Elite 500 NwM

Easy to install

Alerts for network events

Network visualisation

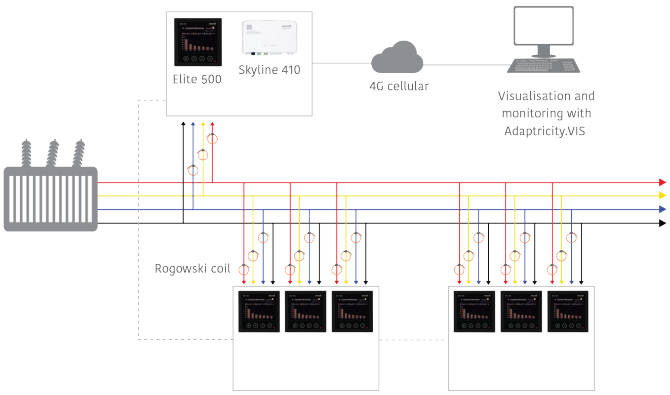
Elite 500 NwM is an advanced measurement kit for single or multi-feeders that seamlessly integrates with a robust Data Acquisition System (DAS). This integrated solution enables frequent data collection, in-depth analysis and intuitive visualisation. It also provides power distribution utilities with a comprehensive view of their Low Voltage (LV) grid network for improved monitoring and decision-making.



Solution architecture

The innovative solution kit comes in two configurations: Single-feeder and three-feeder. Single-feeder setup includes one Elite 500 meter with Rogowski coils for advanced power monitoring, connected to a Skyline 410 gateway through a power adaptor. Three-feeder setup includes three such meter - coils units, all linked to Skyline 410 through a power adaptor.

Data is transmitted securely by the gateway over a 4G cellular network (fallback to 2G) to Secure's data handling facility, ensuring seamless monitoring. Designed for flexible deployment, this solution can be installed at key LV transformers (DT) or LV feeder pillar boxes.



Applications

- LV network monitoring
- Network visualisation, data-driven planning, stress analysis and future scenario simulation
- Network loss (technical and non-technical) analysis
- Harmonics assessment

Benefits

- Determine the saturation degree and balance of transformers, LV feeders, and unbalance across phase
- Monitor and manage Distributed Energy Resources (DER) and EV loads with their intermittent demand patterns
- Receive instant alerts for network events such as phase loss, imbalance, or outages, enabling timely corrective action
- Optimise load distribution and identify potential issues
- Large, high-resolution graphical display for analytical and graphical views
- Dynamic tracking of all LV network parameters
- Expandable by daisy chaining to cover multi LV feeders

Features

- Fully integrated and preassembled kit
- Easy to install and expandable as per feeders
- Accurate measurement with proven metrology (Class 0.5S)
- Local display for monitoring and configuration
- Dual-SIM 4G connectivity for reliable data transmission
- Data logging and edge computing for load pattern analysis, shifting, and diversion
- Monitoring / metering and communication interfaces for distributed energy resources load tracking

SECURE

Elite 500 NwM

Technical specifications

Electrical

Wiring configuration	Three phase four wires (3P4W)
Supply voltage	100 - 270 V AC (L-N)
Frequency range	50Hz / 60Hz
Burden	< 21VA @240 V AC
Rogowski coil primary current I_{pr}	5% to 100% I_{pr}
Measurement current range	1000A
Power factor range	0.1 Lag – Unity – 0.1 Lead (for I_{pr})
Energy accuracy	Active: Class 0.5S and reactive: Class 1
Rogowski coil type	Three metre cable with 70 mm diameter coil
Rogowski coil input - output ratio	1000A / 100 mV

Environmental

Protection degree	IP 65
Pollution degree	3
Insulation	Double insulation
Impulse withstand	6.4 kV
Altitude	≤ 2000 metre
Installation category	CAT III
Temperature	-10 °C to +40 °C (Operating) and -20 °C to +70 °C (Storage)
Humidity	95% non-condensing

Communication

RS-485	1 x half-duplex, baud rate upto 19200 bps (default 9600 bps)
Parity bit (Single feeder)	None, even, odd

User interface

LEDS on Elite 500	2 x LEDs (Red for calibration and yellow for alarm)
Touch keys on Elite 500	4 x touch keys for navigation (Back, Up, Down, and Enter)
LEDs on Skyline (Single feeder)	2 x LEDs (Red for device on and green for network connection)

Mechanical

Overall dimensions (L x W x D)	380 x 280 x 130 mm approx
Overall weight	Multi-feeder: 3.75 kg approx, Single-feeder: 3.5 kg approx
Mounting	Wall mount
Material	Flame-retardant polycarbonate (PC-FR)
Torque (Tightening screw)	0.8 Nm (for input voltage connector)

Standard compliance

Safety	EN IEC 62368-1:2020 + A11:2020 (3rd edition)
Radiated spurious emissions	ETSI EN 301-908-1
EMC	EN 301-489-1, EN 301-489-52, EN 55032, EN 61000-3-2, EN 61000-3-3, IEC 61326
Metrology	IEC 61557-12, IEC 62053-22/24, IEC 61869-10

Specifications are subject to change without prior notice

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