph 4 W Unbalanced Load