





	TEST CERTIFICATE	 T-0347
	Issued By : YADAV MEASUREMENTS PRIVATE LIMITED Regd Office & works : Post Box no. 169, Plot no. 373-375 RIICO Bhamashah Industrial Area, Kaladwas Udaipur-Rajasthan - 313003, INDIA Tel: 0091-294-2650127,28, Fax: 0091-294-2650129 Email: Yadav.measurements@ymllabs.com website: www.yadavmeasurements.com CIN number: U31909RJ2003PTC018450	

Certificate number: YMPL/262439/64281		Page 1 of 5
1.a	Tested for:-	RISHABH INSTRUMENTS PRIVATE LIMITED, F-31, MIDC SATPUR, NASHIK, MAHARASHTRA, 422007, INDIA
1.b	Submitted by:	RISHABH INSTRUMENTS PRIVATE LIMITED, F-31, MIDC SATPUR, NASHIK, MAHARASHTRA, 422007, INDIA
2.	Reference:-	
	Customer order number:	-Nil-
	Service request form number:	2014-2015/1009/6
	Date:	16 th October, 2014
	Date of receipt of the instrument:	16 th October, 2014
	Condition of item on receipt:	Satisfactory
3.	Test certificate:	
	Date of issue:	16 th December, 2014
	Date of testing:	9 th December, 2014
4.	Description of equipment under test:-	
	Number of samples:	2
	Nature of sample:	POWER QUALITY MONITOR
	Sr. No.	14/07/0107, 14/07/0108
	Aux. Supply:	60-300V AC/DC
	Input Voltage:	500V L-L
	Current rating:	5A/1A
	Impulse Constant:	4000 imp/kWh
	Type/Model :	RISH PQM
	Reference frequency:	45Hz-65Hz
	Accuracy Class:	0.5s

This certificate is issued in accordance with the laboratory accreditation requirements of the National Accreditation Board for testing and calibration Laboratories (NABL). This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.	
Checked by :  Sign. :  Name : PRADEEP BHANAWAT	Approved by :  Sign. :  Name : ABHIJAT DUBE

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5	Tests details:- D=Test done, ND=Test not done, NA=Test not applicable, PD=Test partially done C: Conform, NC= Non Conform		
5.1	Test specification as per IEC 61326-1:2012 Amend 0 and test procedure as per IEC 61000-4-5:2005 for Surge immunity test.		
A	Surge immunity test.	D	C
6.	Note:- 1) This Certificate relates only to the particular samples received for testing at YMPL. 2) Only the test(s) asked by the customer has been carried out. 3) This certificate, in full or in part, shall not be published, advertised, used for any legal action, unless prior permission has been secured. 4) Any anomaly/discrepancy in this test report/certificate should be brought to our notice within 45 days from the date of issue. 5) Authenticity of this certificate can be verified by sending details of certificate to Yadav.measurements@ymllabs.com 6) EN 61326-1:2013 is equivalent to IEC61326-1:2012 7) Unless otherwise specified all testing done on 50Hz.		
7.	Test results:-The test results are given on next pages.		

Product Description

The EUT is Power Quality monitor with both of the configuration 3 Phase 4 Wire and 3 Phase 3 Wire input supply 500V L-L and auxiliary supply 60V-300V AC/DC along with the Input current 5A/1A. EUT has a LCD Display. Refer figures given below for detailed description of EUT.

For testing EUT was powered up with 230 V AC auxiliary voltages and was given input voltage 230V along with the line current of 5A for the all three lines.
 It has 2 terminals 13 and 14 for auxiliary supply.
 1, 4 and 7 for line current IN for L1 L2 and L3 respectively and terminal 3, 6 and 9 for line current OUT for L1 L2 and L3 respectively.

EUT limits specified as specified by customer.

Performance criteria A: During the test Input voltage 230V is given to the EUT should be within the range of +/-23.0V and 5 Amp the current given to the system should within the range of the +/-0.5amp as read by the display of the EUT.
 Performance criteria B: During the testing the equipment could be outside the limits i.e. (0.5Amps if 5 AMP and 23V if 230V is fed into the system) but after the test there shall be no loss or degradation of performance.

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EUT picture:

1) Front View



2) Side View



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Surge immunity test

Test Instrument details: - Lightning surge simulator
Make: - Noise ken
Model: - LSS 15AX-A3A

S. No.	Particulars of tests and clause number	Requirement as per Specification	Measured value / Observation	Remarks
A	Surge immunity test (As per IEC61326-1:2012)	<p>Test shall be carried out as per IEC 61000-4-5 under the following condition:</p> <ul style="list-style-type: none"> - Equipment is powered up by applying reference voltage -cable length between surge generator and equipment : 1m -Test voltage on the input power ports: 1.0 kV on line to line -Test voltage on Auxiliary ports: 1.0 kV on line to line -Test Angle 0°,90°,180°,270° -Number of tests: 5 Positive and 5 negative. -Repetition rate: maximum 1/min. <p>The equipment should meet the Performance Criteria B, after the application of surge test the EUT shall continue to operate as intended. No change of actual operating state is allowed.</p>	<p>The equipment meets the performance criteria B, the equipment operates as intended after the application of surge test. No damage was found after the application of the test. No malfunction or degradation of performance was observed in the equipment before and after the test. Also there was no disturbance occurred in modbus communication during the test. (Test was performed on EUT Sr. No. 14/07/0108)</p>	Conform

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Observation table:-
a) Input Terminals:

Circuit in which surge is applied	Voltage Level			
	0.5kV		1.0kV	
	+	-	+	-
L1 with respect to L2	Ok	Ok	Ok	Ok
L2 with respect to L3	Ok	Ok	Ok	Ok
L3 with respect to L1	Ok	Ok	Ok	Ok
L1 with respect to N	Ok	Ok	Ok	Ok
L2 with respect to N	Ok	Ok	Ok	Ok
L3 with respect to N	Ok	Ok	Ok	Ok

b) Auxiliary Power ports:

Circuit in which surge is applied	Voltage Level			
	0.5kV		1.0kV	
	+	-	+	-
L1 with respect to N	Ok	Ok	Ok	Ok

Checked by:  	Approved by: 
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