Network Analyzer with LCD Screen Datasheet



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V.25.1

1. General Features

Network Analyzers with LCD Screen comply with the IEC 61557-12 standard and are capable of performing functions such as full power parameter measurement, power monitoring, harmonic analysis, limit alarms, and grid status monitoring. These features enable users to accurately track power consumption data and meet their energy management requirements.

2. Technical Features

Environmental Characteristics	
Operating Temperature:	-25°C...+70°C
Storage Temperature:	-25°C...+70°C
Relative Humidity:	%5...%95 RH, No Condensation
Operating Altitude:	≤ 2000m CAT III
Class of Pollution:	2
Mechanical Properties	
Overall Dimensions:	96mm × 96mm × 83mm
Protection Class:	Front Case IP54, Rear Case IP20
Security Features	
Measurement Category:	300V (CAT III)
Security Standard:	IEC 61010-1, Double Insulation
Auxiliary Power Supply	
Voltage:	AC/DC 80V...270V
Frequency:	50/60Hz ± 5Hz
Power Consumption:	≤ 5VA
Voltage Input	
Nominal Value:	230/400 VAC
Start Value:	10V
Resolution:	0.1 V
Impedance:	≥ 1.7 M Ω / Phase
Power Consumption:	≤ 0.1 VA / Phase
Overload:	Continued: 1.2Vn, Instantaneous: 2Vn / 1 Min
Frequency:	45Hz...65Hz
Current Input	
Nominal Value:	1A or 5A
Start Value:	10 mA
Resolution:	1 mA
Impedance:	≤ 20m Ω / Phase
Power Consumption:	≤ 0.2 VA / Phase
Overload:	Continued: 2In, Instantaneous: 20In/1s
Communication Interface	
Channels:	1
Interface:	RS485
Baud Rate:	1.2kbps...38.4kbps
Communication Protocol:	Modbus-RTU
Terminal	
Tightening Torque:	0.5 Nm
Standards	
IEC 61557-12	Performance Measurement and Monitoring Device
IEC 61326-1	Electromagnetic Compatibility
IEC 61010-1	Electrical Safety

3. Measurable Line Parameters

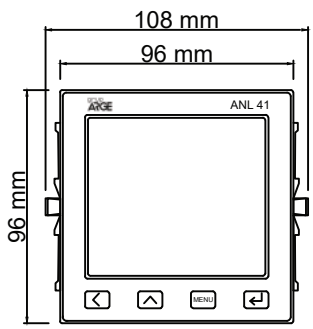
- Phase-to-Neutral Voltages (V11, V12, V13)
- Phase-to-Phase Voltages (V12, V23, V13)
- Phase Currents: (I1, I2, I3, ΣI)
- Neutral Current: (In)
- Frequency
- Active Power: (P1, P2, P3, ΣP)
- Reactive Power
- Capacitive Reactive Power: (ΣQ(cap), Q1(cap), Q2(cap), Q3(cap))
- Inductive Reactive Power
- Apparent Power: (ΣS, S1, S2, S3)
- Power Factors: (PF1, PF2, PF3)
- Active Energy: (Import / Export, ΣWh)
- Reactive Energy: (Import / Export, ΣVARh)
- Min/Max Values: (Import / Export)
- Demand Values: (Import / Export)
- Voltage and Current Harmonics per Phase: (Up to 31st Harmonic)
- Voltage Crest Factor
- Voltage K-Factor
- Total Harmonic Distortion for Current and Voltage: (THDV and THDI)
- Voltage Unbalance (%)
- Current and Voltage Phase Angles

3.1. Measurable Parameter Functions

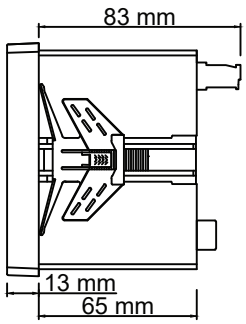
Type	Parameters	Phase Separation	Total	Average	Sequence Component
Voltage	Phase Voltage	✓		✓	✓
	Line Voltage	✓		✓	
	Voltage Unbalance		✓		
	Phase Angle	✓			
	Fundamental Voltage	✓			
	Voltage Crest Factor	✓			
Current	Current	✓		✓	✓
	Neutral Line Current		✓		
	Current Unbalance		✓		
	Phase Angle	✓			
	Fundamental Current	✓			
	Current Crest Factor	✓			
	Current Percentage	✓			
Power	Active Power	✓	✓	✓	
	Reactive Power	✓	✓	✓	
	Apparent Power	✓	✓	✓	
	Power Factor	✓	✓		
	Load Percentage	✓	✓		
Frequency	Frequency (A-Phase Voltage)		✓		
Harmonic	THDV	✓			
	THDI	✓			
	Voltage Harmonic Content	✓			
	Current Harmonic Content	✓			
	2-31st Voltage Harmonic	✓			
	2-31st Current Harmonic	✓			

4. Technical Drawing

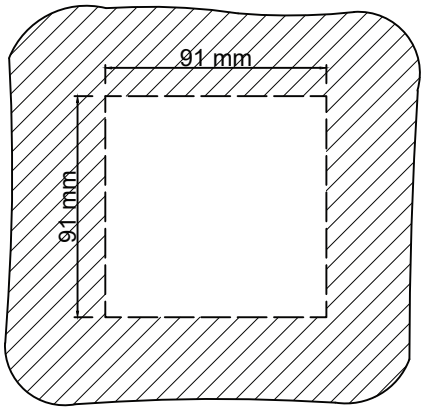
4.1. Technical Drawing



Front View

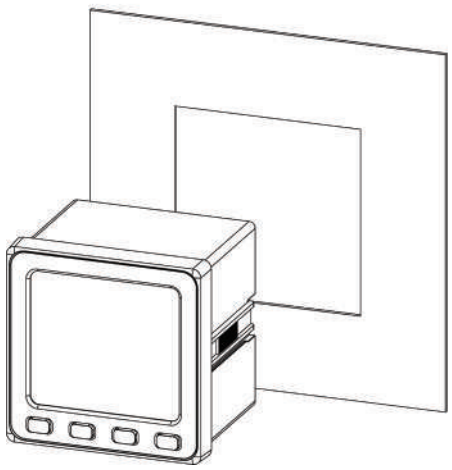


Side View

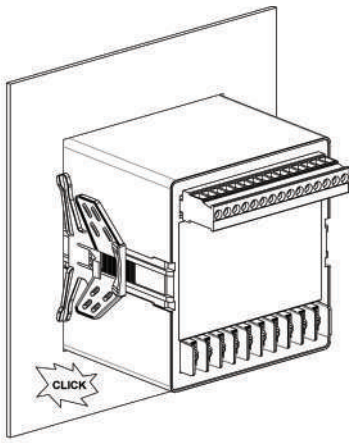


Panel Cut-Out

4.2. Mounting Dimensions



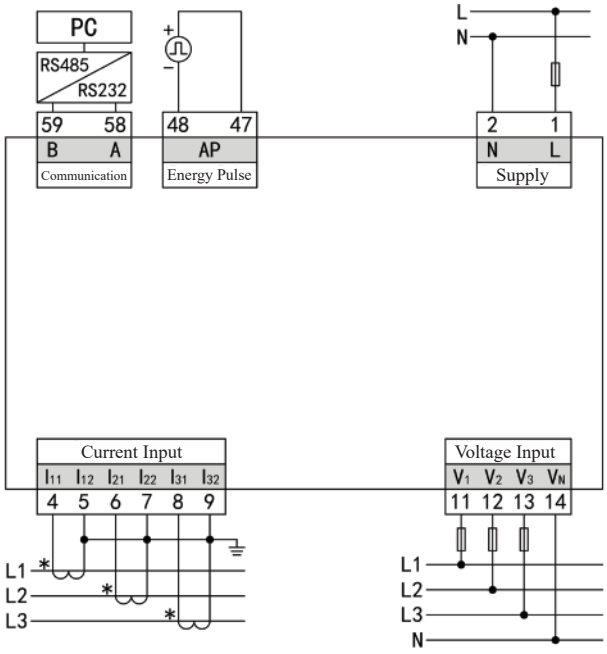
Panel Size: 96×96 (mm)



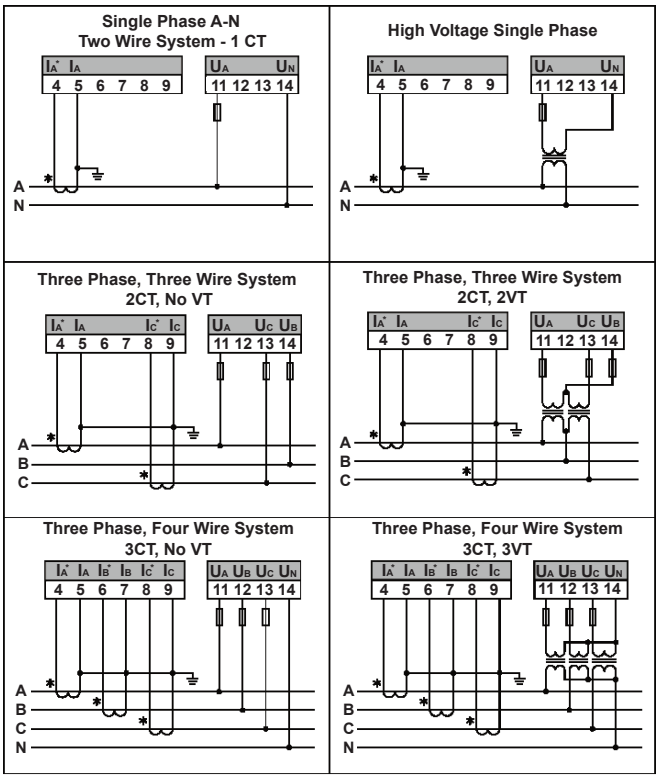
Panel Cut-Out: 91×91 (mm)

5. Connection Diagram

5.1. Standard Connection Diagram



5.2. Input Signal Connection Diagram

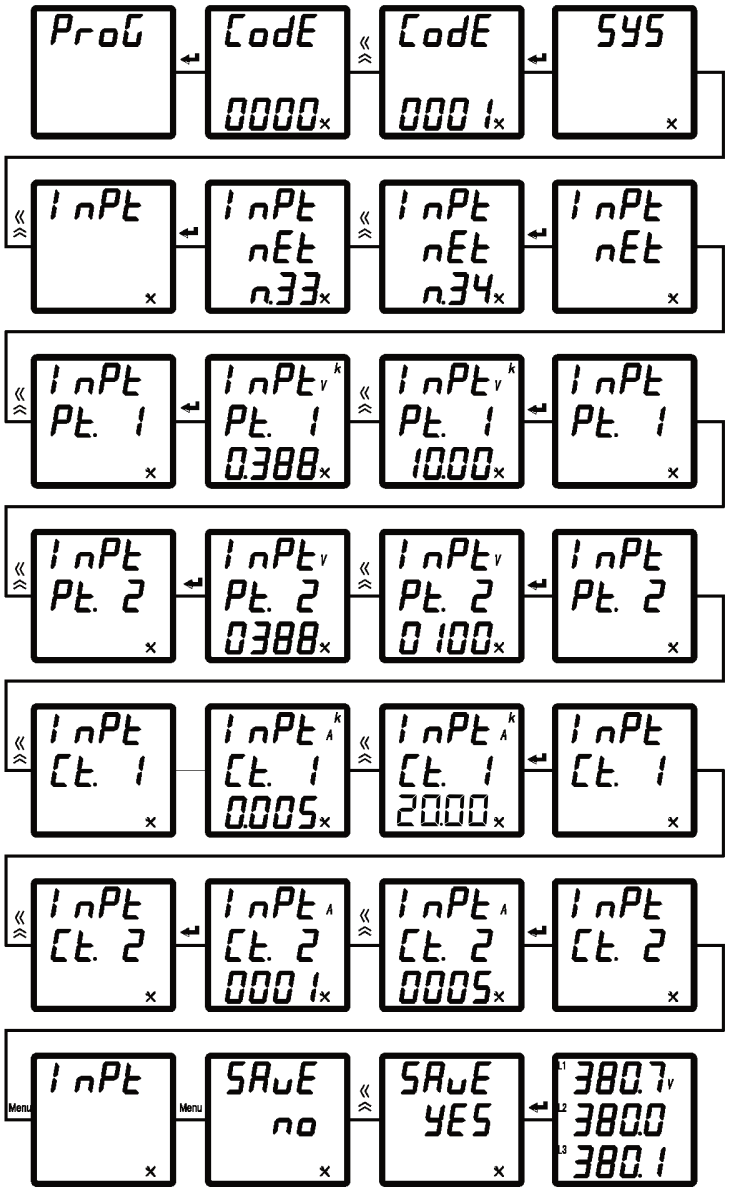


CT: Current Transformer
VT: Voltage Transformer

6. Programming Procedure and Examples

Users can modify relevant parameters and settings, including system parameters, signal input, communication settings, etc., via the keypad.

If the signal is 10 kV / 100 V, 20 kA / 5 A, the menu operation steps are as follows:



Enter Programming Interface

Enter Primary Voltage Setting Menu, k indication light is on

Change Primary Voltage Range to 10 kV

Change Secondary Voltage Range to 100 V

Change Primary Current Range to 20 kA

Change Secondary Current Range to 5 A

Save Modified Data and Exit Programming