


# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p><b>UKAS</b> CALIBRATION</p> <p>0446</p> <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Siemens Metering Services</h3> <p>Issue No: 026    Issue date: 2 June 2010</p>	
	<p>Littlebrook Manor Way Dartford Kent DA1 5PS</p>	<p>Contact: Mr Peter Rees Tel: +44 (0)1322 295131 Fax: +44 (0)1322 295019 E-Mail: peter.rees@siemens.com Website: www.siemensenergy.co.uk</p>
<p>Calibration performed by the Organisations at the locations specified below</p>		

### Locations covered by the organisation and their relevant activities

#### Laboratory locations:

Location details		Activity	Location code
<p><b>Address</b> Littlebrook Manor Way Dartford Kent DA1 5PS</p>	<p><b>Local contact</b> Mr Peter Rees</p>	<p>Electrical DC &amp; LF Electrical Power and Energy</p>	<p>Laboratory</p>

#### Site activities performed away from the locations listed above:

Location details		Activity	Location code
<p>Customers' sites or premises</p> <p>The customers' site or premises must be suitable for the nature of the particular calibrations undertaken and will be the subject of contract review arrangements between the laboratory and the customer.</p>	<p><b>Local contact</b> Mr Peter Rees</p>	<p>Electrical Power and Energy</p>	<p>Site</p>



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DETAIL OF ACCREDITATION

Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ( $k = 2$ )	Remarks	Location Code
AC VOLTAGE	30 V to 500 V 45 Hz to 55 Hz	50 ppm	AC power and energy measurements can be made over the voltage range 30 V to 500 V and the current range 10 mA to 10A.  Measurements can be made between 10 A and 100 A but there will be an additional uncertainty of 40 ppm.  The uncertainties shown are for single phase power and energy meters. The calibration of three-phase devices may also be undertaken but there will be an additional uncertainty of 30 ppm.	Laboratory
AC CURRENT	10 mA to 100 A 45 Hz to 55 Hz	100 ppm		Laboratory
AC POWER/ENERGY (Frequency counting method)	45 Hz to 55 Hz:			Laboratory
Active energy	power factor (cos $\phi$ ) $\geq 0.5$ <0.5 to 0.25	60 ppm 60 ppm + 10 ppm/cos $\phi$		
Reactive energy	power factor (sin $\phi$ ) $\geq 0.5$ <0.5 to 0.25	70 ppm 70 ppm + 15 ppm/sin $\phi$		
Active power	power factor (cos $\phi$ ) $\geq 0.5$ <0.5 to 0.25	60 ppm 60 ppm + 10 ppm/cos $\phi$		
Reactive power	power factor (sin $\phi$ ) $\geq 0.5$ <0.5 to 0.25	80 ppm 80 ppm + 15 ppm/sin $\phi$		
(Direct measurement)	45 Hz to 55 Hz:			Laboratory
Active energy	power factor (cos $\phi$ ) $\geq 0.5$ <0.5 to 0.25	80 ppm 80 ppm + 10 ppm/cos $\phi$		
Reactive energy	power factor (cos $\phi$ ) $\geq 0.5$ <0.5 to 0.25	90 ppm 90 ppm + 15 ppm/sin $\phi$		
Active power	power factor (cos $\phi$ ) $\geq 0.5$ <0.5 to 0.25	80 ppm 80 ppm + 10 ppm/cos $\phi$		
Reactive power	power factor (sin $\phi$ ) $\geq 0.5$ <0.5 to 0.25	100 ppm 100 ppm + 15 ppm/sin $\phi$		
FREQUENCY	10 Hz to 10 MHz 10 MHz to 100 MHz	0.10 ppm 1.0 ppm		Laboratory



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Measured Quantity Instrument or Gauge	Range	Calibration and Measurement Capability (CMC) Expressed as an Expanded Uncertainty ( $k = 2$ )	Remarks	Location Code
AC POWER/ENERGY  Specific values of power and energy	47 Hz to 60 Hz:  Voltage: 60 V, 120 V, 240 V and 480 V  Current: 0.05 A, 0.1A, 0.25 A, 0.5 A, 1.0A, 2.5 A, 5 A and 10 A	0.040 %	Specific values are those that lie with $\pm 10\%$ of the values indicated. Site calibration of single-phase devices may be undertaken.  See also Notes 1 and 2.  NOTE 1  The uncertainties shown are for unity power factor. Measurements may be carried out at other power factors, between 0.25 and unity, but there will be an additional uncertainty of $\pm \frac{10}{\cos\theta}$ ppm.  NOTE 2  Measurements may also be made with intermediate currents within the range 25 mA to 10 A but there will be an additional uncertainty of $\pm 0.005\%$ .	Laboratory and Site
END				