

NPT916

Transformer 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.

NPT916 is a transformer protection IED with sophisticated and easy to use differential protection function. The NPT916 transformer protection IED provides for both low and high side overcurrent, earth-fault, negative sequence and two independent restricted earth-fault instances. The NPT916 can be applied for generator and motor differential protection as well.

The NPT916 communicates using various protocols including IEC 61850 substation communication standard.



- Predefined or custom connection group selection
- 2nd and 5th harmonic blocking
- Automatic verification of connection group and nominal value settings
- Through fault and overloading statistics for preventive maintenance



RE and Data Centre recommended.

ANSI CODES

87T/87M /87G	87N	49T	50/51	50N /51N	50H/51H /68H	46/46R /46L	50BF /52BF	99
74TC	68	86						

OUR TRADEMARKS



TECHNIREL

CHARACTERISTICS

Protection functions

- Differential protection (2 winding transformer, generator, motor) [87T/87M/87G]
- Low impedance restricted earth fault / cable end differential [87N]
- Transformer thermal overload [49T]
- 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]
- Breaker failure protection [50BF/52BF]
- Programmable functions [99]
- Arc protection (option) [50Arc/50NArc]

Measuring and monitoring

- Phase and residual currents (IL1, IL2, IL3, IO1, IO2)
- Current THD and harmonics (up to 31st)
- Frequency (f)
- Circuit breaker wear (CBW)
- Disturbance recorder: from 400 Hz to 3.2 kHz (8 to 64 samples per cycle)
- Disturbance recorder (3.2 kHz)
- Current transformer supervision (CTS), 2 instances
- Trip circuit supervision [74TC]

Control

- Controllable objects: 5
- Cold-load pick-up block [68]
- Lock out relay [86]
- 8 setting groups

Hardware

- Current inputs: 10
- Digital inputs: 2 or 3 (standard)
- Output relays: 5+1 (standard)

Options (2 slots)

- Digital inputs optional: +8 per card
- Digital outputs optional: +5 per card (2cards 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

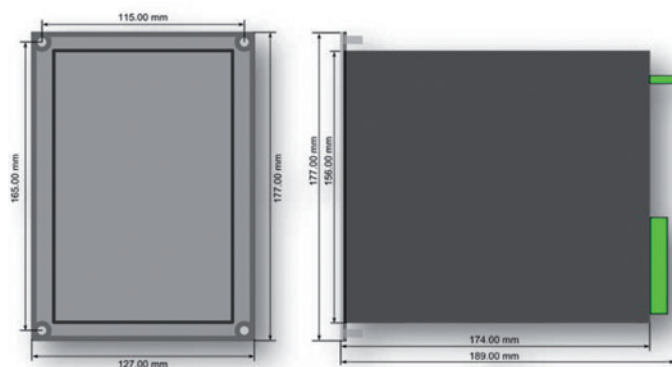
- RJ45 Ethernet 100Mb (rear port) + RS485
- Double LC fibre Ethernet 100Mb HSR/PRP (rear port)
- Double Ethernet RJ45 - 100 Mb HSR/PRP (rear port)
- RS232 + serial fibre PP/PG/GP/GG (option)
- Double RJ45 Ethernet 100Mb (rear port)
- Double ST fibre Ethernet 100Mb (rear port)

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

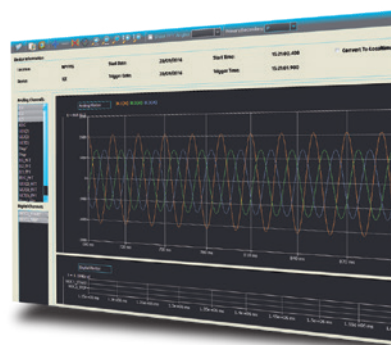
Case (dimensions without protection gasket)

- H, W, D without terminal 177x127x174 mm
- H, W, D with terminal 177x127x189 mm (casing height 4U, width 1/4 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).



The specifications and drawings given are subject to change and are not binding unless confirmed by our specialists.



GENERATION



TRANSMISSION



DISTRIBUTION



RAILWAY



INDUSTRY

