



X80

POWER FACTOR REGULATOR

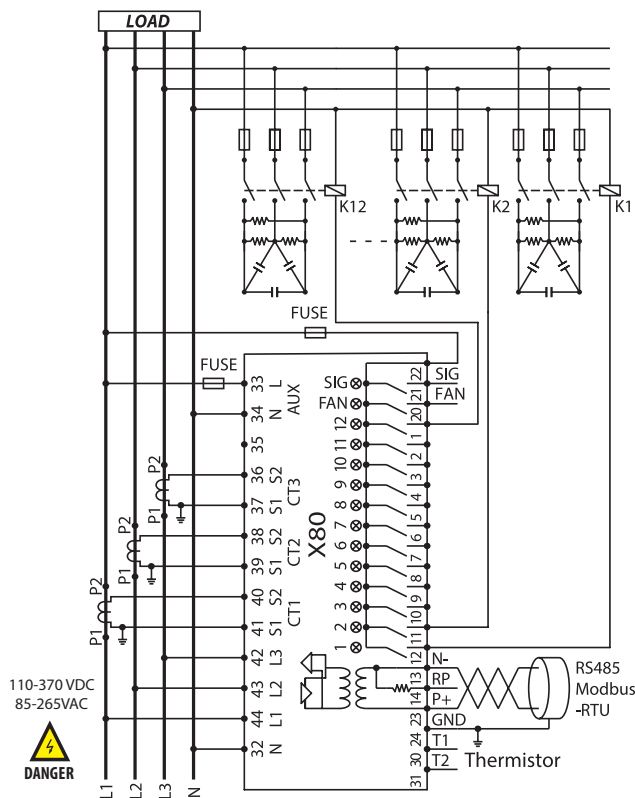


FEATURES

- 2 inch, 64 x 128 dot matrix LCD Display with backlighting
- Three phase and single phase detection of reactive power
- 12 (or 8 for 8 step model) output with two additional independent contact for signal alarm output and fan output
- Three phase compensation mode
- 5 different switching program mode
- Automatic detection of C/K and rated step value
- No Voltage Release
- Measurement parameters
 - Active, reactive and apparent power
 - Temperature
 - Phase voltage and phase current
 - Frequency
 - Up till 31st order Harmonics measurement in graphical or table format
 - Power Factor and Displacement Power Factor (Cos φ)
- Various configurable alarm settings
- Alarm linked signal contact
- Programmable fan control
- Modbus-RTU communication
- Fixed step for hybrid switching
- Compatible with Mikrosafe Software

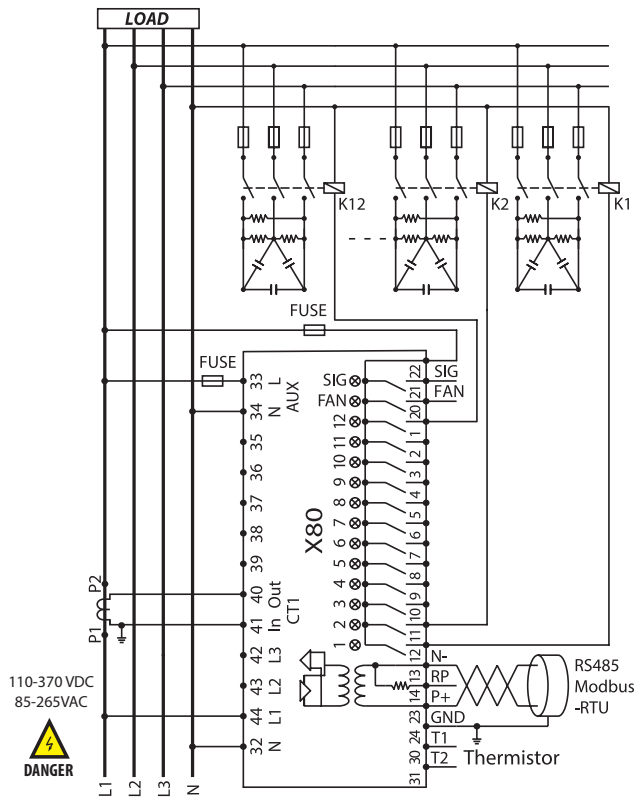
TYPICAL APPLICATION DIAGRAM

X80 Connection diagram for 3 Phase 12 Step model



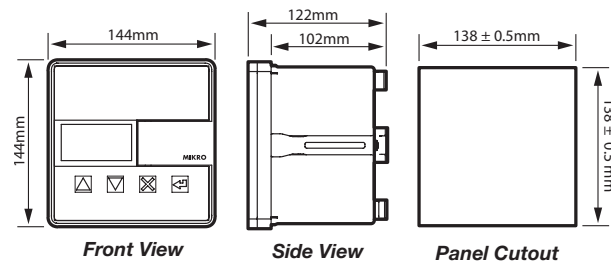
X80 PFR120P3-230-50

X80 Connection diagram for 1 Phase 12 Step model



X80 PFR120P1-230-50

CASE DIMENSION



TECHNICAL DATA

CURRENT INPUT (EACH PHASE)

Nominal current : 5 A
Operating limits : 0.01 - 10 A
Rated frequency : 50 Hz or 60 Hz

VOLTAGE INPUT

(EACH PHASE with respect to neutral)
Nominal voltage : 230V AC
Operating limits : 0 - 277 V L-N
Consumption : 0.05 VA
Rated frequency : 50 Hz or 60 Hz
Category : III

THERMISTOR INPUT

Thermistor temperature range : 0 - 100 °C

AUXILIARY

Auxiliary Input voltage range : 85 - 265V AC
Consumption : 10VA max
Rated frequency : 50 Hz or 60 Hz

OUTPUT CONTACTS

Number of outputs : 14 (model dependent)
Contact arrangement : NO contact type
Contact rating : 5A
Expected electrical life : 100,000 operations at rated current
Expected mechanical life : 5 x 10⁶ operations

CONTROL RANGE

Target power factor : 0.80 Inductive - 0.80 Capacitive
C/K setting : 0.03 - 1.20 / Automatic detect
Sensitivity : 5 - 240s
Switching program : Automatic / manual / four-quadrant / rotational / linear
Rated step coefficient : 0 / 1 / 2 / 3 / 4 / 5 / 6 / 8 / 12 / 16 / Fixed
Detection mode : L1 / L2 / L3 / max Load / three phase
Fan setting : Fixed on / output on / temperature / none
Signal contact : Linked to 10 different programmable alarm / none

ALARM SETTING RANGE

% THDI : 20% - 300% / OFF
Over voltage : 253 - 264V / OFF
Under voltage : 195 - 204V / OFF
Over current : 5.50 - 7.00A / OFF
Under current : 0.01 - 0.15A / OFF
Under compensate : On / OFF
Over compensate : On / OFF
*CT polarity error : On / OFF
Step error : On / OFF
Temperature : 36 - 70 °C / OFF
*Only available for single phase model

DISPLAY

% THDI and THDV : 0% - 500%
Harmonics resolution : Up till 31st Harmonics
Active power : 0 - 3000 W
Reactive power : 0 - 3000 VAR
Apparent power : 0 - 3000 VA
Voltage : 0 - 300V AC
Current : 0.00 - 10.0 A rms
Temperature : 0 - 100 °C
Frequency : 45 - 65 Hz
Power factor : -1.00 - 1.00
Displacement power factor : -1.00 - 1.00 (CAP / IND)

MECHANICAL

Mounting type : Panel mounting
Dimension(mm) : 144 (W) x 144 (H) x 122 (L)
Enclosure protection : IP54 at the panel
: IP20 at the body
Approximate weight : 1.2 kg (for three phase model)
: 1 kg (for single phase model)

ENVIRONMENT CONDITIONS

Temperature : -10 °C to + 55 °C
Humidity : 5% to 95%, non-condensing
Pollution degree : 2
Dielectric withstand : IEC 61010-1

ELECTROMAGNETIC COMPATIBILITY (EMC)

Part 6-2: Generic standards : IEC 61000-6-2
Immunity for industrial environment
Part 6-4: Generic standards : IEC 61000-6-4
Emission standard for industrial environment

ORDERING INFORMATION

<u>MODEL</u>	<u>DESCRIPTION</u>	<u>MODEL</u>	<u>DESCRIPTION</u>
X80 PFR120P3-240-50	: 12 Step, 3 Phase, 240V AC, 50Hz Model	X80 PFR120P3-240-60	: 12 Step, 3 Phase, 240V AC, 60Hz Model
X80 PFR120P1-240-50	: 12 Step, 1 Phase, 240V AC, 50Hz Model	X80 PFR120P1-240-60	: 12 Step, 1 Phase, 240V AC, 60Hz Model
X80 PFR80P3-240-50	: 8 Step, 3 Phase, 240V AC, 50Hz Model	X80 PFR80P3-240-60	: 8 Step, 3 Phase, 240V AC, 60Hz Model
X80 PFR80P1-240-50	: 8 Step, 1 Phase, 240V AC, 50Hz Model	X80 PFR80P1-240-60	: 8 Step, 1 Phase, 240V AC, 60Hz Model