



PFR160NX 120NX 80NX

Features

- Three-phase power factor regulator
- Measurement parameters
 - Active, reactive and apparent power
 - Required VAR
 - RMS voltage and current
 - Frequency
 - *2 Up to 15th order harmonics measurement
 - True power factor and displacement power factor
- Automatic step size detection
- Automatic CT polarity correction
- 4-quadrant operation
- No voltage release alarm
- Programmable sensitivity
- Programmable alarm
- NFC communication
- Complies with IEC 61000-6-2 and IEC 61000-6-4 standard
- *2 60 alarm records, 120 system records and 350 step records

External Plug-in Module



NXM1

- PFR step extensible
- RS485 Modbus-RTU communication isolated
- Records with timestamp

Technical Data

AUXILIARY POWER SUPPLY

Supply voltage : 100~415 V AC / 140~370 V DC
 Operating limits : -15% + 10%
 Consumption : 10 VA max
 Rated frequency : 45~65 Hz

OUTPUT CONTACTS

Numbers of outputs : 8 / 12 / 16 (PFR80NX/PFR120NX/PFR160NX)
 Rated voltage : 250 V AC
 Contact rating : 5 A (COSφ=1)
 Expected electrical life : 100,000 operations at rated current
 Expected mechanical life : 5 x 10⁶ operations
 Max current for the common terminals : 12 A continuous

VOLTAGE SENSING

Rated voltage : 230 V AC
 Operating limits : 5 V ~ 600 V
 Rated Frequency : 50 Hz and 60 Hz

CURRENT SENSING

Rated current (In) : 5 A
 Operating limits : 0.05 A to 10 A
 Rated frequency : 50 Hz and 60 Hz
 Burden : <0.3 VA at In

ALARMS SETTING

% THDV : 10% ~ 20% / OFF
 % THDI : 20% ~ 300% / OFF
 Undercurrent : 1.0% ~ 3.0% / OFF
 Overcurrent : 110% ~ 140% / OFF
 Undervoltage : 90 V ~ 395 V / OFF
 Overvoltage : 132 V ~ 500 V / OFF
 Cap. size error : ON / OFF
 Undercompensate : ON / OFF
 Overcompensate : ON / OFF
 Step error : ON / OFF
 No voltage release : ON / OFF
 *1 Clock loss : ON / OFF
 EEPROM error : ON / OFF

CONTROL RANGE

Power factor setting : 0.8 Ind - 0.8 Cap
 Smallest Cap. : 500 - 1.5x10⁶ VAR / Automatic
 Switching sensitivity : 5 - 600 s/step
 Reconnection time for : 5 - 240 s same step
 Switching program : Automatic / Automatic Rotate / 4-quadrant / Manual
 Rated step coefficient : 0 / 1 / 2 / 3 / 4 / 5 / 6 / 8 / 12 / 16 (Automatic if smallest cap set to Auto)

ENVIRONMENTAL CONDITIONS

Temperature : -10°C to 55°C
 Humidity : 5% to 95%, non-condensing

MECHANICAL

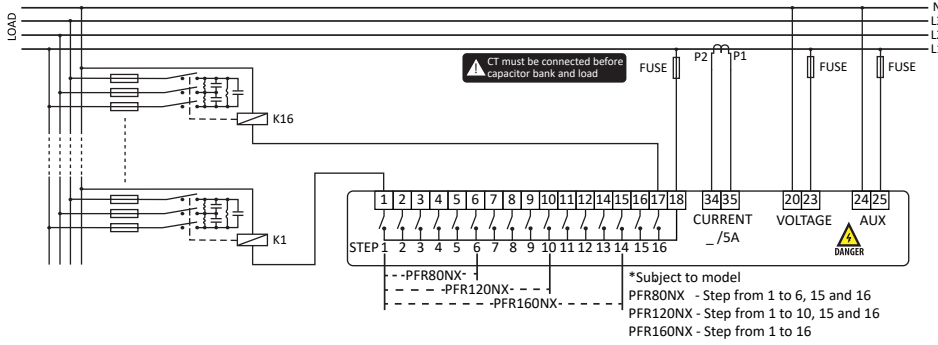
Mounting : Panel mounting
 Dimension (mm) : 145(w) x 145(h) x 78(d)
 Enclosure protection : IP54 at the panel IP20 at body
 Approximate weight : 0.8kg

*1 Only applicable if NX-M1 attaches on PFRNX

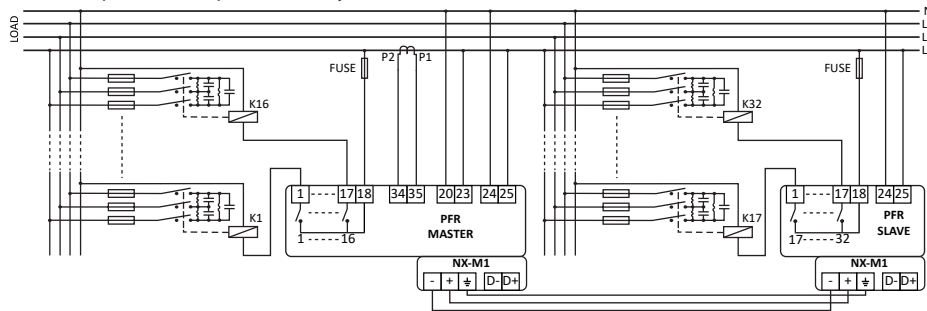
*2 Only can be read from NFC or RS485 Communication

Typical Application Diagram

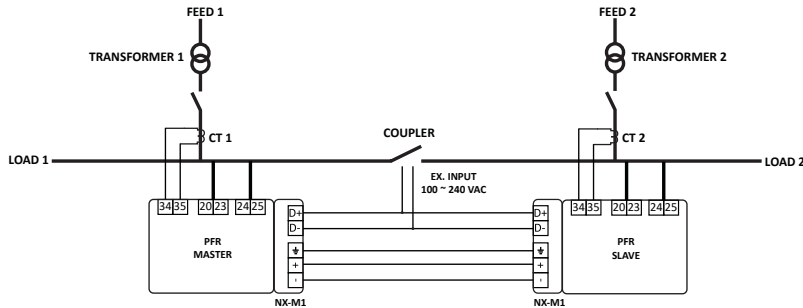
PFRNX live-neutral voltage system connection diagram



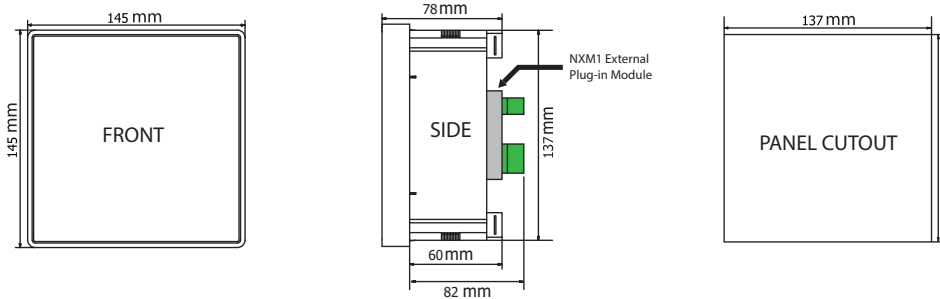
*1 PFRNX operate in step extension system



*1 PFRNX operate in two feeds system



Case Dimensions



Ordering Information

MODEL	DESCRIPTION
PFR80NX	8 Steps, 50/60Hz, 100 ~ 415 VAC or 140 ~ 340VDC
PFR120NX	12 Steps, 50/60Hz, 100 ~ 415 VAC or 140 ~ 340VDC
PFR160NX	16 Steps, 50/60Hz, 100 ~ 415 VAC or 140 ~ 340VDC
NX-M1	External module for PFRNX models

*1 Only applicable if NX-M1 attaches on PFRNX