



# Data Sheet

## RISH EINE NX

3 Ph Ammeter / Voltmeter With Touch Key



Measure



Control



Record



Analyze



Optimize

### Application

The programmable Digital Panel Meter Rish Eine NX have been designed for industrial application, which frequently require precise and on-site adjustment of the display range. It can be used in industrial automation and for laboratory uses.

### Product Features

#### True RMS measurement

The instrument measures distorted waveform upto 15<sup>th</sup> harmonic.

#### User Selectable 3Ph4Wire,3Ph3Wire and single phase network

#### Display parameters

Voltage VLN, VLL or Line current or System Voltage or Current.

#### Attractive look with two touch keys

Using two key, it is possible to go to desired parameter on screen instantly.

Two keys are also useful for easy setup navigation and changing setup parameters

#### 1 line 4 digits LED display

1 Line 4 digits seven segment LED display for simultaneous reading of voltage or current.

#### Potential Free Relay Contact (Optional)

User selectable relay output. Relay output can be configured as Limit (Alarm) switch or Timer output to operate relay in cyclic manner

#### Display Autoscroll

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

#### On site programmable PT parameters (For volt DPM)

Potential Transformer (PT) primary and secondary is programmable on site through front panel keys and MODBUS. PT Primary value ranging from 100 VLL to 999k VLL. PT Secondary value ranging from 100 VLL to 500 VLL

#### On site programmable CT parameters (For Ammeter)

Current Transformer (CT) primary and secondary is programmable on site through front panel keys and MODBUS. CT Primary value ranging from 1A to 9999A. CT Secondary value ranging from 1A/5A.

#### Communication

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

#### Auxiliary supply

Higher Auxiliary power supply with voltage range 60V-300V AC/DC.

#### Enclosure Protection for dust and water

Conforms to IP 50 (for front face) & IP 20 (for back) & as per IEC60529.

#### EMC Compatibility

Compliance to IEC61326.

#### Fast & Easy Installation on panel with click fit arrangement



Measure



Control



Record

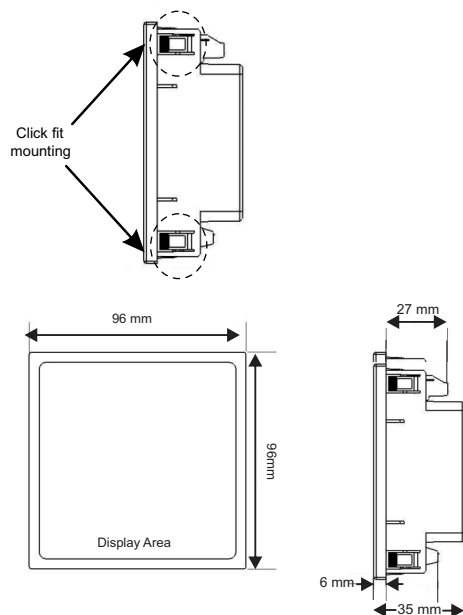


Analyze



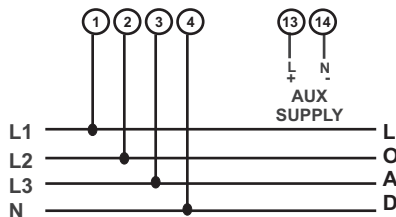
Optimize

### Dimensions Details

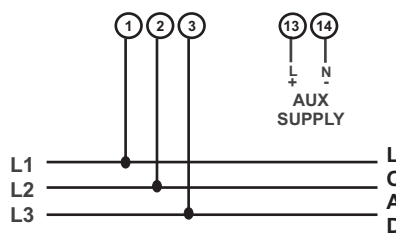


### Electrical Connection

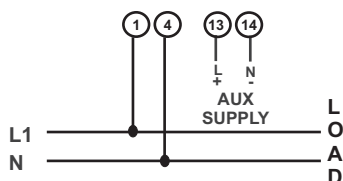
For Voltage DPM



**Connection For  
3PH - 4 Wire Network**



**Connection For  
3PH - 3 Wire Network**



**Connection For  
1PH - 2 Wire Network**

### Technical Specifications:

#### Operating Measuring Ranges

Voltage Range	11 -- 346V <sub>LN</sub> (19 --- 600V <sub>LL</sub> )
Current Range	For 1A (30mA-1.2A) & For 5A (55mA-6A)
Frequency	40...70 Hz

#### Input Voltage (for Volt DPM)

Nominal Input voltage (AC RMS)	57.7-288V <sub>LN</sub> (100V..500V <sub>LL</sub> )
Max continuous input voltage	120% of Nominal volt of Primary(OL>1.21xPTP)
Input voltage burden	0.3 VA approx per Phase at 230VAC

#### Input Current (for Ammeter)

Nominal Input current	1A / 5A per Phase
Max continuous input current	120% of Nominal current of Primary (OL>1.21xCTP)
Input current burden	0.3 VA approx per Phase

#### Auxiliary Supply

Higher AC-DC External Aux.	60-300V AC/DC
Frequency range	45 to 65 Hz
VA burden	5 VA Approx

#### Overload With stand

Voltage	620V <sub>LL</sub> for 1 second, repeated 10 times at 10 second intervals
Current	2 x 5A value for 1 second, repeated 5 times at 5 second intervals

#### Reference conditions for Accuracy

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

#### Display update rate

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

#### Accuracy

Voltage	± 1.0% (As Per Nominal Voltage Set) (opt. ± 0.5)
Current	± 1.0 % of 1A/5A (opt. ± 0.5)

#### Influence of Variations

Temperature coefficient (for range of use (0°C to 55°C))	0.025% / °C for Voltage 0.05% / °C for Current
---	---

#### Applicable Standards

EMC	IEC 61326-1 (Table-2)
Safety	IEC 61010-1-2018, Permanently connected use
IP for water & dust	IEC 60529



Measure



Control



Record



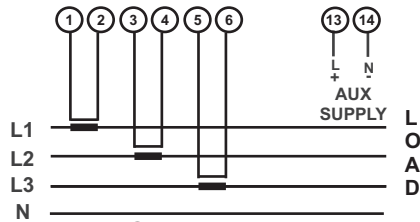
Analyze



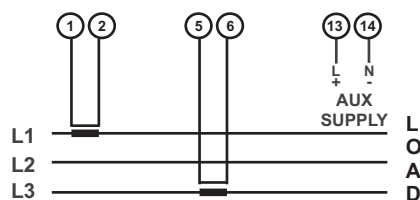
Optimize

### Electrical Connection

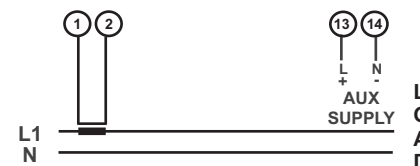
For Current DPM



Connection For  
3PH - 4 Wire Network



Connection For  
3PH - 3 Wire Network



Connection For  
1PH - 2 Wire Network

### Technical Specifications

#### Interfaces (Optional)

Relay  
MODBUS

250 V AC, 5 A AC / 30V DC, 5A DC  
RS485, max.1200m  
Baud rate : 4.8, 9.6,19.2, 38.4, 57.6kBPS

#### Environmenta

Operating temperature  
Storage temperature  
Relative humidity  
Warm up time  
Shock

0°C to +55°C  
-25°C to +70°C  
0... 90% non condensing  
Minimum 3 minute  
Half sine wave, Peak acceleration  
30gn (300 m/s<sup>2</sup>)  
10... 55 Hz, 0.15mm amplitude

Vibration

#### Enclosure

Front  
Back

IP 50  
IP 20

#### Dimensions

Housing dimensions  
Panel cut-out

96 x 96 x 40 mm  
92.8 x 92.8 mm

#### Safety

Pollution degree  
Installation category  
High Voltage Test

2  
III  
2kV AC, 50Hz for 1 minute between  
aux. and measuring input  
200gm Approx.

#### Weight

### Electrical Parameters:

Sr No.	Parameters	3 Phase 4 Wire		3 Phase 3 Wire		1 Phase 2 Wire	
		Voltmeter	Ammeter	Voltmeter	Ammeter	Voltmeter	Ammeter
1	System Voltage	✓		✓		✓	
2	System Current		✓		✓		✓
3	Volts L1-N	✓				✓	
4	Volts L2-N	✓					
5	Volts L3-N	✓					
6	Volts L1-2	✓		✓			
7	Volts L2-3	✓		✓			
8	Volts L3-1	✓		✓			
9	Current L1		✓		✓		✓
10	Current L2		✓		✓		
11	Current L3		✓		✓		
13	Timer No. of cycles	✓	✓	✓	✓	✓	✓
14	Relay Limit	✓	✓	✓	✓	✓	✓



Measure



Control



Record



Analyze



Optimize

### Ordering Information :

Ordering Information	ED99-	G	3	X	XX	H	X	X	X	X	000	
Product Type	AC DPM - 3 Phase - RISH Eine NX											
Size	96 X 96mm											
System Type(Programmable)	3 Phase (1Phase/ 3Phase)											
Input Type	AC Voltmeter			V								
	AC Ammeter			A								
Input Range (Programmable)	100-500VLL 50/60Hz (AC Voltmeter)				8C							
	1/5A 50/60Hz (AC Ammeter)				8D							
Auxiliary Supply	60-300V AC/DC											
Accuracy	Class 1						1					
	Class 0.5						5					
IP Protection	Standard - IP50								0			
	Optional - IP54 (On request-Chargeable)								2			
Test certificate	Not Required								0			
	Required (On request-Chargeable)								1			
Options	Basic										Z	
	Advanced (1-Relay Output and Modbus)										R	

### Order Code Example : ED99-G3V8CH521Z000

RISH Eine NX- 3Phase, Size 96X96mm, Input 100-500VLL 50/60Hz, Aux supply 60-300V AC/DC, Accuracy 0.5, with IP54, with Test certificate



Measure



Control



Record



Analyze



Optimize



RISHABH



Measure



Control



Record



Analyze



Optimize

## RISHABH INSTRUMENTS LIMITED

Domestic (India): +91 253 2202099 | [marketing@rishabh.co.in](mailto:marketing@rishabh.co.in)  
International: +91 253 2202004/06/08/99 | [global@rishabh.co.in](mailto:global@rishabh.co.in)  
[www.rishabh.co.in](http://www.rishabh.co.in)