

meters uk Ltd

**Whitegate – White Lund Trading Estate – Lancaster
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web site www.meters.co.uk
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Three Phase Electro Mechanical Kilowatt Hour Credit Meter

Amperage 40 –100amps

Minimum Current 4watt hours

Voltage 230/400 Volts Frequency 50/60Hz

Class 2.0

Manufactured to BS5685 IEC 521

Size – 170mm wide 158 mm deep 202 mm high

Weight – 4.1kg

Meter Case – Phenolic moulded base and integral terminal

block with a glazed phenolic meter cover – security screws optional

Terminal Size - 8.2 mm diameter brass construction to BS 5685 Pt 1

EMC Standards - 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



Typical Technical Information

Current Rating 40 –100 amp

Rotor Speed : rev min (at basic current 230 v)

14.4

Torque:gcm (at basic current 230 v)

13.1

Rotor weight: (g)

28.0

Losses (at 50Hz)

Voltage Coil; (at 230v) Power Loss

1.0

Voltage Coil; (at 230v) Burden VA

5.5

Current Coil (basic current) Power W

1.0

Current Coil (basic current) Burden VA

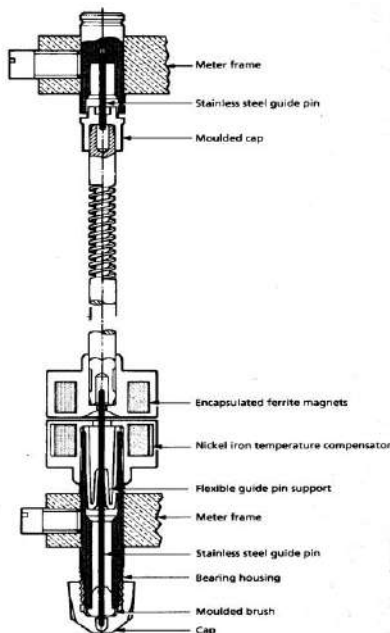
0.8

Two Rate Actuator Coil (230v) Power W

1.0



Magnetic Suspension Bearings



A symmetrical magnetic field set up between fixed and moving high coactivity permanent magnets, supports the rotor, leaving only small transverse forces to be contained by fixed pin and guide bearings. Polished stainless steel guide pins run in bearing which are precision moulded from low friction material. Temperature compensation maintains a constant field strength thus minimising variations in disc height. The Bearing system is fully illustrated.

Technical Data Sheet



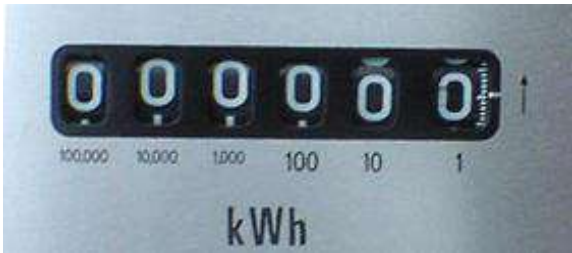
Cert No: 161 0020

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Registers

Two types of interchangeable register



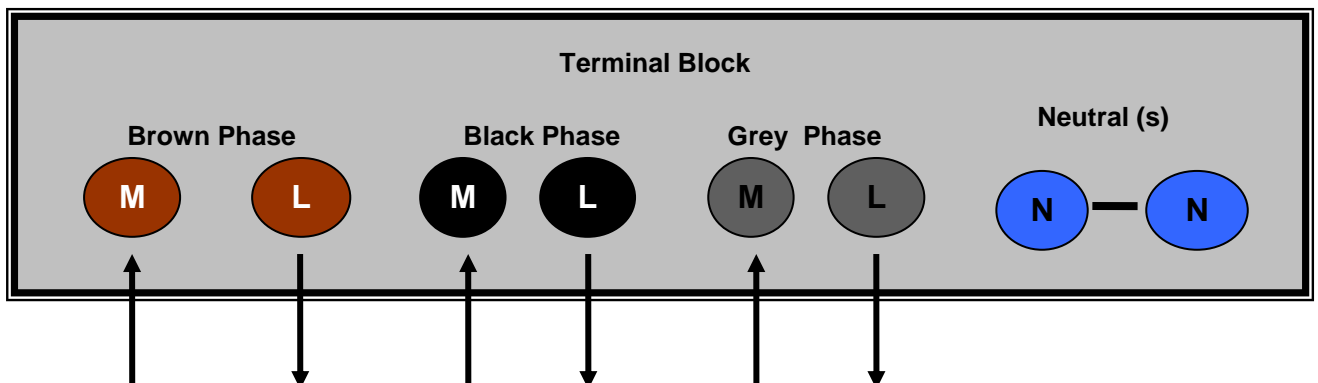
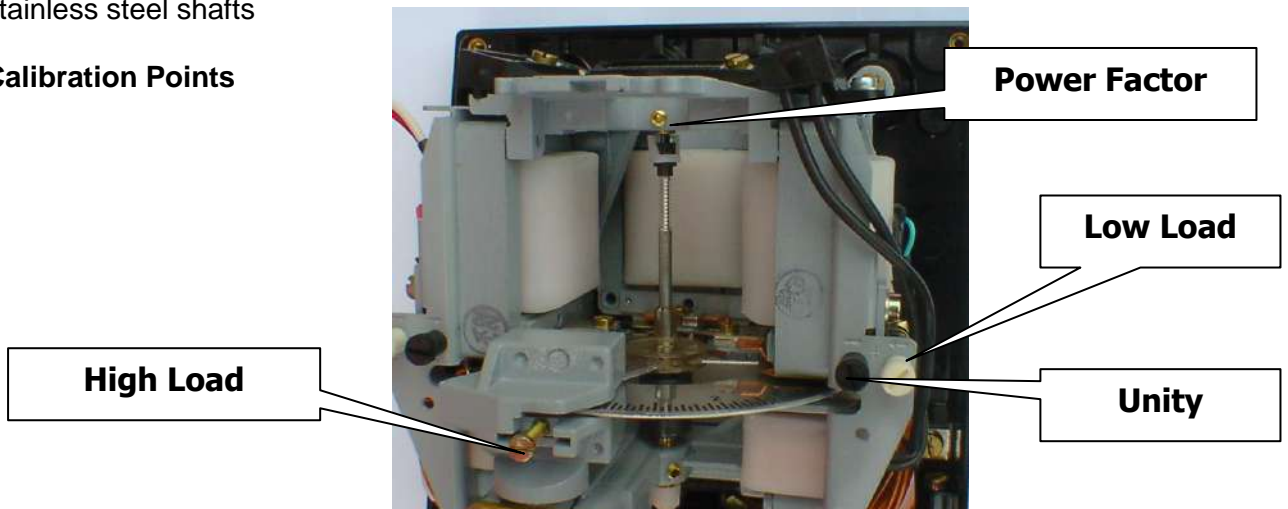
Single Rate 6 figure cyclometer with quick-change number and transfer mechanism

Dual Rate 6 figure cyclometer with two sets of number wheels



All registers have precision moulded gears with low friction coefficient, and polished stainless steel shafts

Calibration Points



Technical Data Sheet



Cell 04/16/0202

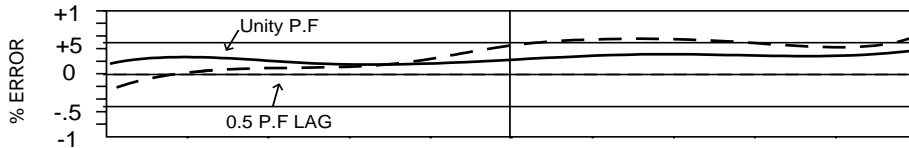
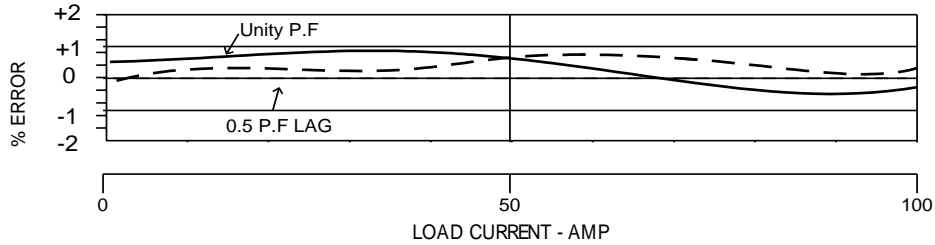
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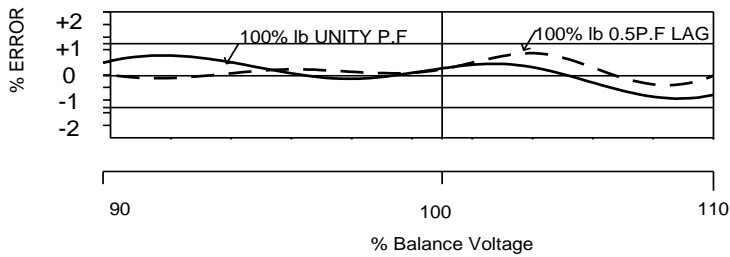
TYPICAL PERFORMANCE CURVES

40-100amps

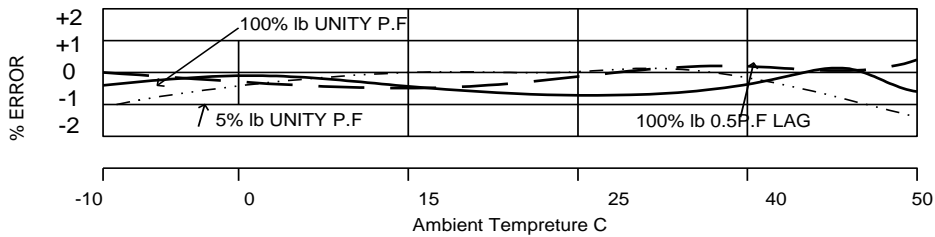
Balanced Load



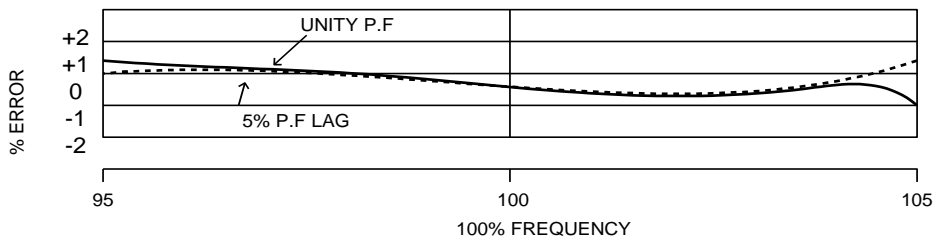
Unbalanced Load. One element only load



Variation due to change in voltage



Variation due to change in temperature



Variation due to change in frequency

Technical Data Sheet



Cell 3/20/06 2006

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Rotor Shaft

Driven by a highly polished worm gear, cut into the rotor shaft

Meter Coils

Are encapsulated in polypropylene

Non-Reverse Device

Fitted at the top of the rotor shaft preventing non reverse power flow

Rotor System

Is a light and rigid aluminium disc which is a diecast to an aluminium alloy shaft

Brake Magnets

The four-pole system has two Alcomax bar magnets with soft iron pole pieces die cast into a rigid aluminium housing. The design minimises rotor vibration and variations in braking torque with disc height

Anti Creep

Two holes in the disc prevent rotation on voltage alone

Testing

Disc has 200 black marking around its edge for testing purposes and a 15mm black edge line

