


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

 <p>0005</p> <p>Accredited to ISO/IEC 17025:2005</p>	<h3>AREVA T&D UK Limited</h3> <p>Issue No: 017 Issue date: 20 October 2009</p>	
	<p>The Electrical Measurements Laboratory St Leonards Avenue Stafford Staffordshire ST17 4LX</p>	<p>Contact: Mr N J Podmore Tel: +44 (0)1785 223251 Ext 2253 Fax: +44 (0)1785 227729 E-Mail: neil.podmore@areva-td.com Website:</p>
<p>Calibration performed at the above address only</p>		

DETAIL OF ACCREDITATION

Measured Quantity Instrument or Gauge	Range	Best Measurement Capability Expressed as an Expanded Uncertainty ($k=2$)	Remarks
DC RESISTANCE	Specific values as shunts		NOTES
	37.5 $\mu\Omega$	340 ppm (test current 2 kA)	The value of a 4-terminal shunt may be expressed as a terminal voltage at a specific current
	100 $\mu\Omega$ 1 m Ω 10 m Ω 100 m Ω	130 ppm (test current 225 A) 56 ppm (test current 70 A) 26 ppm (test current 14 A) 24 ppm	Calibration can be performed at other test currents but with increased uncertainties
	at negligible power		Supplies up to 4 kA are available to the laboratory
	1 m Ω 10 m Ω 100 m Ω	30 ppm 23 ppm 10 ppm	Resistors of modest dimensions, suitable for oil immersion, can be measured over the temperature ranges 15 °C to 30 °C
	1 Ω 10 Ω 100 Ω 1 k Ω 10 k Ω	7 ppm 3 ppm 2 ppm 2 ppm 4 ppm	
	100 k Ω 1 M Ω 10 M Ω 100 M Ω	8 ppm 14 ppm 19 ppm 38 ppm	
Other values	10 Ω to 100 M Ω	200 ppm	



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DC VOLTAGE	Standard cell values 10 V Up to 10 V Above 10 V to 200 V Above 200 V to 1500 V	0.75 μ V 0.8 ppm 1 ppm + 0.6 μ V 5 ppm 8 ppm	
DC CURRENT	Up to 200 μ A Above 200 μ A to 2 mA Above 2 mA to 20 mA Above 20 mA to 200 mA Above 200 mA to 1 A Above 1 A to 14 A Above 14 A to 100 A Above 100 A to 700 A Above 700 A to 2 kA Above 2 kA to 4 kA	8 ppm + 0.5 nA 11 ppm + 2.5 nA 11 ppm + 25 nA 12 ppm + 0.25 μ A 13 ppm + 2.4 μ A 20 ppm 41 ppm 150 ppm 440 ppm 500 ppm	Supplies available up to 4 kA
DC POWER	Up to 150 kW	The overall power uncertainty will be the sum of the individual uncertainties for the corresponding voltage and current measurements as in this case they are correlated terms.	Limiting voltage 1.5 kV Limiting current 100 A
AC VOLTAGE			
10 mV to 210 mV	40 Hz to 20 kHz 20 kHz to 100 kHz	300 ppm + 12 μ V 500 ppm + 12 μ V	
Above 210 mV to 2.1 V	40 Hz to 20 kHz 20 kHz to 100 kHz	51 ppm + 12 μ V 150 ppm + 12 μ V	
Above 2.1 V to 21 V	40 Hz to 20 kHz 20 kHz to 100 kHz	32 ppm + 120 μ V 56 ppm + 120 μ V	
Above 21 V to 210 V	40 Hz to 20 kHz 20 kHz to 100 kHz	42 ppm + 1.2 mV 72 ppm + 1.2 mV	
Above 210 V to 300 V	10 kHz to 100 kHz	95 ppm + 12 mV	
Above 210 V to 1010 V	40 Hz to 10 kHz	45 ppm + 12 mV	
AC CURRENT			
30 μ A to 210 μ A Above 210 μ A to 2.1 mA Above 2.1 mA to 21 mA Above 21 mA to 210 mA Above 210 mA to 2.1 A	40 Hz to 1 kHz 40 Hz to 1 kHz 40 Hz to 1 kHz 40 Hz to 1 kHz 40 Hz to 1 kHz	200 ppm + 243 nA 60 ppm + 100 nA 63 ppm + 240 nA 75 ppm + 2.4 μ A 120 ppm + 26 μ A	
2.5 A to 1000 A	45 Hz to 60 Hz	0.03 %	Supplies available up to 500 A



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AC CURRENT RATIO Primary Currents 0.25, 0.5, 1, 2.5, 5, 10, 25, 50, 100, 250, 500, and 1000 A Secondary Current 5A only	50 Hz	150 ppm ratio 0.75 minutes of phase (for C T's of accuracy class 0.5 or better) 800 ppm ratio 2.5 minutes of phase (for C T's of accuracy class 0.5 up to 5)	For calibration of current transformers with resistive burdens up to 10 VA Supplies available up to 500 A
AC POWER 2.5 W to 6 kW Above 6 kW to 100 kW	50 Hz to 60 Hz	0.008 % (Limiting current 6 A) 0.014 % (Limiting current 100 A)	[*Limiting voltage 1 kV] at unity power factor The limiting current and voltage are for a single-phase system. For a three-phase system they will be reduced to 25 A and 500 V
PHASE ANGLE 0° to 360°	50 Hz to 5 kHz 5 kHz to 50 kHz 50 kHz to 100 kHz	0.02° 0.04° 0.06°	Equal amplitudes in the range 50 mV to 120 V. Increased uncertainties will apply for unequal amplitudes. The uncertainties relate to the calibration of a phase meter of suitable resolution and stability.
FREQUENCY Specific values	1 Hz, 10 Hz, 50 Hz, 100 Hz, 1 kHz, 10 kHz, 100 kHz, 1 MHz, 5 MHz, 10 MHz	8.1 in 10 ¹²	
TIME INTERVAL	100 μs to 10 minutes	8 in 10 ¹² +1 ns	

END