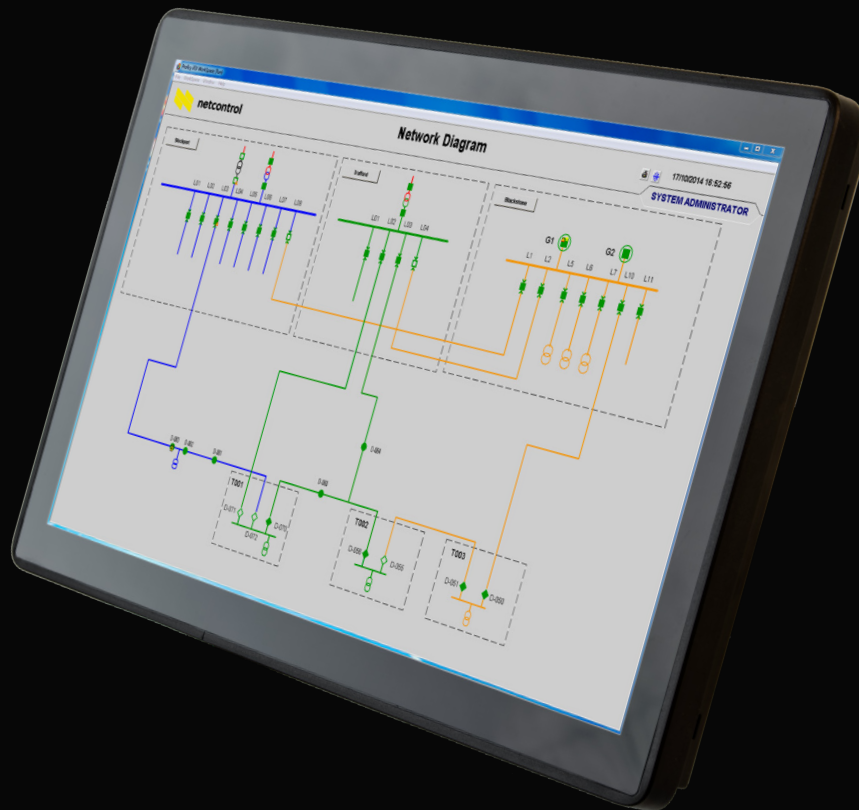


NETCON 500 OP

Operator Panel for Netcon 500 Outstation



Advanced local functionality for primary substations



NETCON 500 OP

Operator Panel for Netcon 500 Outstation

FEATURES

Substation diagrams

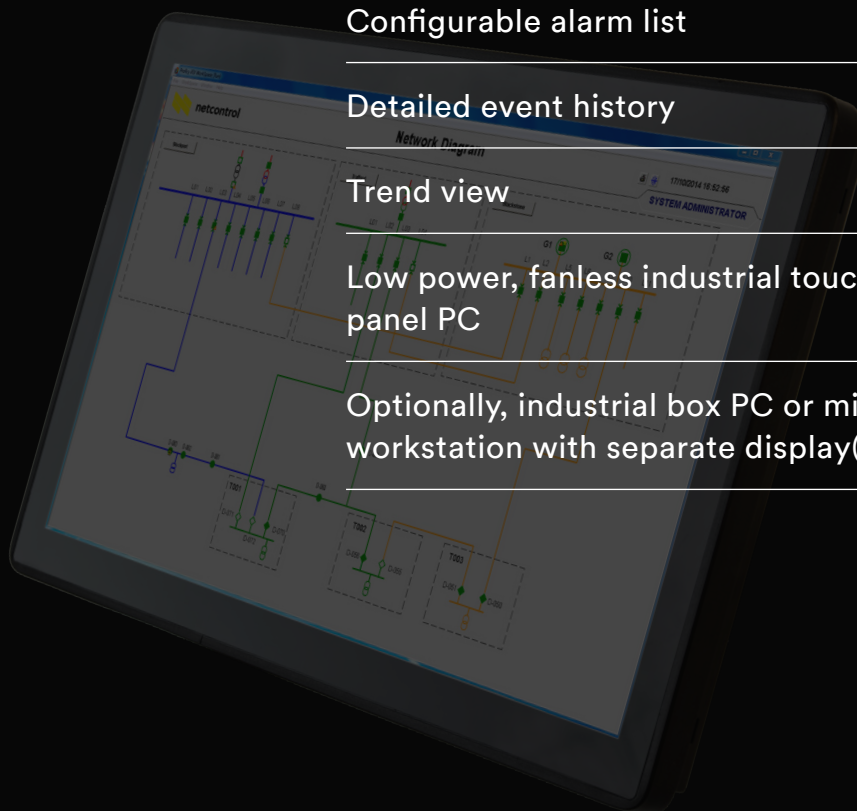
Configurable alarm list

Detailed event history

Trend view

Low power, fanless industrial touch-screen panel PC

Optionally, industrial box PC or minitower workstation with separate display(s)



Advanced local functionality for primary substations

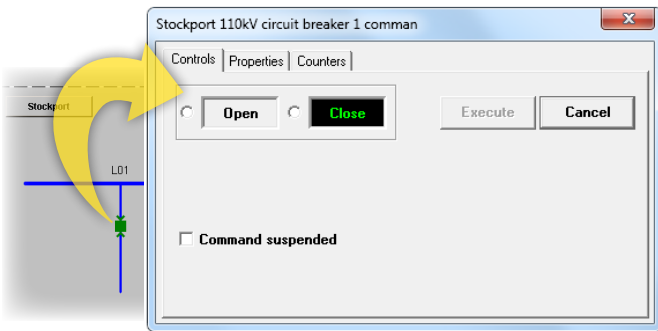
The Netcon 500 OP (Operator Panel) is an advanced human-machine interface for the Netcon 500 systems of primary substations. It has all the functionality needed for the local supervision of a substation and offers several hardware options, all hardened for strict cyber security.

- Alarm/event history
 - Information about time of change of alarm condition
 - Advanced filter functions
 - Supports up to 100 000 events

FUNCTIONALITY

The Netcon 500 OP provides a clear overview of the current switching state, alarm and event lists and measurements and trends. Its user interface is highly configurable, as in modern SCADA systems.

- Diagrams
 - Display circuit breaker or disconnecter state
 - Display measurement values
 - Enable the user to issue switching commands



- Support for several diagrams, e.g. detailed views of each feeder

- Alarms
 - Display date, time, value and description
 - Background and text coloured according to e.g. alarm level
 - Acknowledge functionality

Time	Description	Value	Status	Operator
17/10/2014 15:47:00	Stockport T2 power	87.6 MW	Open CPN	STAC T2 MW
17/10/2014 15:33:58	Stockport L09 circuit breaker status	Open CPN	Error HIGH	STAC L09 QO
17/10/2014 15:22:38	Stockport L07 circuit breaker status	Open CPN	Error MEDIUM	STAC L07 QO
17/10/2014 15:20:58	Stockport L05 circuit breaker status	Open CPN	Error MEDIUM	STAC L05 QO
17/10/2014 15:20:48	Stockport L04 circuit breaker status	Open CPN	Error MEDIUM	STAC L04 QO
17/10/2014 15:20:35	Stockport L03 circuit breaker status	Open CPN	Error MEDIUM	STAC L03 QO
17/10/2014 14:59:15	Stockport L02 circuit breaker status	Open CPN	Error MEDIUM	STAC L02 QO
17/10/2014 14:58:12	Stockport L01 circuit breaker status	Open CPN	Error MEDIUM	STAC L01 QO
17/10/2014 14:17:58	Stockport L09 circuit breaker status	Open CPN	Error MEDIUM	STAC L09 QO
17/10/2014 14:17:52	Stockport L07 circuit breaker status	Open CPN	Error MEDIUM	STAC L07 QO
17/10/2014 14:17:52	Stockport L05 circuit breaker status	Open CPN	Error MEDIUM	STAC L05 QO
17/10/2014 14:17:52	Stockport L04 circuit breaker status	Open CPN	Error MEDIUM	STAC L04 QO
17/10/2014 14:17:52	Stockport L03 circuit breaker status	Open CPN	Error MEDIUM	STAC L03 QO
17/10/2014 14:17:52	Stockport L02 circuit breaker status	Open CPN	Error MEDIUM	STAC L02 QO
17/10/2014 14:17:52	Stockport L01 circuit breaker status	Open CPN	Error MEDIUM	STAC L01 QO
17/10/2014 13:57:23	Stockport T2 power	87.6 MW	Open CPN	STAC T2 MW
17/10/2014 13:37:23	Stockport T1 power	87.6 MW	Open CPN	STAC T1 MW

- Trends
 - Configurable real time trend view



Ack	Date In	Time In	Tagname	Description
1	17/10/2014	16:44:07	STA1_INCOMING_1_QO	Stockport 110kV
2	17/10/2014	16:43:03	STA1_L01_QO	Stockport L01 cir
3	17/10/2014	16:39:35	STA1_L06_QO	Stockport L06 cir
4	17/10/2014	16:39:22	STA1_L04_QO	Stockport L04 cir
5	17/10/2014	16:38:40	STA1_L09_QO	Stockport L09 cir
6	17/10/2014	16:37:54	STA1_L02_QO	Stockport L02 cir
7	17/10/2014	15:47:40	STA1_T2_MW	Stockport T2 powe
8	17/10/2014	15:47:40	STA1_T1_MW	Stockport T1 power

Value	Priority
Intermediate HIHI	Error HIGH
Error HIGH	Error MEDIUM
Error MEDIUM	Error MEDIUM
Intermediate MEDIUM	Open MEDIUM
87.6	LOW
0.0	LOW



Advanced local functionality for primary substations

HARDWARE & OS



- Low power, fanless, industrial touch-screen panel PC
- Intel J1900 CPU, 1.9 GHz Quad Core
- 8 GB DDR3 SODIMM
- 2 × M-SATA 120 GB
- 2 × RS-232, 4 × USB, 2 × LAN RJ45
- HDMI, VGA, audio
- Power input options: 12 VDC, 24 VDC, 230 VAC
- Windows 10 IoT

Environmental specifications

- Operating temperature: 0...+50°C
- Operating humidity: 10%...90%

HW options for panel PC

- 18.5" panel for panel mounting
 - cutout hole: 438 × 264 mm
- 18.5" panel with 19" rack mount
- 21.5" panel for panel mounting
 - cutout hole: 518 × 306 mm
- 24" panel for panel mounting
 - cutout hole: 555 × 332 mm

SOFTWARE OPTION

- Local functionality for designing and editing diagrams

HARDWARE OPTIONS

Fanless industrial wall-mount FAS Tech box PC

- Intel Core i7 1.7 GHz (4 cores)
- 16 GB RAM, 2 × 500 GB SSD
- Microsoft Windows 10 IoT Enterprise LTSC
- 9...36 VDC power input
- Operating temperature 0...+60°C
- Dell Professional 24" display



Dell minitower

- OptiPlex XE3 Small Form Factor
 - Intel Core i7-8700 (6 Cores/12 MB/12 T/ up to 4.6 GHz)
 - 8 GB (2 × 4 GB) 2666 MHz DDR4 UDIMM non-ECC
 - 2 × 256 GB SATA SSD
 - Intel GPU for 2 × 4k display
 - Keyboard & mouse
 - Windows 10 IoT LTSC
 - 24" Dell Professional P2419H display
- Optionally, 2 × 24" Dell displays
- Environmental specifications:
 - Operating temperature: +10...+45°C
 - Storage temperature: -40...+60°C
 - Operating humidity: 20...80%

