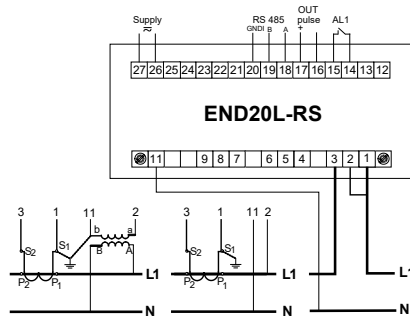**ETIMETER**

END20L-RS Network Analyser

Features:
→ → 3.5" LCD screen with backlight;
→ IP65 degree of protection of the front panel in the enclosure;
→ freely programmable output relay;
→ W-WH-VA-VAR-VARH power measurement;
→ Measurement of current and voltage THD distortion coefficients;
→ function for measuring the maximum consumption of each phase;
→ Data transmission via RS-485 (Modbus);
→ pulse output under the electricity meter;
→ configuration of the displayed parameters;
→ password protection;
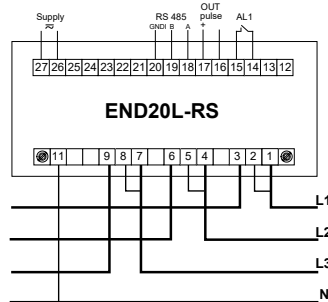→ integrated real time clock and calendar.

Application - The END20L-RS mains analyser is designed to monitor electrical parameters and quality in three-phase or single-phase low and high voltage networks. The analyser provides accurate measurements of all types of electricity and has a wide range of options for setting the parameters displayed on the screen. The analyser can be connected both directly and via current and voltage transformers. Modbus protocol and pulse output for electricity meters are used for data transfer.

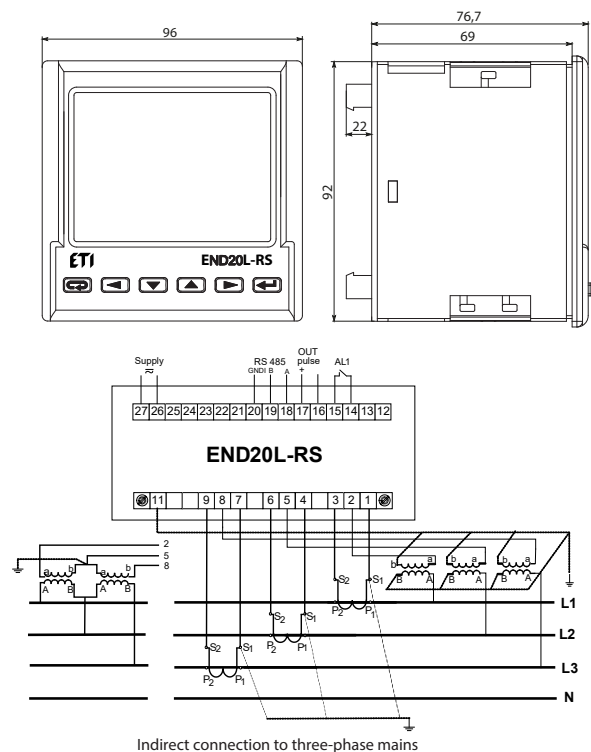| Technical data	
Power supply voltage	85 - 253V AC / 90 - 300V DC
Measurement voltage phase, AC	2,8 - 276V AC
Measuring voltage linear, AC	5 - 480V AC
Measured current	0,002 - 6000 A
Nominal frequency	47 - 63 Hz
Maximum power input	6 VA
Maximum current input consumption	0,05 VA
Maximum voltage input consumption	0,05 VA
Relay output	potential-free 1 NO (0,5A, 250V AC)
Counter pulse output	NPN (18-27V, 10-27mA), 1000 - 20000 imp/kW
Communications interface	RS-485 (Modbus RTU)
Data transmission speed	4.8 / 9.6 / 19.2 / 38.4 kB
Operating temperature range	-25 ... +55 ℃
Overvoltage class	300, category III
Degree of pollution	II
Degree of protection	IP65 - front panel; IP20 - connection side
Weight	300 g
Dimensions H x W x D	96 x 96 x 77 mm
Installation opening H x W	92,5 x 92,5 mm
Compliance with standards	EN 61010-1, 61326-1, 61000-6-4

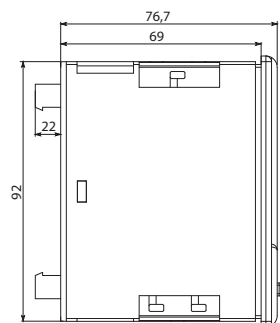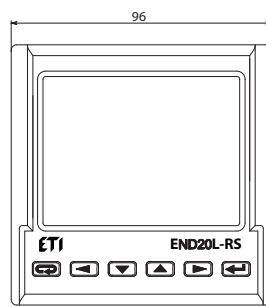| Network Analyser				
Type	Description	Code	Weight (g)	Packaging (pcs.)
END20L-RS	Network analyzer (RS-485)	004656950	300	1

Connection to single-phase mains

Direct connection to three-phase mains

Indirect connection to three-phase mains

END25 Network parameter analysers

Application - The END25-RS and END25-ETH are designed to monitor electrical parameters and quality in three-phase or single-phase LV or HV networks. The END25-RS has two potential-free output contacts that can be used to connect an external electricity meter. The END25-ETH has an 8Mb on-board memory for recording power peaks, events and breakdowns at the required interval. The analyzers have extensive customisation options for the parameters displayed on the screen, including graphical diagrams. The END25-RS uses an RS-485 interface with Modbus communication protocol and the END25-ETH uses an ETHERNET interface with Mosbus TCP/IP communication protocol.
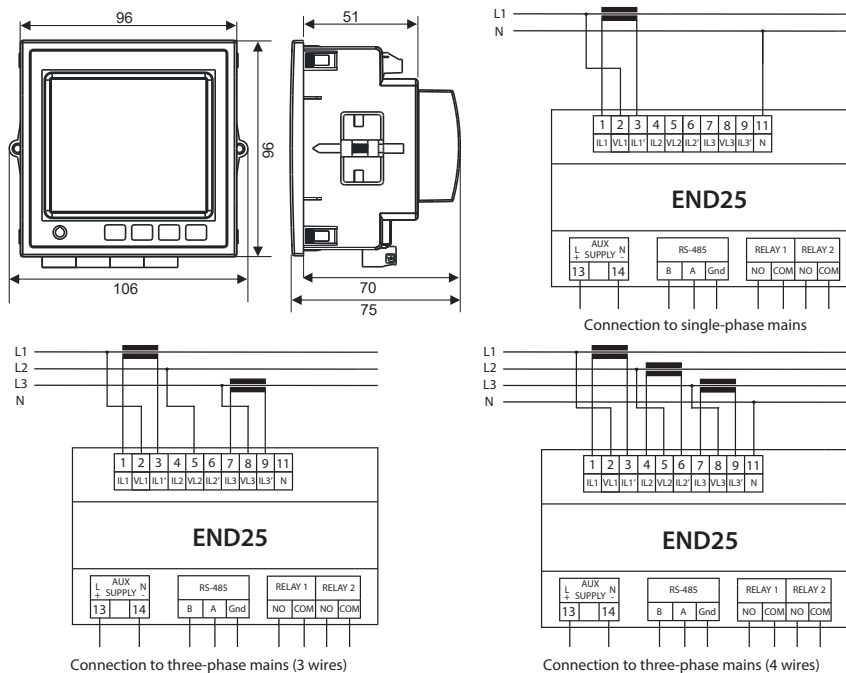
Features:

→ Measurements up to 31 harmonics;
→ 3.5" backlit LCD screen;
→ measurement of 85 AC mains parameters;
→ 8Mb internal memory for recording measurement parameters (END25-RS);
→ current and voltage THD measurement;
→ high accuracy class: 0.5s for END25-RS and 0.2S for END25-ETH;
→ maximum consumption measurement function for each phase;
→ two programmable outputs (END25-RS);
→ 28 configurations of displayed parameters;
→ password protection;
→ Built-in real-time clock.

Technical data	END25-RS	END25-ETH
Power supply voltage	100 - 550V AC/DC	
Measurement voltage phase, AC	57,7 - 346,4V AC	
Measuring voltage linear, AC	100 - 600V AC	
Measuring current (primary winding)	1/5 A	
Measuring current (secondary)	1 - 9999 A	
Nominal frequency	45 - 65 Hz	
Voltage measuring range	20 - 120 % от Un	
Current measuring range	1 - 120 % of In	
Maximum current/voltage input consumption	<0,3 VA	
Relay output	potential free, 2 NO (5A, 240V AC)	-
Communication interface	RS-485 (Modbus RTU)	Ethernet (Modbus TCP/IP)
Transmission speed	4.8 / 9.6 / 19.2 / 38.4 / 57,6 kB	-
Operational temperature range	-10 ... +60 ℃	
Overvoltage class	III	
Degree of pollution	II	
Degree of protection	IP65 - front panel; IP20 - connection side	
Weight	320 g	
Dimensions H x W x D	96 x 96 x 75 mm	
Installation opening H x W	92 x 92 mm	
Compliance with standards	EN 61010-1-2010, 61326-1, 61000-4-3, 60529, 62053	

Network Analyser

Type	Description	Code	Weights (g)	Packaging (pcs.)
END25-RS	Network Parameter Analyzer (RS-485)	004656951	320	1
END25-ETH	Network Parameter Analyzer (Ethernet)	004656952		

Connection to single-phase mains

Connection to three-phase mains (3 wires)

Connection to three-phase mains (4 wires)

Note: The END25-ETH analyser has no relay outputs and instead of RS-485 terminals there is an RJ-45 connector for Ethernet protocol connection. The measurement and supply terminals are unchanged.