



Data Sheet

RISH CD30/60 Compact VAF Meter



Datasheet subject to change without notice



Measure



Control



Record



Analyze

RISHABH INSTRUMENTS PVT. LTD.

Domestic (India): +91 253 2202028/99 | marketing@rishabh.co.in

International: +91 253 2202004/06/08/99 | global@rishabh.co.in

www.rishabh.co.in

Data Sheet

RISH CD30/60 Compact VAF Meter

Application:

RISH CD30/60 Compact VAF Meter measures electrical parameters in 1 Phase Network for AC direct current measurement application.

Salient Features:

- True RMS measurement.
- 2 Line 4 digits ultra bright LED display.
- Direct current measurement upto 30/60 A depending on model.
- Fast & Easy Installation on housing with self clicking.
- Optional RS485 (MODBUS) for remote settings and monitoring.



Product Features:

Display parameters:

- ▶ Voltage VLN, Line current, Frequency, RPM, System Min-Max Voltage and Current, System Voltage and Current THD (*only for advanced model*).

True RMS Measurement:

- ▶ The instrument measures distorted waveform upto 15th harmonic.

2 line 4 digits LED display:

- ▶ 2 Line 4 digits seven segment LED display for simultaneous reading of voltage and current.

Storage of system parameters:

- ▶ The instrument stores minimum and maximum values for system voltage, system current available on both display and MODBUS.

Front panel keys:

- ▶ Using three key, it is possible to go to desired parameter on screen instantly. Three keys are also useful for easy setup navigation and changing setup parameters.

Display Autoscroll:

- ▶ Display auto scroll enables user to see all parameters without key operation.
- ▶ On site selection of auto/manual scrolling.

Direct Connected Current Measurement:

- ▶ Instrument measures current upto 30/60A depending on variant, without any external CT.

Communication:

- ▶ Optional Isolated multi baud rate RS485 (MODBUS) output for remote viewing, configuration and external logging.

On site programmable PT parameters:

- ▶ Potential Transformer (PT) primary and secondary is programmable on site through front panel keys and MODBUS.
- ▶ PT Primary value ranging from 57VLN to 4618 kVLN.
- ▶ PT Secondary value ranging from 57VLN to 300VLN.

Auxiliary supply:

- ▶ Higher Auxiliary power supply with voltage range 60V-280V AC / DC.
- ▶ Lower Auxiliary power supply with voltage range 20-60V AC/DC.

Enclosure Protection for dust and water:

- ▶ Conforms to IP 54 (for front face) & IP 20 (for back) & as per IEC60529.

EMC Compatibility:

- ▶ Compliance to IEC61326

Datasheet subject to change without notice



Measure



Control



Record



Analyze

RISHABH INSTRUMENTS PVT. LTD.

Domestic (India): +91 253 2202028/99 | marketing@rishabh.co.in

International: +91 253 2202004/06/08/99 | global@rishabh.co.in

www.rishabh.co.in

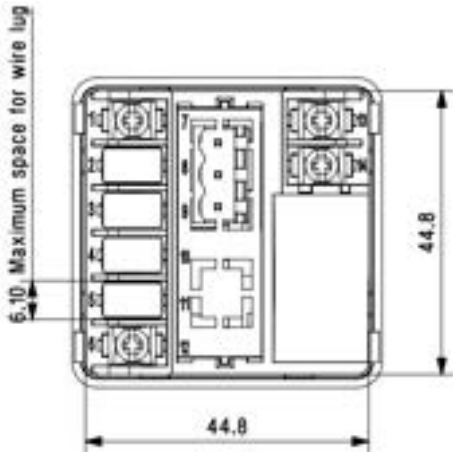
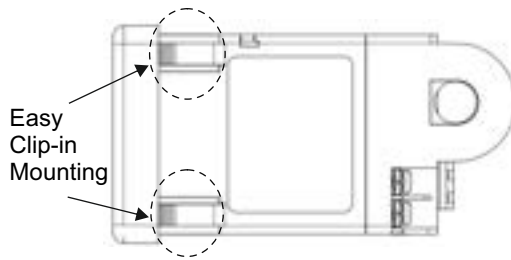
Page 1/4

Rev : D 11/21

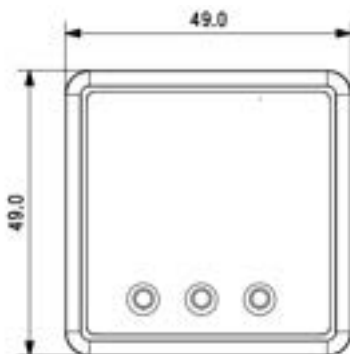
Data Sheet

RISH CD30/60 Compact VAF Meter

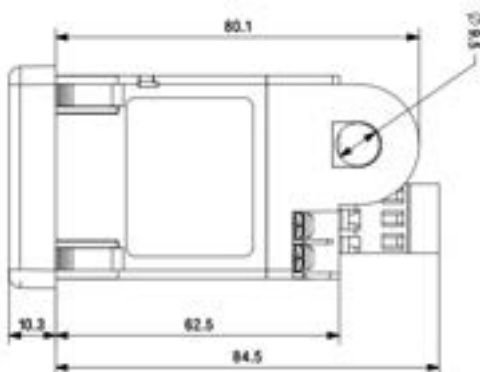
Installation



Dimensions Details



Front View



Side View

Technical Specifications:

Operating Measuring Ranges:

Voltage Range	5.77VLN 360VLN
Current Range:	RISH CD30: 1A36A RISH CD60: 1A.....72A
Frequency	45...65 Hz

Input Nominal Voltage:

Nominal input voltage (AC RMS)	57.7-300V L-N
Max continuous input voltage	120% of Nominal value
Nominal input voltage burden	0.3 VA approx.
System PT secondary values	57VLN to 300VLN programmable on site
System PT primary values	57VLN to 4618kVLN programmable on site

Input Nominal Current:

Nominal input current	RISH CD30 - 30A RISH CD60 - 60A
Max continuous input current	120% of Nominal current
Nominal input current burden	0.1 VA approx.

Auxiliary Supply:

Higher AC-DC External Aux.	60-280V AC-DC
Lower AC-DC External Aux.	20-60V AC/DC
Frequency range	45 to 65 Hz
VA burden	6 VA Approx.

Overload Withstand:

Voltage	2 x Nominal value for 1 second, repeated 10 times at 10 second intervals
Current	2 x Nominal value for 1 second, repeated 5 times at 5 second intervals

Reference conditions for Accuracy:

Reference temperature	23°C $\pm$ 2°C
Input waveform	Sinusoidal (distortion factor 0.005)
Input frequency	50 or 60 Hz $\pm$ 2%
Auxiliary supply voltage	Nominal Value $\pm$ 1%
Auxiliary supply frequency	Nominal Value $\pm$ 1%

Display update rate:

Response time to step input	Less than 1 second
-----------------------------	--------------------

Accuracy:

Voltage	$\pm$ 0.5 % of Nominal Voltage (20... 100% of Nominal value)
Current	$\pm$ 0.5 % of range (10... 100% of Nominal value)
Frequency	$\pm$ 0.2 % of mid frequency
%THD Accuracy	$\pm$ 4%

Influence of Variations:

Temperature coefficient :	0.025 % /°C for Voltage
(for nominal value range of use -20°C to 70°C)	0.05 % /°C for Current

Applicable Standards:

EMC	IEC 61326 - 1 : 2012, Table 2
Safety	IEC 61010-1-2010, Permanently connected use
IP for water & dust	IEC 60529

Interfaces:

MODBUS	RS485, max.1200m Baud rate : 4.8, 9.6,19.2, 38.4, 57.6 kbps.
--------	---

Datasheet subject to change without notice



Measure



Control



Record



Analyze

RISHABH INSTRUMENTS PVT. LTD.

Page 2/4

Rev :D 11/21

Domestic (India): +91 253 2202028/99 | marketing@rishabh.co.in

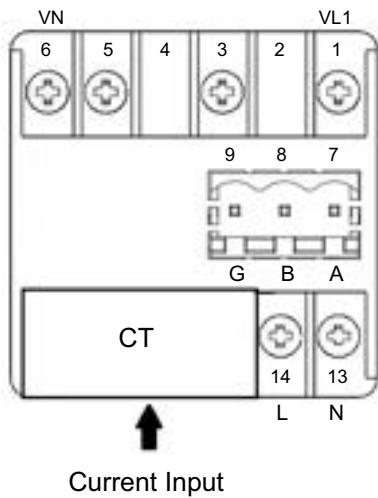
International: +91 253 2202004/06/08/99 | global@rishabh.co.in

www.rishabh.co.in

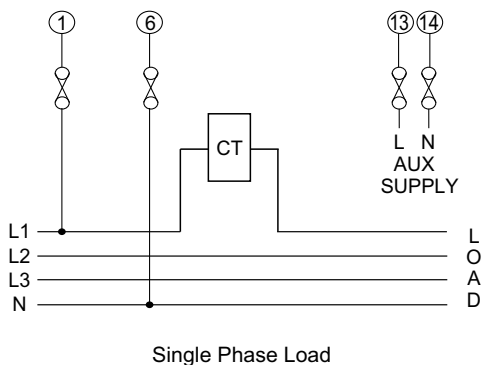
Data Sheet

RISH CD30/60 Compact VAF Meter

Terminal Connection



Electrical Connection



Technical Specifications:

Environmental:

Operating temperature	-20°C to +70°C
Storage temperature	-30°C to +80°C
Relative humidity	0... 90% non condensing
Warm up time	Minimum 3 minute
Shock	Half sine wave, Peak acceleration 30gn (300 m/s ²), duration of 18ms 3 axis - 6 shocks in each axis
Vibration	10... 55 Hz, 0.15mm amplitude

Enclosure:

Front	IP 54
Back	IP 20

Dimensions and Weights:

Housing dimensions	49 x 49 x 90.4 mm
Panel cut-out	45 x 45 mm
Back depth with modbus	84.5 mm
Unpacked Weight	115 gm
Packed weight	145 gm

Safety:

Pollution degree	2
Installation category	III
High Voltage Test	3.3 kV AC, 50Hz for 1 minute between aux. and measuring inputs 2.2 kV AC, 50Hz for 1 minute between aux. and modbus

Datasheet subject to change without notice



Measure



Control



Record



Analyze

RISHABH INSTRUMENTS PVT. LTD.

Page 3/4

Rev :D 11/21

Domestic (India): +91 253 2202028/99 | marketing@rishabh.co.in

International: +91 253 2202004/06/08/99 | global@rishabh.co.in

www.rishabh.co.in

Electrical Parameters:

Sr No.	Parameters	1 Phase 2 Wire	
		ADVANCED	BASIC
1	System Voltage	✓	✓
2.	Max System Voltage/Current	✓	✓
3.	Min System Voltage/Current	✓	✓
4.	System Frequency	✓	✓
5.	RPM	✓	✓
6.	System Voltage and Current THD	✓	✗

Ordering Information:

Ordering information	Ordering Code
KMAT	AV00
Size 48x48	S
Accuracy Class 0.5	5
Class 1	1
System Type 1 Phase	1
Input Voltage (on site-programmable) 57.7 - 300VLN	1
Input Current CT 30A	0
CT 60A	2
Rs485 communication With RS485 communication	R
None	Z
Auxiliary Supply AC DC Higher Aux (60V – 280V AC/DC)	H
AC DC Lower Aux (20V–60V AC/DC)	L
Model Advance	1
Basic	0

Order Code Example:

AV00-S1112RL000000

AV00- 48x48, Class 1, 1 Phase, 57.7-300VLN, CT 60A, with RS485, 20-60V AC/DC, and Basic Model

Datasheet subject to change without notice



Measure



Control



Record



Analyze

RISHABH INSTRUMENTS PVT. LTD.

Domestic (India): +91 253 2202028/99 | marketing@rishabh.co.in

International: +91 253 2202004/06/08/99 | global@rishabh.co.in

www.rishabh.co.in

Page 4/4

Rev :D 11/21



Datasheet subject to change without notice



Measure



Control



Record



Analyze

RISHABH INSTRUMENTS PVT. LTD.

Domestic (India): +91 253 2202028/99 | marketing@rishabh.co.in

International: +91 253 2202004/06/08/99 | global@rishabh.co.in

www.rishabh.co.in