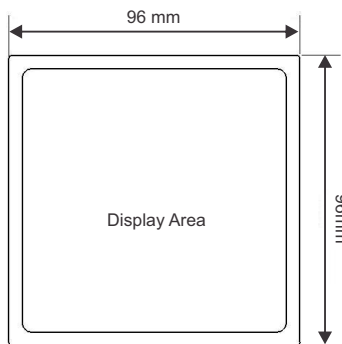


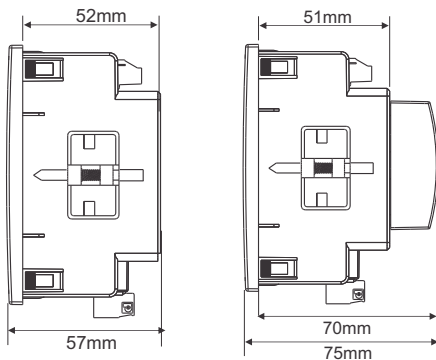
Multifunction Instrument

RISH LM13XX

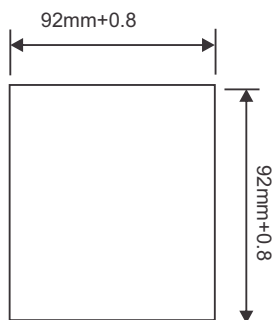
Dimensions Details:



Front View



Side View



Panel Cutout

Technical Specifications:

Input Voltage:

Nominal input voltage (AC RMS) programmable on site.	100VLL to 600 VLL 57.5VLN to 346.42 VLN
System PT primary values	100VLL to 1200kVLL programmable on site.
Max continuous input voltage	120% of nominal value
Overload Withstand:	2 x rated value for 1 second, repeated 10 times at 10 second intervals
Overload Indication	"-OL-" >121% of Nominal value
Nominal input voltage burden	< 0.3VA approx. per phase(at nominal 240V)

Input Current:

Nominal input current	1A / 5A onsite programmable
System CT primary values	From 1A to 9999A
Max continuous input current	200% of nominal value
Overload Indication	"-OL-" >205% of Nominal value
Nominal input current burden	< 0.3VA approx. per phase
Overload Withstand:	20 x rated value for 1 second, repeated 5 times at 5 minute intervals

Auxiliary Supply:

Higher Auxiliary supply range	100-550V AC/DC (230V AC/DC nominal)
Lower Auxiliary supply range	12-60V AC/DC (24 V AC /48 V DC nominal)
Aux Supply frequency	45 to 65 Hz range
Auxiliary Supply burden (at nominal value)	
With Addon card	< 6VA approx.
With Ethernet card	< 8 VA approx.

Operating Measuring Ranges:

Current (Energy Measurement)	1...200% of nominal value
Starting current :	as per Standard IEC62053-22(0.5s) as per Standard IEC62053-22(Class 0.2s)(optional)
Voltage	20... 120% of nominal value
Power Factor	0.5 Lag ... 1... 0.8 Lead
Frequency	45Hz to 66Hz

Reference Conditions for Accuracy

Reference temperature	23°C +/- 2°C
Input Waveform	Sinusoidal(distortion factor 0.005)
Input frequency	50/60 Hz ± 2%
Auxiliary supply frequency	50/60 Hz ± 1%
Total Harmonic distortion	50% up to 15th Harmonics 10% up to 31st Harmonics (Current range 20%...100% of nominal value)
Voltage range	50%.....100% of nominal value
Current range	1%.....120% of nominal value

Accuracy

Active Energy	Class 0.5s as per IEC 62053 - 22 Class 0.2s as per IEC 62053- 22(optional)
Apparent Energy	Class 1
Reactive Energy	Class 2 as per IEC 62053 - 23



Measure



Control



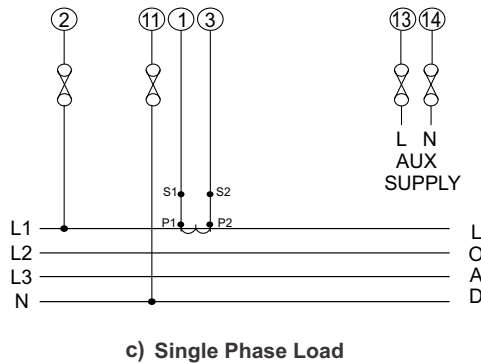
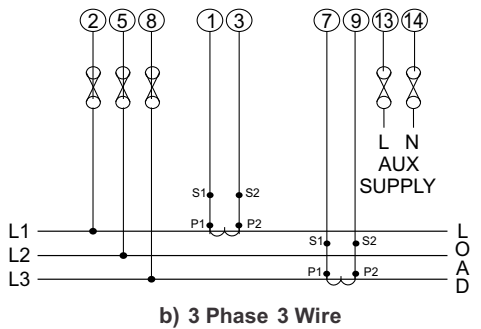
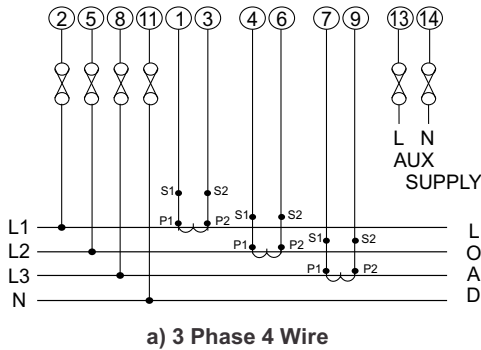
Record



Analyze

Electrical Connection:

Network Types :



It is recommended that the wires used for connections to the instrument should have lugs soldered at the end. That is, the connections should be made with Lugged wires for secure connections.

Technical Specifications:

Accuracy

	Class 0.5s (Standard)	Class 0.2s (on request)
Voltage	± 0.5% of Nominal value	± 0.2% of Nominal value
Current	± 0.5% of Nominal value	± 0.2% of Nominal value
Frequency	± 0.2% of mid frequency	± 0.2 % of mid frequency
Active Power	± 0.5% of Nominal value	± 0.2% of Nominal value
Re-Active Power	± 1.0% of Nominal value	± 1.0% of Nominal value
Apparent Power	± 0.5% of Nominal value	± 0.2% of Nominal value
Power Factor/ angle	±3°	±3°
THD (Voltage / Current)	±3%	±3%

Display update rate:

Response time to step input 1 sec approx.

Applicable Standards:

EMC	IEC 61326 - 1 : 2012, Table 2
Immunity	IEC 61000-4-3. 10V/m – Level 3 industrial Low level
Safety	IEC 61010-1-2010 , Permanently connected use
IP for water & dust	IEC60529
Pollution degree:	2
Installation category:	III

Isolation:

Protective Class	2
High voltage test	
Input+Aux Vs Surface	4kV RMS, 50Hz, 1min
Input Vs Remaining Circuit	3.3kV RMS, 50Hz, 1min

Environmental

Operating temperature	-20 to +70°C
Storage temperature	-25 to +75°C
Relative humidity	0... 95%RH (non condensing)
Warm up time	Minimum 3 minute
Shock (As per IEC60068-2-27)	Half sine wave, Peak acceleration 30gn (300 m/s ²), duration 18ms.
Vibration	10... 150... 10 Hz, 0.15mm amplitude
Number of Sweep cycles	10 per axis
Enclosure	IP 20 (Terminal side) and IP54(Front side)

Interfaces

Impulse Led	For Energy testing
Relay(Optional)	250 VAC, 5 A AC 30VDC, 5A DC
Modbus (Optional)	RS485, max. 1200m Baud rate : 4.8k, 9.6k, 19.2k, 38.4k , 57.6kpbs.
Ethernet (Optional)	Ethernet access on Modbus TCP/IP Protocol.



Measure



Control



Record



Analyze