



ND31 & ND31LITE

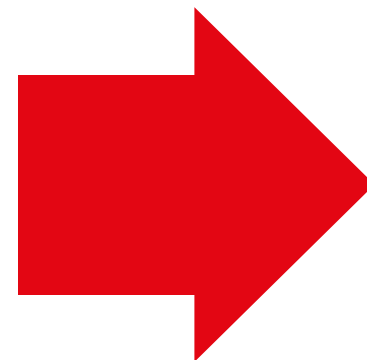
Features, Applications & Sales Messaging



Understanding the transition from the legacy ND30 series to the versatile ND31 family.

ND30 Series: Protocol Specific

- Three distinct models (e.g., Modbus, BACnet/IP).
- Measurement: 54 electrical parameters, harmonics up to 51st order.
- Required picking protocol specific variant at time of order.



ND31 Series: Universal Communication

- Single model supports RS 485 Modbus RTU, Ethernet Modbus TCP/IP, BACnet/IP, MQTT.
- Advanced measurement: 54 parameters, harmonics up to 63rd order, color TFT display, internal memory.
- “One box fits many protocols” - significantly reduces complexity.

Why the Shift?

Adapting to Modern Demands

Designed for Industry 4.0 and the evolving IoT environment.

Streamlined Operations

Achieves simpler logistics and deployment across diverse applications.

Enhanced Digital Integration

Offers richer connectivity for seamless digital integration.

Key takeaway: The ND31 series combines the ND30's measurement excellence with unparalleled universal communication flexibility.

Lumel's ND31 family offers power network and quality meters for industrial, commercial, and energy monitoring systems. Multiple variants let you tailor solutions to different budgets and infrastructure readiness.



ND31LITE

Core meter with essential features and RS 485 interface for budget conscious customers.



ND31

Standard meter with Ethernet, recording, and IoT capabilities for modern installations.



All models share this common baseline differences are incremental enhancements for connectivity and networking.

Universal Measurement

- Single phase and three phase systems
- Up to 54 electrical parameters
- Harmonics up to 63rd order
- Energy accuracy class 0.2S.

Flexibility & Recording

- Analog output 0/4 20 mA
- Pt100 temperature inputs
- Internal memory for archiving
- Up to 32 parameters stored.

Display & Interface

- Color TFT LCD 3.5" display
- Configurable screens with harmonic pages
- 2 relay outputs for alarms.

Installation

- Dimensions: 96 × 96 × 77 mm
- AC and DC power supply options.



Interface

- RS 485 with Modbus RTU protocol.



Full Measurement

- 54 network parameters including harmonics, same accuracy as premium models.



Display

- Color TFT 3.5" with 10 configurable screens plus harmonic visualization.



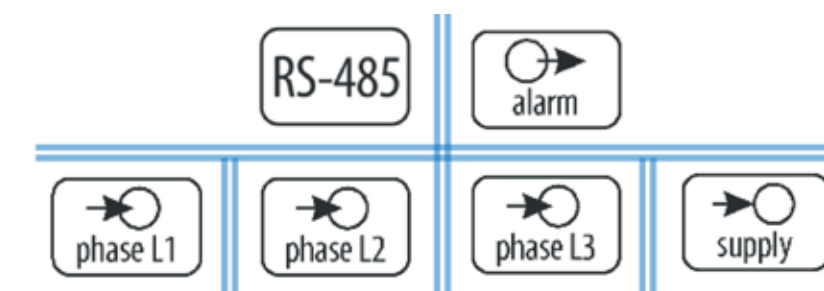
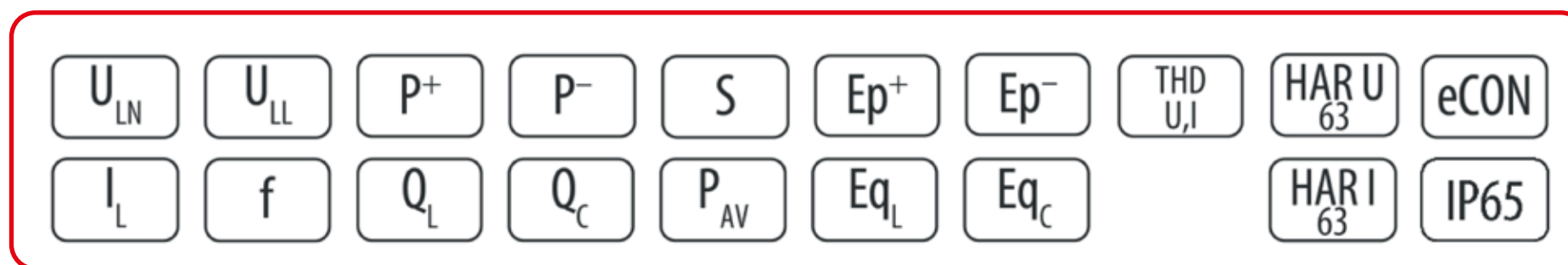
Memory

- Min/max values and archival for subset of parameters.



Perfect for: Retrofitting existing RS 485 networks, budget conscious projects, or simpler installations where serial communication is sufficient.

Sales message: “All the measurement you need, interface you already have”.



AC



2x Relay



RS485

Modbus



Accuracy - 0.2S (IEC 62053 22) for Active Energy

Available colours for digital interface:



Phase Sequence Error & Soft correction

Phase Sequence Error Detection

A1E A2E T1: 49°C T2: 53°C 1 2 1% RX TX 18/09/15 09:51:07

Terminal 2 voltage	U1
Terminal 5 voltage	U1
Terminal 8 voltage	U1
Terminals 1-3 current	U2
Terminals 4-6 current	U3
Terminals 7-9 current	I1

Phase Sequence correction using econ software or using programming menu in ND30 Parameters setting

Conditional Alarming

A1E A2E T1: 49°C T2: 53°C 1 2 1% RX TX 06/06/16 07:22:35

... Alarm 1

Settings

Condition C1

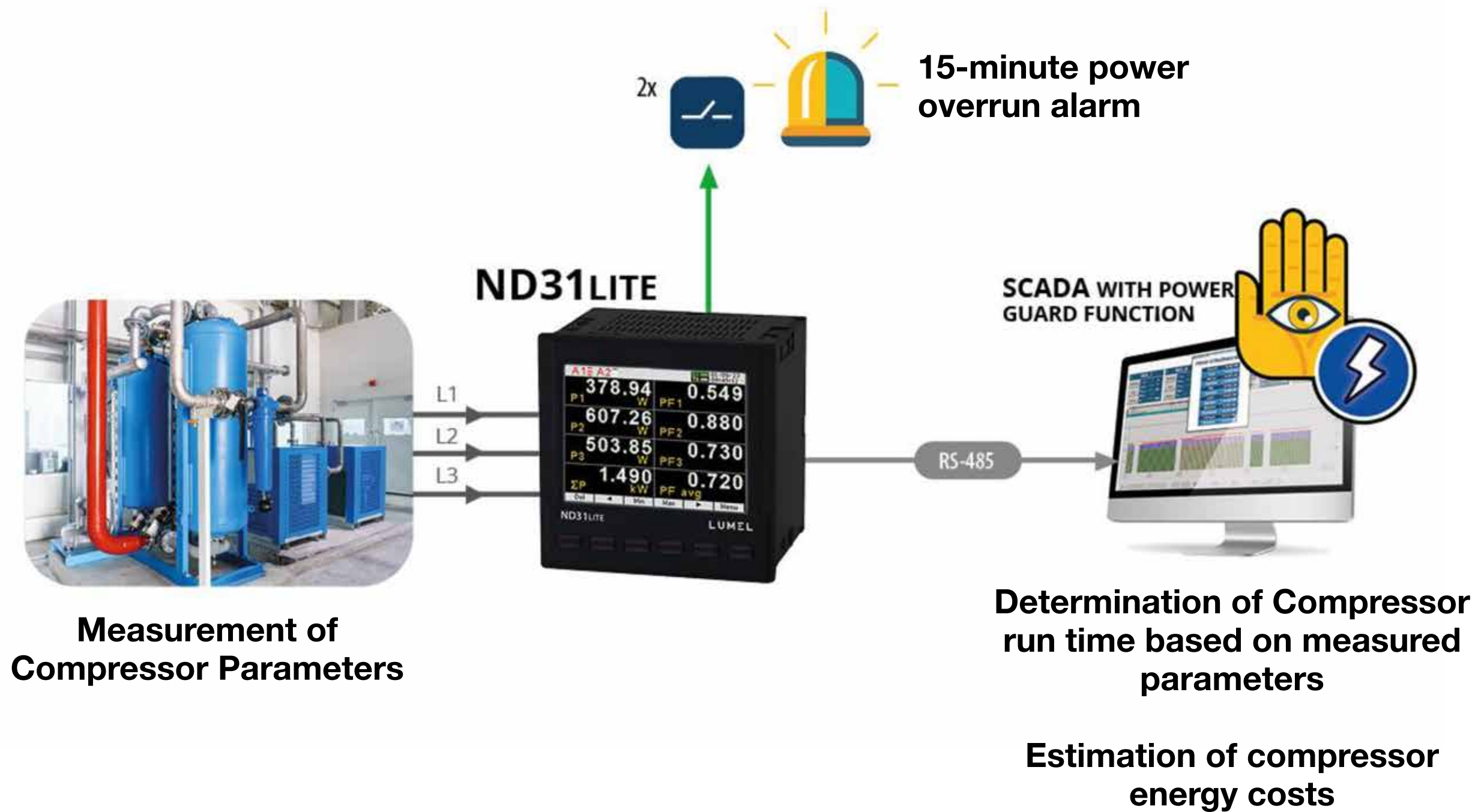
Condition C2

Condition C3

Esc ▼ ▲ Select



Application





The ND31 adds full Ethernet and IoT compatibility over LITE, enabling future upgrades and seamless integration with modern monitoring systems. Ideal for customers wanting advanced features.

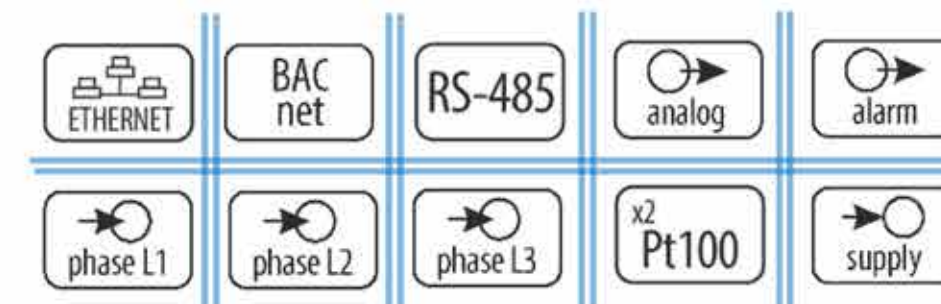
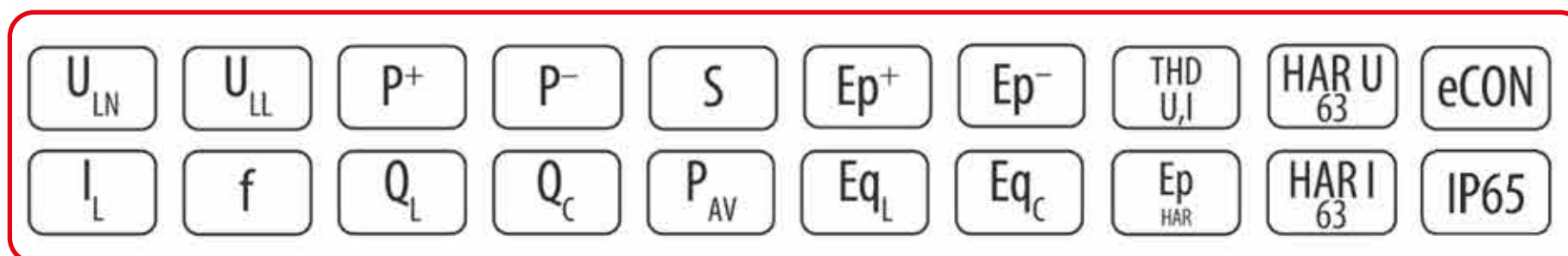
Enhanced Connectivity

- Ethernet 10/100 BASE T + RS 485
- Modbus TCP/IP, HTTP, FTP protocols
- MQTT and BACnet/IP support
- Web server and remote access.

Advanced Features

- Internal file system for logging
- Remote configuration capability
- Analogue outputs and Pt100 inputs
- Full SCADA/BMS integration.





AC

x2
Pt100



Internal SD card Memory 8 GB

Accuracy - 0.2S (EN 62053 22) for Active Energy



2x Relay



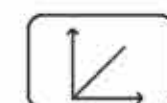
Ethernet

Port



RS485

Modbus



Analogue

Output

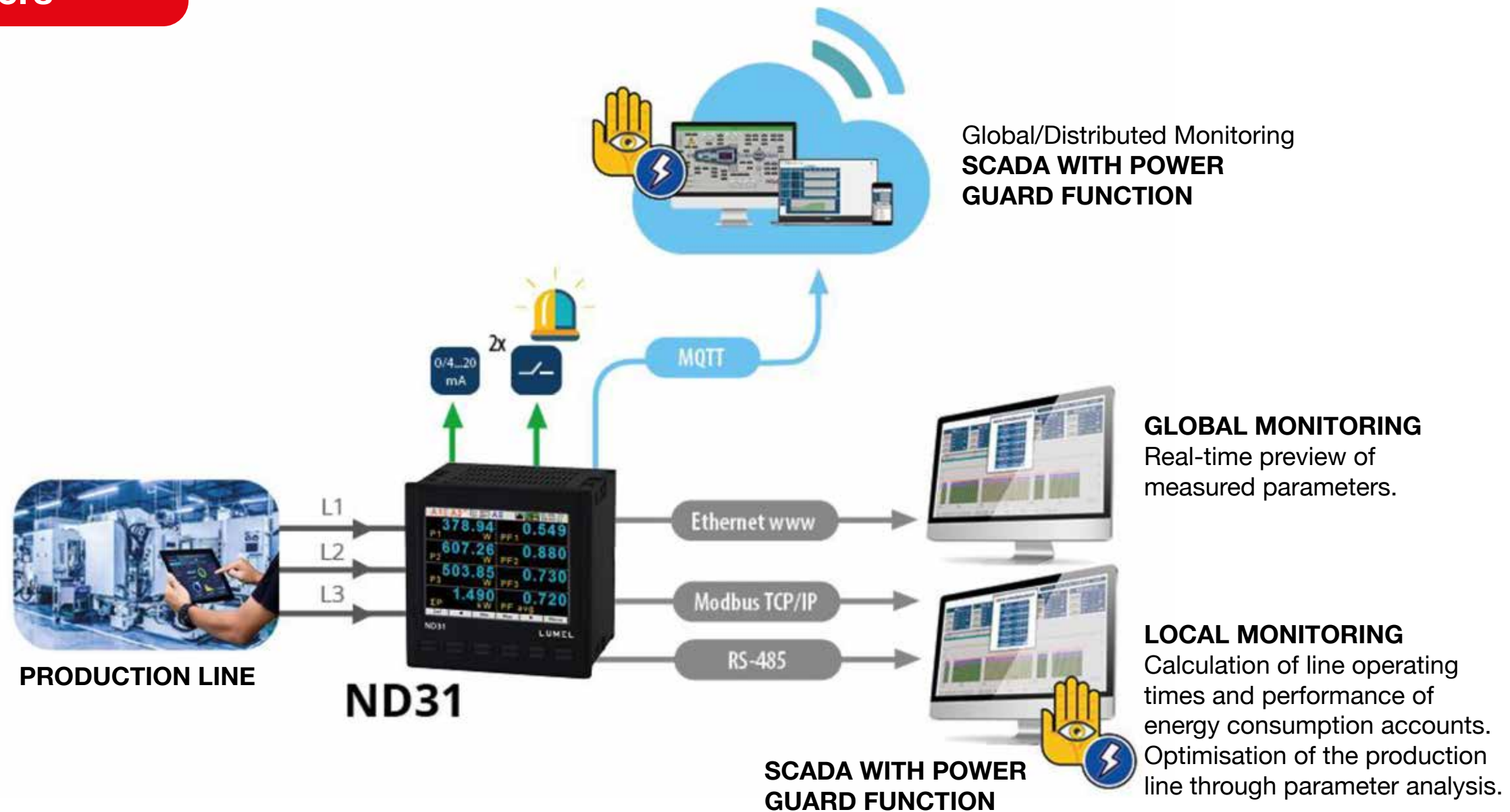


or

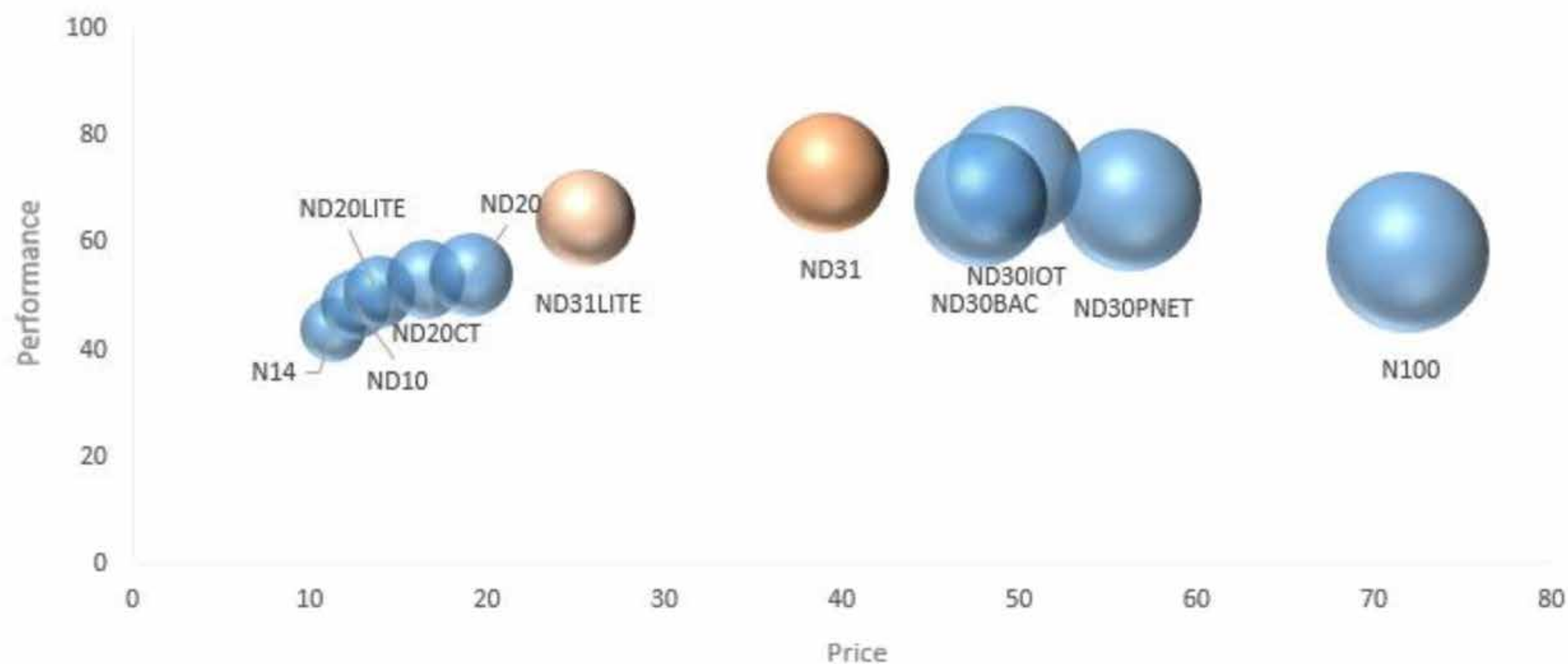


Application

Measurement of Production Line Parameters



Price V/S Performance





U_{LN} Voltage Line to Neutral	P_{AV} Average Power	IP65 Ingress Protection - IP65	AC AC Input
U_{LL} Voltage Line to Line	E_p Active Energy	 Relay Output	2x PT100 Temperature Sensor I/P - PT100
I_L Line Current	E_q Reactive Energy	 Analog Output	 RS485 Modbus Communication
f Frequency	THD Total Harmonic Distortion	ETH Ethernet Communication	BAC BACnet Communication
P Active Power	E_{Har} Harmonic Energy	 Web Browser	MQTT MQTT Protocol
Q Reactive Power	H_{Har} Individual Harmonic	FTP FTP Server	
S Apparent Power	eCon eCon Programming Software	eCon Web Browser	

ND31LITE & ND31



Configuration with Free eCon Software


e-Con
 Device configurator

[EN](#) | [PL](#) | [ESP](#) | [DE](#) | [IT](#)
[Check for updates](#) | [Update firmware](#) | [Guide](#)

Select device:

Filter:

- ☐ All
- ☐ Transducers
- ☒ Meters
- ☐ Controllers
- ☐ RF modules

Name:

N24_N25
 N27P
 N30H
 N30o
 N30P
 N30U
 N43
 ND10
 ND20
ND31
 S4AO

Configure

Communication

Port:

Device ID:

Baud rate:

Mode:

Timeout: [ms]

☐ Use the factory settings of the module

Status: **port disconnected**

Device: **unknown**

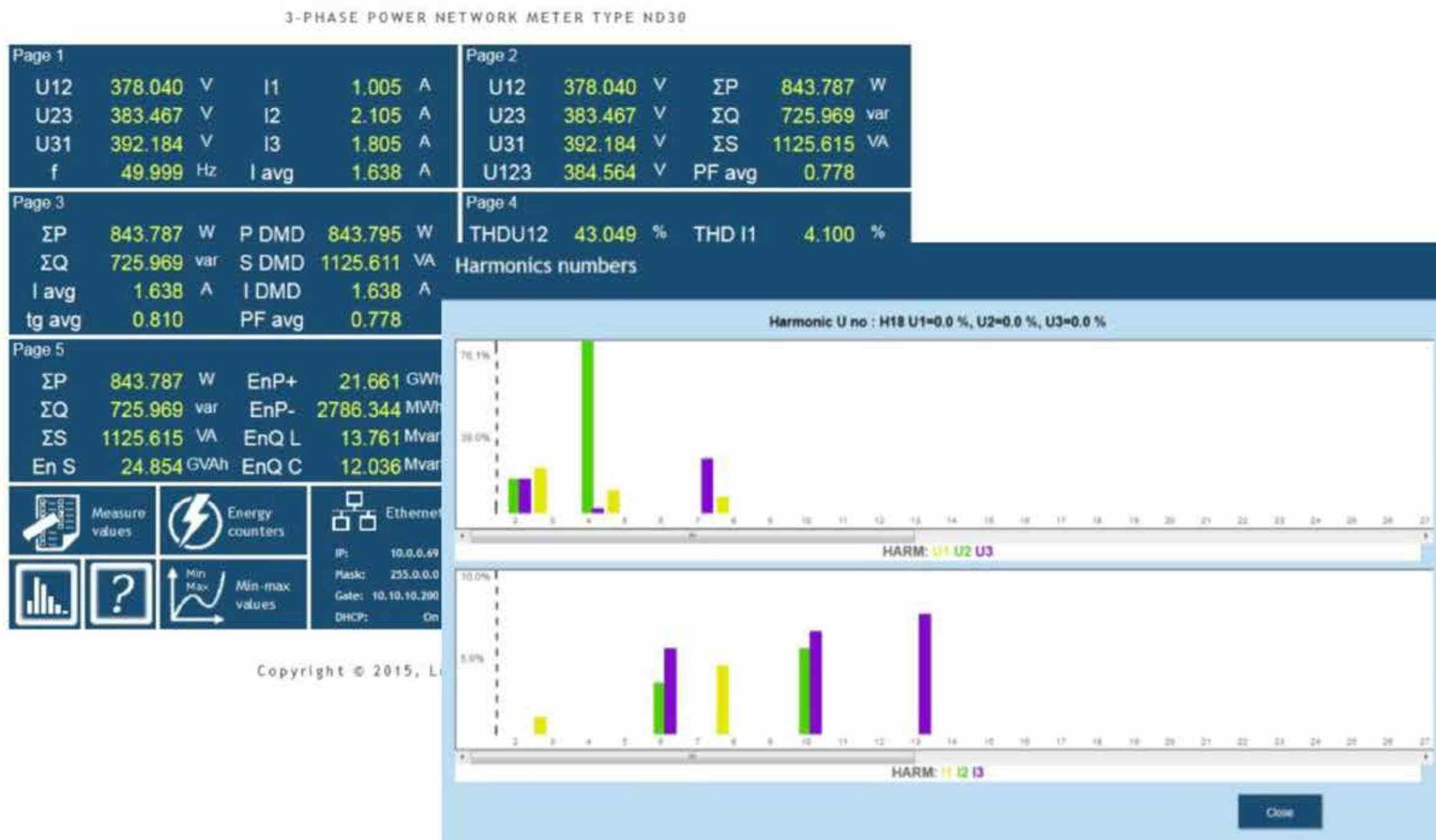
ND31 - configuration [Configuration not downloaded!]

Turn off forms validation for ND31 ☐

- Meter parameters
- Alarm 1 configuration
- Alarm 2 configuration
- Analog output
- Pages display

Pages - general settings										
Pages selection (on/off)	1	2	3	4	5	6	7	8	9	10
	☒	☐	☐	☐	☐	☐	☐	☐	☐	☐
Harm. pages selection (on/off)	11					12				
	☐					☐				
Display brightness	Minimum									
Display dimmer delay	[0 - 3600] s									
Pages color	Green									
Reset pages settings	No					Restore				
Save										
- Pages 1-5 settings
- Pages 6-10 settings
- Archive
- Ethernet settings
- Modbus settings

Remote Readout via Ethernet (WWW & FTP)



Harmonic U no : H18 U1=0.0 %, U2=0.0 %, U3=0.0 %

HARM: U1 U2 U3

HARM: H1 H2 H3

Close



THANK YOU



Sifam Tinsley Instrumentation Ltd

1 Warner Drive
Springwood Industrial Estate
Braintree
Essex
CM7 2YW

Tel: 01376 335271

Email: sales@sifamtinsley.com

www.sifamtinsley.co.uk