

Certificate of Accreditation



Yadav Measurements Private Limited

Testing Laboratory No. 2437

Is accredited in accordance with International Standard ISO/IEC 17025:2017 – General Requirements for the competence of testing and calibration laboratories.

This accreditation demonstrates technical competence for a defined scope specified in the schedule to this certificate, and the operation of a management system (refer joint ISO-ILAC-IAF Communiqué dated April 2017). The schedule to this certificate is an essential accreditation document and from time to time may be revised and reissued.

The most recent issue of the schedule of accreditation, which bears the same accreditation number as this certificate, is available from www.ukas.com.

This accreditation is subject to continuing conformity with United Kingdom Accreditation Service requirements.

A handwritten signature in black ink, appearing to read "Matt Gantley", is positioned above a horizontal line.

Matt Gantley, *Chief Executive Officer*
United Kingdom Accreditation Service

Initial Accreditation: 10 April 2003
Certificate Issued: 25 January 2021




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Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

 2437 Accredited to ISO/IEC 17025:2017	Yadav Measurements Private Limited Issue No: 033 Issue date: 20 March 2023	
	Post Box 169 Plot No. F-373 - 375 Riico Bhamashah Industrial Area Kaladwas Udaipur 313 003 India	Contact: Mr B M Vyas Tel: .+91 294 265 0127 Fax: +91 294 265 0129 E-Mail: .yadav.measurements@ymllabs.com Website: www.yadavmeasurements.com
Testing performed at the above address only		

Flexible Scope

The laboratory is accredited to ISO/IEC17025:2017 for testing activities in accordance with the standards listed in the schedule. This may also include tests on the same or similar product types against standards, or customer-specified methods that are not specifically listed in this Schedule, providing that:

- (1) The method or standard does not introduce new principles of measurement.
- (2) The method or standard does not require measurements to be made outside the parametric boundaries defined in this Schedule.

Information about flexible scopes of accreditation is available in UKAS document GEN-4 and EA document EA-2/05.

NOTES

The abbreviation IS refers to Indian Standards and the abbreviation CBIP refers to the Central Bureau of Irrigation and Power, Government of India.

Tests carried out to IS13779:1999 include Amendment 1 (October 2003), Amendment 2 (October 2004), Amendment 3 (December 2004) and Amendment 4 (June 2006), Amendment 5 (March 2015)

Tests carried out to IS14697:1999 include Amendment 1 (October 2003), Amendment 2 (October 2004) and Amendment 3 (December 2004), Amendment 4 (Dec.2014)

Tests carried out to IS13779:1999 and IS14697:1999 include the reaffirmation of those standards that were carried out in 2004.

Tests carried out to CBIP 88:February 2002 include Amendment 4 (2005).

Publication No. 304 is dated 2008 and is published by CBIP.

Publication No. 325 is Jan, 2015 and is published by CBIP.



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DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
<p>Computers and Peripherals Domestic Appliances: Electrical Electrical/Electronic Components Electrical/Electronic Connectors Electrical/Electronic Products Electronic Products: Digital Electro-Mechanical Devices IT Equipment Luminaires Micro-electronic Circuits and Components Office Equipment: Electrical Printed Circuit Boards Electrical equipment for measurement, control and laboratory use Audio, Video and similar electronic apparatus Instruments: Indicating/ Recording Medical & Diagnostic Instruments</p> <p>Measuring Instruments – Electrical measuring transducers</p> <p>Flow/Gas meters</p>	<p align="center"><u>1.0 EMC Tests</u></p> <p>1.1 Conducted Radio interference Emissions Measurement <i>Frequency Range</i> 0.15 MHz to 30 MHz 0 dBμV to 137 dBμV</p> <p>1.2 Radiated Emissions <i>Frequency Range:</i> 30 MHz to 2.5GHz <i>quite zone 2m x 2m x 2m</i> 2.5GHz to 6GHz <i>quite zone 1.5m x 1.5m x 1.5m</i></p> <p>1.3 Immunity to Electrostatic Discharge</p> <p>1.4 Immunity to electromagnetic HF field <i>Frequency Range:</i> 80 MHz to 6 GHz <i>Field strength: upto 30 V/m</i></p> <p>1.5 Electrical fast transient burst test 0.5 kV to 4.0 kV</p> <p>1.6 Surge Immunity Test 0.5 kV to 12 kV</p>	<p>EN55022:2006 EN55022:2006 +A1:2008 CISPR 22 (1997/2006/2008) CISPR 16 -2-1:2008 CISPR 16 -2-1:2014 CISPR 32 (2015)</p> <p>EN55011:2007 CISPR 32 (2015) CISPR 16 -2-3</p> <p>IEC 61000-4-2 (1995) IEC 61000-4-2 (2008) EN 61000-4-2 (1995/2009)</p> <p>IEC 61000-4-3 (2002' 2010) IEC 61000-4-3 (2006) EN 61000-4-3 (2002/2006 +A1:2008 +A2:2010)</p> <p>IEC 61000-4-4 (1995/2004/2012) EN 61000-4-4: 2012</p> <p>IEC 61000-4-5 (1995/2005/2014)+A1 2017 EN 61000-4-5: 2014+A1 2017</p>



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	<u>1.0 EMC Tests (Cont)</u>	
	1.7 Test of immunity to conducted disturbances, induced by radio frequency fields <i>Frequency range: 150 kHz to 80 MHz</i> <i>EMF: upto 10 V rms</i>	IEC 61000-4-6 (1996/2006/2008/2013) EN 61000-4-6: 2014+COR 2015
	1.8 Immunity to power frequency magnetic fields of external origin	IEC 61000-4-8 (2001/2009) EN 61000-4-8 (2001)
	1.9 Damped oscillatory wave immunity test Max Voltage: 2.5 kV Max Current: 25 A	IEC 61000-4-12 (1995) IEC 61000-4-18: 2019 EN 61000-4-18:2019
	1.10 Conducted Disturbance Induced Current 2 kHz to 150 kHz 1 A and 2 A	CLC/TR/50579: 2012
	1.11 Voltage dips and Interruptions Max Voltage : 270 V Time period : 6 ms to 6 min Max current : 2 A	IEC 61000-4-11 : 2004
	1.12 Ring wave test Max Voltage: 6 kV Max Current: 500 A	IEC 61000-4-12: 2017 EN 61000-4-12: 2017
	1.13 EMC Generic & product specific standards. These are accredited to the extent that the basic standards are included above	IEC 62055-31:2005 IEC 62052-21:2004 EN 14236 (2007) and 2018 BS EN 14236 (2007) and 2018 EN 1359 (1999) Incorporating Amendment No. 1 BS EN 1359: 2017 EN 1359: 2017 CISPR 11(2004) BS EN 62052-21:2004



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	<p align="center"><u>2.0 Climatic Tests</u></p> <p>2.1 Dry Heat Test <i>Ambient to +120 °C</i></p> <p>2.2 Cold Test / resistance to storage temperature range <i>Ambient to - 40 °C and + 60 °C</i></p> <p>2.3 Damp Heat Cyclic / resistance to external humidity test <i>Temperature + 20 °C to + 60 °C</i> <i>Relative Humidity 30 % to 95 %</i></p> <p>2.4 Resistance to salt spray</p> <p>2.5 Salt Mist</p>	<p>IEC 60068-2-2 (1994) IEC 60068-2-2 (2007)</p> <p>IEC 60068-2-1 (1994) IEC 60068-2-1 (2007)</p> <p>IEC 60068-2-30 (1980) AMD1 (1985) IEC 60068-2-30:2005</p> <p>BS EN 1359:2017 EN 1359:2017 BSEN 1359:1999 Incorporating Amendment No. 1 EN 1359:1998 + Amendment No. 1 Clause 6.3.2.1.5 & 6.3.2.2.2 ISO 7253:1984. BSEN ISO 7253:2001 , EN ISO 9227:2012 EN ISO 9227:2017 EN 14236:2007 and 2018 BS EN 14236:2007 and 2018</p> <p>Clause 6.3.2.5 & 6.3.3.2</p> <p>IEC 62052-11:2020</p> <p>In house procedure TP-GASM-4.1 As above</p>



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	<p align="center"><u>3.0 Mechanical Tests</u></p> <p>3.1 Vibration test <i>Sweep frequency: 10 Hz to 5 kHz</i> <i>Displacement: 20 mm p-p</i> <i>Capacity: 400 kgf</i></p> <p>3.2 Shock test <i>Peak acceleration: 50 g, Half sine pulse Time duration: 11 ms and 18 ms</i></p> <p>3.3 Protection against dust IP2X, IP5X without suction</p> <p>3.4 Protection against water IPX1, IPX2, IPX3 and IPX4, without suction.</p> <p>3.5 Glow wire test/Resistance to heat and fire</p> <p>3.6 Spring and Pendulum Hammer Test</p>	<p>IEC 60068-2-6 (1995) IEC 60068-2-6 (2007)</p> <p>IEC 60068-2-27 (1987) IEC 60068-2-27 (2007)</p> <p>IS/IEC 60529: 2013</p> <p>IEC60695-2-11:2000</p> <p>IEC60068-2-75 (1997-05) IEC60068-2-75 (2014)</p>
	<p><u>4.0 High Voltage Tests</u></p> <p>4.1 AC Voltage test <i>1 kV to 6 kV</i></p> <p>4.2 Insulation Resistance Test <i>Up to 100 MΩ</i> <i>Test voltage 500V dc</i></p> <p>4.3 Impulse Voltage Test <i>0.5 kV to 12 kV</i></p>	<p>IEC 61000-4-5 (1995/2005/2014) IEC 60060-1 (1989)</p>



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<p>The following tests are paragraph by paragraph from the relevant meter standards and demonstrate the comprehensive nature of the accreditation. In the main the test methods are covered in the basic standards in the previous sections.</p>		
<p>Static Watthour and VAR hour meters, including prepayment meters and smart meters Power metering and monitoring devices (PMD)</p>	<ol style="list-style-type: none"> 1. AC Voltage test <i>1 kV to 6 kV</i> 2. Insulation Resistance Test <i>Up to 100 MΩ</i> <i>Test Voltage: 500 V dc</i> 3. Impulse Voltage Test <i>0.5 kV to 12 kV</i> 4. Limits of Errors 5. Meter Constant 6. Starting Conditions 7. Ambient Temperature Influence 8. Repeatability of errors test 9. Test of power consumption <i>(Upper limits are 100 VA for the current circuit and 10W or 50 VA for the voltage circuit)</i> 10. Influence of Self Heating 11. Influence of Heating 12. Immunity to Earth Fault 13. Test/abnormal voltage condition For test 4 to 13 <i>Single Phase: 0.04 W to 38.4kW</i> <i>Three Phase: 0.12 W to 115.2kW</i> <i>30 V to 320 V</i> <i>1 mA to 240 A</i> 14. Start Up Test of energy meters <i>30 V to 320 V</i> 	<p>IEC62052-11 (2003) + A1:2016 IEC 62052-11:2020 IEC 62053-21 (2003) + A1:2016 IEC 62053-21:2020 IEC 62053-22 (2003) + A1:2016 IEC 62053-22:2020 IEC 61000-4-5(1995) IEC 61000-4-5(2014) IEC 60060-1 (1989) IEC 61000-4-5 (2005) IEC 62053-23(2003) + A1:2016 IEC 62053-23:2020 IEC 62053-61: 1998 IEC62052-21:2004 IEC 60601-1-2: 2001 IEC62055- 31:2005 IEC62053- 23 (2003) IEC 60695-2-10(2000) IEC 60695-2-11(2000) IEC 62059-32-1:2011 IEC 62053-24 (2014) + A1:2016 IEC 62053-24:2020 IEC 62053-31 (2015) BS EN 62053 -21:2003 AS 62053.22 (2005) BS EN 62053 -22:2003 BS EN 62053 -23:2003 BS EN 60687:1993 BS EN 61036:1997 BS EN 62052- 11:2003 BS EN 62052- 21:2004 BS EN 62054- 21:2004 IEC 60068-2-30 AMD1(1985)</p>



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Static Watthour and VAR hour meters, including prepayment meters and smart meters, Power metering and monitoring devices (PMD) (cont'd)	15. No load condition <i>30 V to 320 V</i> 16. Short time over voltage test 17. Spring and pendulum hammer tests <i>0.20 Nm, 0.22 Nm, 0.35 Nm, 0.50 Nm, 0.70 Nm, 1.00 Nm</i> 18. Resistance to heat and fire <i>Up to 1000 °C</i> 19. Tests of effect of voltage dips and short interruptions / influence of supply voltage <i>At 63.5 V, 110 V and 240 V; 50Hz</i> 20. Interpretation of test results and adjustments 21. Test of influence quantities (a)Voltage variation, (b)Frequency Variation, (c)Reverse phase sequence, (d)Voltage unbalance, (e)Auxiliary voltage, (f)Harmonic components in current and voltage circuits, (g)10 percent of third harmonics, (h)Sub-harmonics in a.c. circuit (i)Continuous magnetic induction of external origin, (j)Continuous abnormal magnetic induction of external origin (k)Magnetic induction of external origin, (l)DC and even harmonics in AC circuit, (m)Odd harmonics in AC circuit, (n)Operation of accessories (o)Abnormal AC magnetic induction of external origin (<i>10mT, 200mT</i>) <i>Single Phase: 0.04 W to 38.4 kW</i> <i>Three Phase: 0.12 W to 115.2 kW</i>	AS 62053.23(2006) AS 62052-21:2006 AS 62052.11 (2005)) AS 62053-22 (2005) AS 62054.21 (2006) AS 62053.21 (2005) EN50470 -1:2006 EN50470 -1:2006 + A1 2018 EN50470 -3:2006 EN50470 -3:2006+ A1 2018 EN60068-2-75(1997) NMI M6 (2012) NMI-M6:2020 OIMLR46-1/-2 Ed 2012 IEC 61000-4-11 :2004 IEC 61557-12 :2018



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Static Watthour and VAR hour meters, including prepayment meters and smart meters, Power metering and monitoring devices (PMD) (cont'd)	22. Short time over current test <i>20 A to 7000 A</i> <i>(1/2 cycle to 50 cycles)</i> <i>(1/2 cycle up to 12 kA peak)</i> 23. Short time over current test <i>up to 1000 A for up to 25 cycles and</i> <i>up to 7000 A (½ cycles)</i> 24. Surge Immunity Test <i>0.5 kV to 12 kV</i> 25. Electrical fast transient burst test <i>0.5 kV to 4.0 kV</i> 26. General and constructional / Mechanical requirements (A)General: (a)Meter case (b)Display of measured values (c)Output device Optical output device characteristics. Irradiance and pulse parameters (d)Window (B)Terminal: (a)Terminal block(s) - Protective earth terminal, including heat deflection test (b)Terminal cover(s) (c)Clearance and Creepage distances (d)Insulating encased meter of protective class II	<p align="center">As listed on pages 6 & 7</p> <p>BS EN / EN 16314:2013 (24 & 25 only)</p>



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Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
	<p>27. Meter Marking and documentation</p> <p>28. Time keeping Accuracy</p> <p>29. Durability</p> <p>30. Pulse outputs</p> <p>31. Electrical pulse inputs</p> <p>32. Fast load Current Variation</p> <p>33. Conducted Radio Interference Emissions Measurement <i>Frequency Range</i> <i>0.15 MHz to 30 MHz</i> <i>0 to 137 dBµV</i></p> <p>34. Test of immunity to conducted disturbances, induced by radio frequency fields <i>Frequency range 150 kHz to 80 MHz, EMF: up to 10 V rms</i></p>	<p>BS EN / EN 16314:2013 (28 only)</p>



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Static Watthour and VAR hour meters, including prepayment meters and smart meters, Power metering and monitoring devices (PMD) (cont'd)	35. Immunity to electromagnetic HF field <i>Frequency Range: 80 MHz to 6GHz</i> <i>Field strength: up to 30 V/m</i> 36. Radiated Emissions Measurement <i>Frequency Range: 30 MHz to 6GHz</i> <i>Range: 0 to 137 dBμV</i> 37. Damped oscillatory wave immunity test 38. Immunity to Electrostatic Discharge 39. Immunity to power frequency magnetic fields of external origin 40. Dry Heat Test <i>Ambient to +120 °C</i> 41. Cold Test <i>Ambient to - 40 °C</i> 42. Damp Heat Cyclic test <i>Temperature + 20 °C to + 70 °C</i> <i>Relative Humidity 30 % to 98 %</i> 43. Operation within the specified operation range 44. Operation within the limit range of operation 45. Storage and transport outside the limit range of operation 46. load switching capability 47. Token carrier interface 48. Vibration test <i>Sweep frequency: 10 Hz to 3 kHz</i> <i>Displacement: 20 mm p-p</i> <i>Capacity 400 kgf</i>	<p style="text-align: center;">As listed on pages 6 & 7</p>



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Static Watthour and VAR hour meters, including prepayment meters and smart meters, Power metering and monitoring devices (PMD) (cont'd)	49. Protection against dust and water <i>IPX1, IPX2, IPX3, IPX4 and IP5X without suction.</i> 50. Shock test <i>Peak acceleration: 50 g</i> <i>Half sine pulse</i> <i>Time duration: 11 ms and 18 ms</i> 51. Requirement of time keeping 52. Test of keeping time 53. Test of consumption based charging functions 54. Test of time-based charging functions 55. Functional requirements (a)General (b)Robustness of meter accounting process 56. Stability of meteorological Characteristics by applying elevated temperature. 57. High order Harmonics (Test of influence) 58. Test of intrinsic uncertainty 59. Tests of variation of uncertainty with influence quantities 60. Measurement of voltage harmonics and THDu 61. Measurement of current harmonics and THDi 62. Test of compliance voltage and effect of variation of load 63. Test of ripple content 64. Tests of analog output response time 65. Test of limit value of analog output 66. Voltage dip and voltage swell measurements 67. Voltage interruption measurements 68. Voltage unbalance measurements 69. Current unbalance measurements	<p align="center">As listed on pages 6 & 7</p>



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Particular requirement for time switches (synchronized & crystal controlled) (cont'd)	<p>11. Requirement for synchronous time and crystal switches - test of time keeping accuracy <i>(a) test of synchronous and crystal controlled time switches</i> <i>(b) test of synchronous and crystal controlled time switches on operation reserve</i></p> <p>12. Test of time keeping accuracy of crystal-controlled time switches with temperature <i>Frequency: 45 Hz to 65 Hz</i> <i>Single phase: 0.04 W to 38.4 kW</i> <i>Three Phase: 0.12 W to 115.2 kW</i> <i>Temperature -10 °C to + 40 °C</i></p> <p>13. Switching accuracy <i>time up to 168 hours</i> <i>(a) test on time switches with dials</i> <i>(b) test on time switches with digital displays</i> <i>(c) synchronization (time up to 1 minute)</i></p> <p>14. Test of influence of harmonics <i>Single phase: 0.04 W to 38.4 kW</i> <i>Three Phase: 0.12 W to 115.2 kW</i> <i>Time up to 30 days</i></p>	
Tariff and load control equipment	<ol style="list-style-type: none"> Electrical requirements and tests Supply frequency range Output elements 	AS62052-21:2006 EN 62059-32-1:2012
Measuring Instruments - Electrical measuring transducers	<ol style="list-style-type: none"> Environmental condition test 	IEC 60688 (2015)



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	<ol style="list-style-type: none"> 2. Variations due to Auxiliary Supply Voltage 3. Variations due to Auxiliary Supply frequency 4. Variations due to Ambient Temperature 5. Variations due to the frequency of the input quantities 6. Variations due to input Voltage 7. Variations due to input Current 8. Variations due to power factor 9. Variations due to output load 10. Variations due to distortion of the input quantities 11. Variation due to magnetic fields of external origin 12. Variation due to unbalanced currents 13. Variation due to the interaction between measuring elements 14. Variation due to self-heating 15. Variation due to continuous operation 16. Permissible excessive inputs 17. Continuous excessive inputs 18. Excessive inputs of short duration 19. Variation due to common mode interference 20. Variation due to series mode interference 21. Test of limits of Intrinsic Error 22. Marking 23. Test for temperature rise 24. Limiting condition for storage and transport (up to 80 °C 25. Response time (<i>up to 700 ms</i>) 	<p>IS 12784 part 1 (1989) IEC 60521 (1988) IEC 61000-4-12 (1995) IEC 61010-1(2001)</p>



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Measuring Instruments - Electrical measuring transducers (cont'd)	26. Limiting value of output (0 V to 320 V, 0 A to 120 A) 27. Sealing verification 28. Ripple content of output (0 V to 320 V, 0 A to 120 A) 29. Over range of measurand (0 V to 320 V, 0 A to 120 A) and other safety requirements 30. Impulse voltage tests 31. High frequency disturbance test 32. Voltage test, insulation tests	As listed on previous page



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Electricity Metering Equipment (AC)	Information and marking requirements (clause 5) General. Labels, signs and signals. Information for selection. Information for installation and commissioning. Information for use. Information for maintenance. Protection against electrical shock (clause 6) General requirements Determination of accessible parts. Limit values for accessible parts. Primary means of protection (protection against direct contact). Additional means of protection in case of single fault conditions (protection against indirect contact). Connection to external circuits. Insulation requirements. Insulation requirements between circuits and parts. Constructional requirements for protection against electric shock. Safety related electrical tests.	IEC 62052-31:2015 AS 62052-31:2017 Clause 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 Annex A to K



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Electricity Metering Equipment (AC) (cont'd)	Protection against mechanical hazards (7) General. Sharp edges. Provisions for lifting and carrying. Resistance to mechanical stresses (8) General. Spring hammer test. Protection against spread of fire (9) General. Eliminating or reducing the sources of ignition within the equipment. Containment of fire within the equipment, should it occur. Limited-energy circuit. Overcurrent protection Equipment temperature limits and resistance to heat (10) Surface temperature limits for protection against burns. Temperature rise limits for terminals. Temperature of internal parts. Temperature test. Resistance to heat. Protection against penetration of dust and water (11) Protection against liberated gases and substances explosion and implosion - Batteries and battery charging (12) Components and sub-assemblies (13) General. Mains transformers tested outside equipment. Printed wiring boards. Components bridging insulation. Circuits or components used as transient overvoltage limiting devices. Hazards resulting from application - Reasonably foreseeable misuse (14) Risk Assessment (15)	IEC 62052-31:2015 AS 62052-31:2017 Clause 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 Annex A to K



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Electricity Metering Equipment (AC) (cont'd)	<p>Measuring circuits for touch Current (Annex A) Examples for insulation between Parts (Annex B) Examples for direct connected meters equipped with supply control and load control switches (Annex C) Test circuit diagram for the test of long term overvoltage withstand (Annex D) Test circuit diagram for short current test on the current circuit of direct connected meters (Annex E)</p> <p>Examples for voltage tests (Annex F) Additional a.c. voltage tests for electromechanical meters (Annex G) Test equipment for cable flexion and pull test (Annex H) Routine tests (Annex I) Examples of battery protection (Annex J) Rationale for specifying overvoltage category III (Annex K)</p>	



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ISO/IEC 17025:2017

Schedule of Accreditation
issued by
United Kingdom Accreditation Service
2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

Yadav Measurements Private Limited
Issue No: 033 Issue date: 20 March 2023

Testing performed at main address only

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
Diaphragm, Ultrasonic and Thermal mass flow domestic gas meters	<p>Metrological performance: Permissible errors of indication Carried out on air only from 0.016 m³/hour to 10 m³/hour Pressure absorption Starting flow rate Zero flow Metrological stability Overload flow rate Environment and humidity Influence of other devices attached to the meter Cyclic volume Gas — air relationship Immunity to contaminants in gas stream Installation effects Reverse flow Low and high flow registration Pulsed (unsteady) flow Flow disturbance tests Temperature sensitivity Reproducibility Repeatability Vibrations and shocks Test mode comparison</p>	<p>BS EN 1359:2017 EN 1359:2017 BS EN 14236:2018, EN 14236:2018, EN 16314:2013 BS EN 16314:2013, OIML R137-1&2:2012(E) Including Amendment 2014 EN 17526:2021 excluding 5.8.2.3, 5.8.2.4 and 13.5.2</p> <p>BS EN 1359:1999 Incorporating Amendment No. 1 (superseded) EN 1359:1998 + Amendment No. 1 (superseded) EN 14236:2007 (superseded) BS EN 14236:2007 (superseded)</p>



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Diaphragm, Ultrasonic and Thermal mass flow domestic gas meters	Construction and material properties: Resistance to interference Robustness External leak tightness Resistance to internal pressure Meter case sealing Connections Resistance to vibration Resistance to impact Resistance to mishandling Corrosion protection Casework decorative finish Resistance to storage temperature Optional features Pressure measuring point Electrical insulating feet Magnetic index drive Devices to prevent the registration of reverse flow Devices to prevent reverse flow Resistance to high temperatures Resistance to external humidity Flame retardance of external surfaces Resistance to the effects of toluene/iso-octane vapour Resistance to water vapour Meters with temperature conversion Additional functionalities Ageing Ancillary devices	BS EN 1359:2017 EN 1359:2017 BS EN 14236:2018, EN 14236:2018, excluding 6.7 Protection against solar radiation EN 16314:2013 BS EN 16314:2013, OIML R137-1&2:2012(E) Including Amendment 2014 IEC 60068-2-1 IEC 60068-2-2 IEC 60068-2-30 IEC 60068-2-31 IEC 60068-2-47 IEC 60068-2-64, IEC 60068-2-78 EN 17526:2021 BS EN 1359:1999 Incorporating Amendment No. 1 (superseded) EN 1359:1998 + Amendment No. 1 (superseded) EN 14236:2007 (superseded) BS EN 14236:2007 (superseded)



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Diaphragm, Ultrasonic and Thermal mass flow domestic gas meters	<p>Mechanical performance: Durability Meter error of indication at declared gas temperature limits Error of indication subject to declared ambient temperature limit Index Construction details Index windows and surround Diaphragms and components in the gas path Toluene/iso-octane vapour test Water vapour test Ageing Marking Durability and legibility of marking Ultraviolet exposure test Indelibility Adhesion Accompanying information Security Software Battery Voltage interruptions Minimum operating voltage Battery life Immunity to electromagnetic disturbances Electrostatic discharge Radio frequency electromagnetic field Electromagnetic induction (power frequency) Electromagnetic induction (pulsed field) Radio interference suppression DC mains voltage variation: influence test AC mains voltage variation: influence test AC mains voltage dips and short interruptions: disturbance test Low voltage of internal battery (not connected to the mains power): influence test</p>	<p>BS EN 1359:2017 EN 1359:2017 BS EN 14236:2018, EN 14236:2018, EN 16314:2013 BS EN 16314:2013, OIML R137-1&2:2012(E) Including Amendment 2014 EN 17526:2021 excluding 13.5.2</p> <p>BS EN 1359:1999 Incorporating Amendment No. 1 (superseded) EN 1359:1998 + Amendment No. 1 (superseded) EN 14236:2007 (superseded) BS EN 14236:2007 (superseded)</p> <p>EN 17526:2021 IEC 61000-4-3 IEC 61000-4-6 IEC 61000-4-2 IEC 61000-4-4 IEC 61000-4-5 IEC 60654-2 IEC/TR 61000-2-1 IEC 61000-4-11, IEC 61000-6-1, IEC 61000-6-2</p>



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Diaphragm, Ultrasonic and Thermal mass flow domestic gas meters	<p>Additional functionality Types of additional functionality devices AFD1, AFD2, AFD3 Climatic environments Closed location Safety requirements Expected lifetime Security Power system Display Diagnostics Metrological influence AFD connections Input to AFD & Output from AFD Data storage Time interval accuracy Energy Calculation within the meter/AFD Tariffs Display/Human interface Gas valve and System Design Quality Valve operation & performance Display of valve related information Valve closing & opening Electrical Safety Registers Prepayment System History of Consumption Memory Access profiles Non-volatile memory Water vapour Endurance Documentation Ageing Marking</p>	EN 16314:2013
END		