



Matrix Metering Ltd
Electricity Meter Manufacturers
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JG1 Single Phase Electricity Meter

Technical Data Sheet

Order Codes – JG100 – Standard JG100/P Pulsed

Electrical Specification

20 – 100 amp 230 Volts 50 Htz

Meter Constant = 800 pulses Minimum Running Current 0.2%

Power Losses 0/Watts 230v 50 hz

Voltage ccf 5.75VA @ 230v Current cctVA@20A

Accuracy Class 2

Manufactured to ISOEN 1036

Fully complaint to EMS Regulations BS EN 50081 –1 BS EN 50082 –1



Operational Data

Non Registration with voltage alone logical creep inhibits circuit.

Installation Test - 2000V rate of consumption UFD (Red is 8KHz modulated for opto pick up)

Size & Weight

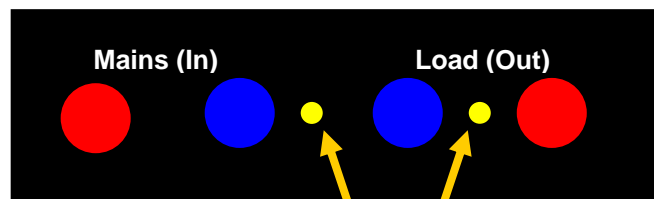
127 mm wide

58 mm deep

177 mm high

0.9kg

Wiring Diagram



Pulse Terminals

Case

Construction – phenolic case, the base of which forms the terminal chamber and the electronic assembly area.

Terminals – Brass to BS 5685 Pt 1 – connect directly to a Manganin shunt in the live circuit

Sealing Points – case and terminals covers are both suitable for Bowden cable seals

Storage & Operating Conditions

Operating – 20c to +55c Storage – 25c to + 70C

Register

7 Digit 4.7 mm high graduated to 0.01 kWh . Mechanical register, driven by stepper motor

Legend Plate - Polycarbonate clip in name plate with integral light guides.

Anti Tamper Features

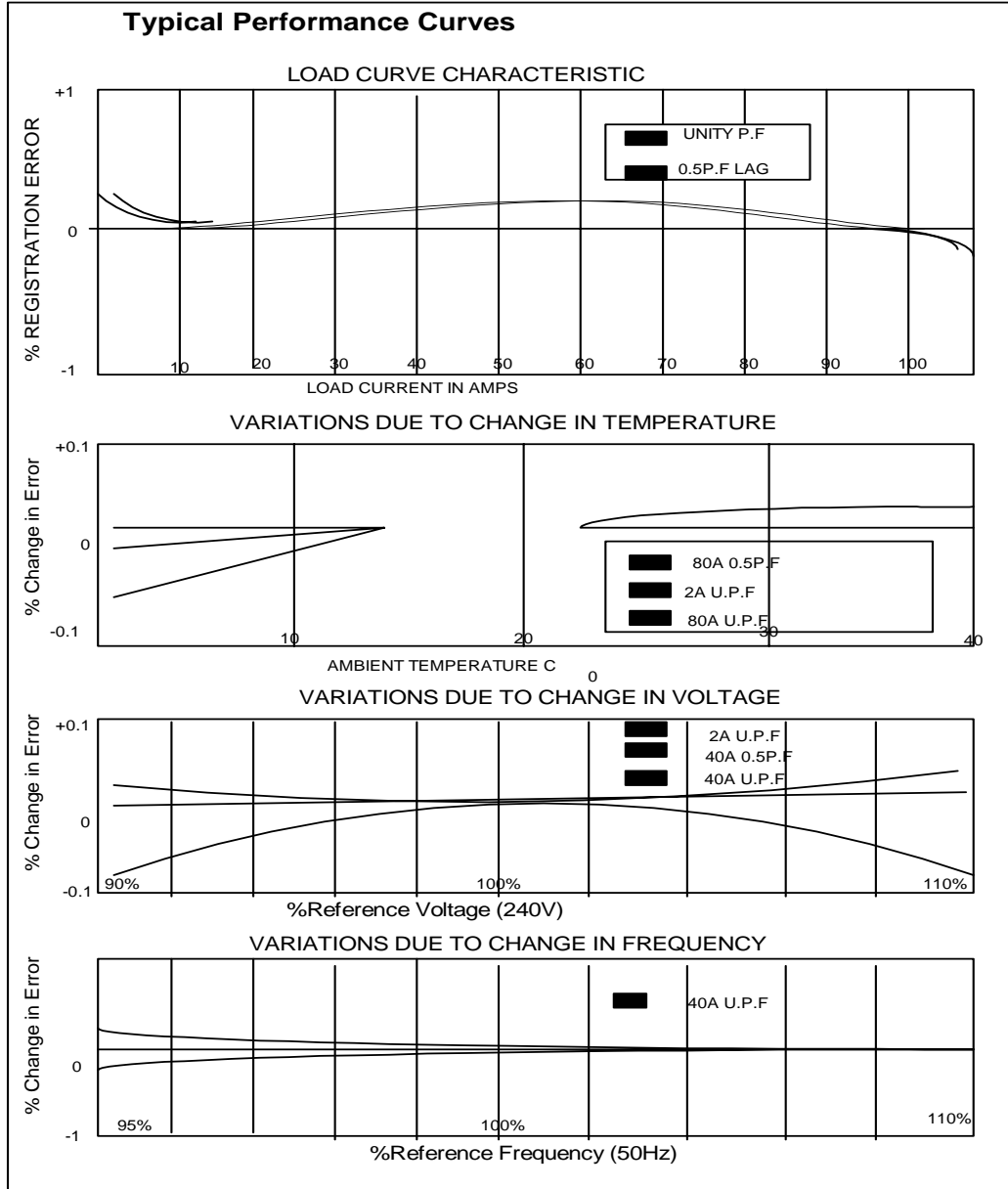
Reverse Current- indicated by Green LED

Compact modular design, with rear seal release points

Hardened mild steel shields are incorporated for improved mechanical and electro magnetic protection.



Meter Typical Performance Curves



Pulse Operation

JG100P – Pulse Meter - provides a reliability with long life operational profile
The pulse collection and transmitting printed circuit board has been designed with the benefits of practical and historical knowledge
Pulses per kWh = 100

Pulse Data

Pulse Width = 250 Ms
Maximum Ratings – Emitter
DC Forward Current + or – 50mA
Surge Forward Current 2.5A



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Total Power Dissipation at 25c	70 mW
Detector	
Collector Emitter Voltage	55v
Emitter Collector Voltage	7v
Collector Current	50 mA
Surge Collector Current`	100 mA
Total Power Dissipation at 25c	150 mW

Package

Isolation Test Voltage between Emitter & Detector	5300VDC
Ref Climate Din 40046 Part 2	
Creepage Distance	7 mm
Clearance Distance	7 mm
Operating Temperature Range	- 55c to +100c

Conformities

ISOEN 1036

The Series 800 complies with IEC 1036 section 4.4.2
Operation over the voltage range complies with IEC 1036 section 4.4.2.1 with permissible error as given in IEC 1036 table 14.
For voltage dips and short interruptions the module complies with IEC 1036 section 4.4.2.2 and tested according to IEC 1036 section 5.4.2.1
Power Burden less than 2VA

EMC

Full compliance meeting generic standard EN50091-2 and immunity standard EN50082-2 for industrial environments



Safety Standard

Complies with EN61010 installation category 11 Pollution degree 2

RoHS & WEE Directives

Compliance with both European directives

