

NPF910

Feeder 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 NPF910 offers a modular feeder protection and control solution for non-directional overcurrent and earth-fault protection with automatic reclosing. Optional cards (I/O, communication...) are available for more comprehensive monitoring and control applications.

The NPF910 communicates using various protocols including IEC 61850 substation communication standard.



- Cable end differential protection
- Low-impedance REF protection
- Harmonics protection and control
- 5-shot scheme controlled autorecloser

ANSI CODES

50/51	50N /51N	50H/51H /68H	46/46R /46L	49F	87N	50BF /52BF	99
74TC	79	68	86				

OUR TRADEMARKS



CHARACTERISTICS

Protection functions

- Three-phase overcurrent, 4 stages INST, DT or IDMT [50/51]
- Earth-fault (sensitive), 4 stages INST, DT or IDMT [50N/51N]
- Harmonic overcurrent / inrush blocking, 4 stages INST, DT or IDMT [50H/51H/68H]
- Current unbalance / broken conductor, 4 stages INST, DT or IDMT [46/46R/46L]
- Cable thermal overload protection [49F]
- Low impedance restricted earth fault / cable end differential [87N]
- Breaker failure protection [50BF/52BF]
- Programmable functions [99]
- Arc protection (option) [50Arc/50NArc]

Measuring and monitoring

- Phase and residual currents (IL1, IL2, IL3, I01, I02)
- Current THD and harmonics (up to 31st)
- Circuit breaker wear (CBW)
- Disturbance recorder: from 400 Hz to 3.2 kHz (8 to 64 samples per cycle)
- Current transformer supervision (CTS)
- Trip circuit supervision [74TC]

Control

- Controllable objects: 5
- Autorecloser [79]
- Cold-load pick-up block [68]
- Switch onto fault logic
- Lock out relay [86]
- 8 setting groups

Hardware

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

Options (4 slots)

- Digital inputs optional: +8 per card
- Digital outputs optional: +5 per card (2 cards max.)
- Arc protection (12 sensors +2xHSO +BI)
- 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

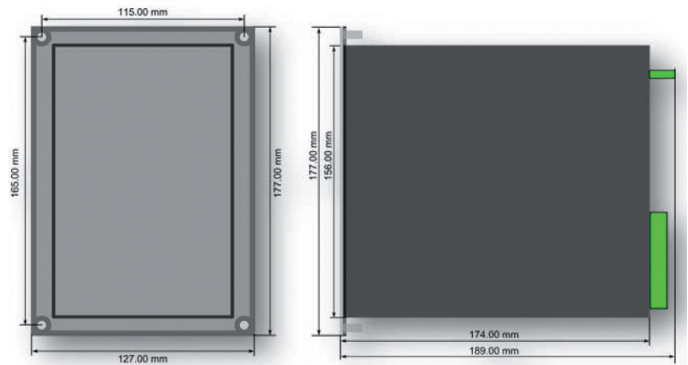
- RJ45 Ethernet 100Mb (rear port) + RS485
- Double LC fibre Ethernet 100Mb HSR/PRP (rear port)
- Double Ethernet RJ45 - 100 Mb HSR/PRP (rear port)
- RS232 + serial fibre PP/PG/GP/GG (option)
- Double RJ45 Ethernet 100Mb (rear port)
- Double ST fibre Ethernet 100Mb (rear port)

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).

