

NPV911

Busbar protection IED



The optimal management of electrical power systems is based in particular on the reliability, availability and communication skills of protection, measurement and automation devices.

The NPV911 offers a modular voltage protection solution for substations. Voltage and frequency protection with optional cards (I/O, communication...) and powerful logic programming possibility make NPV911 optimal for demanding load shedding or automatic transfer applications.

The NPV911 communicates using various protocols including IEC 61850 substation communication standard.



- 8 frequency stages and 8 setting groups for load shedding
- Synchrocheck for up to three circuit breakers

ANSI CODES

59	27	59N	47/27P /59NP	78	81O/81U	81R	50BF /52BF	99
60	74TC	25	86					

OUR TRADEMARKS



CHARACTERISTICS

Protection functions

- Overvoltage, 4 stages INST, DT or IDMT [59]
- Undervoltage, 4 stages INST, DT or IDMT [27]
- Zero sequence overvoltage, 4 stages INST, DT or IDMT [59N]
- Positive sequence under/overvoltage, negative sequence overvoltage, 4 stages INST, DT or IDMT [47/27P/59NP]
- Vector jump [78]
- Over/under frequency, 8 stages INST or DT [810/81U]
- Rate of change of frequency, 8 stages INST or DT or IDMT [81R]
- Breaker failure protection [50BF/52BF]
- Programmable functions [99]

Measuring and monitoring

- Voltage measurements (UL1-UL3, U12-U31, U0, SS)
- Voltage harmonics (up to 31st)
- Disturbance recorder: from 400 Hz to 3.2 kHz (8 to 64 samples per cycle)
- Fuse failure (VTS)
- Trip circuit supervision [74TC]

Control

- Controllable objects: 5
- Synchrocheck [25]
- Lock out relay [86]
- 8 setting groups

Hardware

- Voltage inputs: 4
- Digital inputs: 2 or 3 (standard)
- Output relays: 5+1 (standard)

Options (5 slots)

- Digital inputs optional: +8 per card
- Digital outputs optional: +5 per card (2 cards max.)
- RTD inputs: +8 per card
- mA analog measures (1 input + 4 outputs)
- Communication medias (specified below)

Event recording

- Non-volatile disturbance records: 100
- Non-volatile event records: 10,000

Communication medias

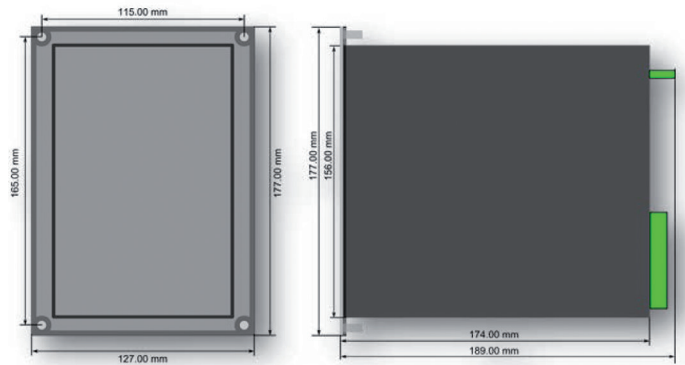
- RJ45 Ethernet 100Mb (rear port) + RS485
- Double LC fibre Ethernet 100Mb HSR/PRP (rear port)
- Double Ethernet RJ45 - 100 Mb HSR/PRP (rear port)
- RS232 + serial fibre PP/PG/GP/GG (option)
- Double RJ45 Ethernet 100Mb (rear port)
- Double ST fibre Ethernet 100Mb (rear port)

Communication protocols standard

- IEC 61850 (including HSR & PRP)
- IEC 60870-5-103/101/104
- Modbus RTU, Modbus TCP/IP
- DNP 3.0, DNP 3.0 over TCP/IP
- SPA

Case (dimensions without protection gasket)

- H, W, D without terminal 177x127x174 mm
- H, W, D with terminal 177x127x189 mm (casing height 4U, width ¼ rack, depth 210 mm)
- H, W of front plate 177x127 mm
- H, W of cut out 160x106 mm
- Removable protection gasket width 3 mm



SMART9 - integrated software

Our user friendly SMART9 (Setting, Measurement, Analysis, Recording, Time-saving) configuration software helps the user get the best from NP900 series relays (connection from RJ45 Ethernet 100Mb front and rear port).

