



NPM915

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 NPM915 offers a modular motor protection and control solution for larger and more important motors requiring both current and voltage based protection functions along with complete measurements. Optional cards (I/O, communication...) are available for more comprehensive monitoring and control applications. Up to 16 RTD signals can be connected for thermal alarming and tripping.

The NPM915 communicates using various protocols including IEC 61850 substation communication standard.



ANSI CODES

| | | | | |
|----------------|----------------|---------|-------|-----------------|
| 50/51 | 50N /51N(S) | 67 | 67N | 50H/51H /68H |
| 46R/46L /46 | 87N | 49M | 48/14 | 66 |
| 37 | 55 | 51m | 59 | 27 |
| 59P/27P /47 | 59N | 81O/81U | 81R | 32/37 /32R |
| 50BF /52BF | | | | |
| 60 | 74TC | | | |

- Power motor management
- Soft-start protection starting from 6Hz
- Star-delta started motor supervision
- 2-speed motor protection
- Energy and Power measurement accuracy better than Class 1 S

Our energy at your service

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(S)]
- Directional overcurrent, 4 stages INST, DT or IDMT [67]
- Directional (sensitive) earth-fault, 4 stages INST, DT or IDMT [67N]
- 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 end differential [87N]
- Motor thermal overload [49M]
- Motor star-up / locked rotor supervision with speed switch [48/14]
- Restart inhibit / frequent starts [66]
- Undercurrent/loss of load [37]
- Power factor protection [55]
- Mechanical jam [51m]
- Overvoltage, 4 stages INST, DT or IDMT [59]
- Undervoltage, 4 stages INST, DT or IDMT [27]
- Positive sequence under/overvoltage, negative sequence overvoltage, 4 stages INST, DT or IDMT [59P/27P/47]
- Zero sequence overvoltage, 4 stages INST, DT or IDMT [59N]
- Over/under frequency, 8 stages INST or DT [810/81U]
- Rate of change of frequency, 8 stages INST or DT or IDMT [81R]
- Over/Under/Reverse power [32/37/32R]
- Breaker failure protection [50BF/52BF]
- Arc protection (option) [50ARC]

Measuring and monitoring

- Phase and residual currents (IL1, IL2, IL3, IO1, IO2)
- Voltage measurements (UL1-UL3, U12-U31, U0, SS)
- Current and voltage harmonics (up to 31st)
- Current THD
- Frequency (f)
- Power (P, Q, S, pf)
- Energy (E+, E-, Eq+, Eq-)
- Circuit breaker wear (CBW)
- Disturbance recorder (3.2 kHz)
- Current transformer supervision (CTS)
- Fuse failure (VTS)
- Trip circuit supervision [74TC]

Control

- Controllable objects: 5
- 8 setting groups

Hardware

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

Options (3 slots)

- Digital inputs optional: +8 per card
- Digital outputs optional: +5 per card (2 cards max.)
- Arc protection (12 sensors +2xHSO +BI)
- 2 x mA input + 6-8 x RTD input (2 cards max.)
- Communication media (specified below)

Event recording

- Non-volatile disturbance records: 100
- Non-volatile event records: 10000

Communication media

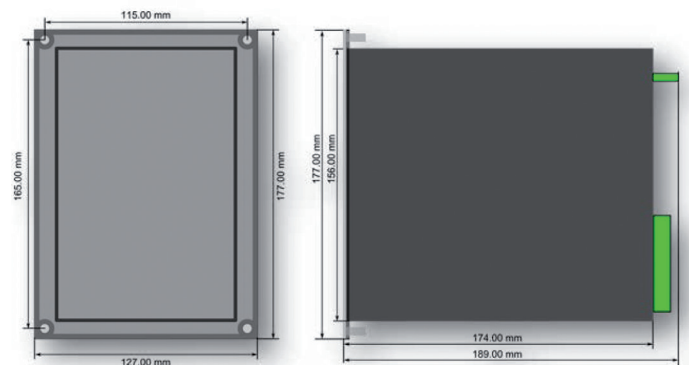
- RJ 45 Ethernet 100Mb (front standard)
- Double LC Ethernet 100Mb (option)
- RS232 + serial fibre PP/PG/GP/GG (option)

Communication protocols standard

- IEC 61850
- IEC 60870-5-103/101/104
- Modbus RTU, Modbus TCP/IP
- DNP 3.0, DNP 3.0 over TCP/IP
- SPA

Case

- 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



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.



CEE Relays Ltd

87C Whitby Road, Slough, SL1 3DR (Registered Office)

Tel: +44 1753 576477 Fax: +44 1753 825661

Web: www.ceerelays.co.uk



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