



Boddingtons Power Controls

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UMG 97 PANEL MOUNTED MULTI METER

**3 PHASE MEASUREMENT OF VOLTS – AMPS – POWER FACTOR – KWH – KVARH – THD U – THD I
MAXIMUM DEMAND OVER 5 -15-30- 60 MINUTES. MODBUS OR PULSE OUTPUT**



The UMG 97 is the panel maker's panel meter. Measuring 96 x 96mm with depth 64mm. The device is compact as well as being competitively priced. Data can be extracted by Modbus or Pulse, and this is achieved by plugging modules into the rear of the instrument, so this small extra cost is only added when needed. The instrument is 3 phase 3 or 4 wire. Where no neutral is connected, the UMG 97 will calculate the out of balance current. Unusually for a low cost panel meter of this type the instrument measure Total Harmonic Distortion up to the 31st harmonic, so that the culprit of harmonic distortion – e.g. variable speed drives, UPS or computers – can be easily seen on each feeder.

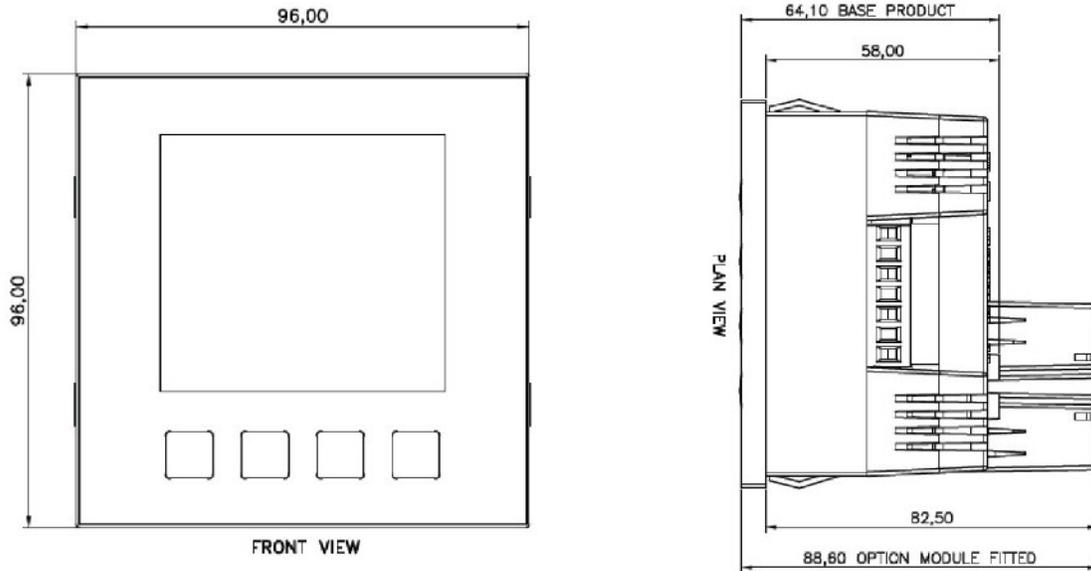
Data Transmission

The output from the Modbus can be fed into a MINISCADA and from there into a PC or the organisation's data network. We are fully experienced in making the necessary Modbus connections and data download facilities if needed. Measured information can then be presented in XL spread sheet form with upper and lower target levels selected. We will be happy to engineer a complete scheme on this The full description of the instrument is included in our data sheet UMG97-1., but the key features are listed below :

Nominal Measured Voltage	100 – 289v L-N ., 173 – 500V L-L . 0.5% accuracy of range maximum
Max permitted continuous overload of Voltage	120% - max 600v L-L
Max Short Duration Over Voltage	2 x range max. for 1 sec. repeated 5 times at 5 min. intervals.
Voltage Burden	0.2VA per phase
Nominal Input Current	5A AC rms 0.5% accuracy ., 4% for I2 in three wire mode . (Only 2 x CT's used)
Max continuous overload of current	120% of nominal
Max short Duration of Current Overload	10x nominal current for 1 sec. repeated 5 times at 5 minute intervals
Frequency	45 – 65 Hz – 0.1 Hz accuracy
Aux Voltage	110-415v AC (99-440v absolute limit).For UL approved installation 110-300v AC. 120-350v DC +- 20% (96-420v absolute Limit) 120 – 300v DC for UL approved installation
Neutral current calculated . , when no neutral connected	4% of range maximum
Power factor	+ -1% of unity accuracy
KW active power	+ - 1% of range maximum
KVAR reactive load	+ - 1% of range maximum
KVA apparent power	+ - 1% of range maximum
Active Energy - KWh	Class 1 (IEC 62053-21)
Reactive Energy – KVARh	+ - 1% of range maximum
THD	+ - 1% up to 31 st . harmonic
Response time	1 sec to min 99% of value
Output modules – Pulse	2 x pulse modules can be fitted . One for kwh and one for kvarh. Contact rating 50mA 250VAC.transistor switch.
Output module – Modbus	1 x Modbus module 2 wire half duplex., baud rate 2400,4800,9600,19200,38400.
Dimensions	96 x 96 facia x 58mm without module With module : depth = 82.5mm
Panel Cut Out	92 x 92mm
Panel Thickness	1-5mm
IP rating	Front : IP52 / Rear IP30
Case Material	UL94V0 Polycarbonate
Weight	0.30kg
Terminals	Shrouded screw clamp for 0.05 - 2.5 sq.mm copper cable. Torque 0.4 Nm.
Operating Temperature	-10+55 deg.C
Storage Temperature	-20+70 deg.C

Relative Humidity	0-90% max.- no condensation of liquid
Shock	30g in three planes
Vibration	10Hz -50Hz IEC 60068-2-6
Dielectric Voltage Withstand Test	3.25kv for 1 minute 1 minute between Comms and measuring inputs ., comms., aux., and aux measuring inputs

DIMENSIONS



WIRING DIAGRAM

