



PFR LCD

Features

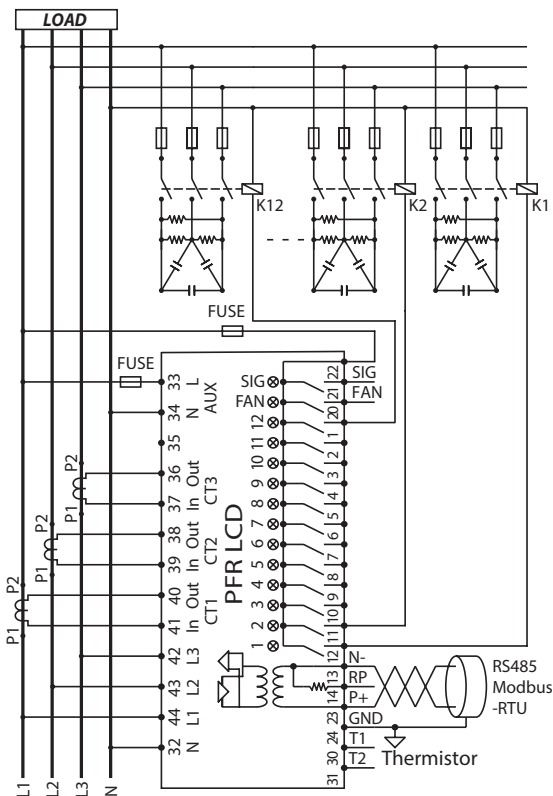
- 2" inch, 64 x 128 dot matrix LCD display with back lighting
- Three phase and single phase detection of reactive power
- 12 (or 8 for 8 step model) output with two additional
- independent contact for signal alarm output and fan output
- Three phase compensation mode
- 5 different switching program
- Automatic detection of C/K and rated step value
- No Voltage release
- Various configurable alarm settings
- Alarm linked signal contact
- Programmable fan control
- ModBus-RTU communication

Measurement Parameters

- Active, reactive, apparent power
- Temperature
- Phase voltage and phase current
- Frequency
- Up till 31st order Harmonics measurement in graphical and table format
- Power Factor and Displacement Power Factor (Cosφ)

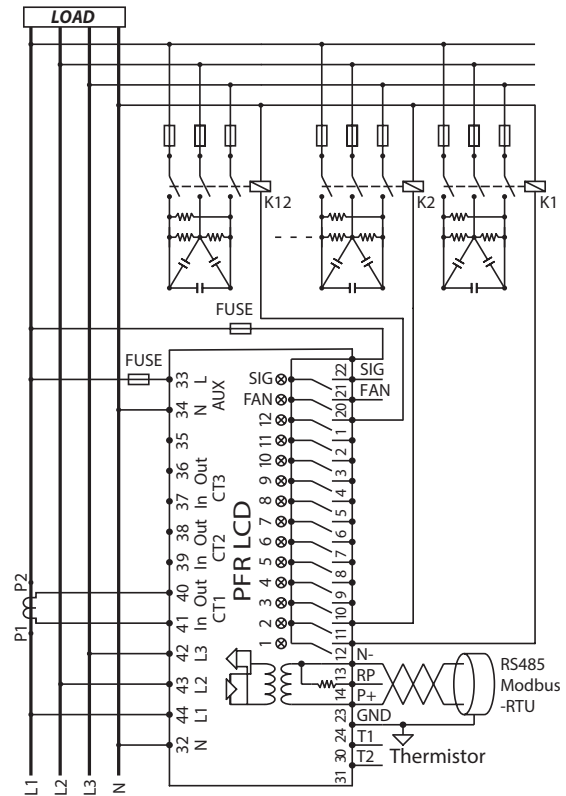
Typical Application Diagram

PFR LCD Connection diagram for 3 Phase 12 Step model



PFR LCD120P3-230-50

PFR LCD Connection diagram for 1 Phase 12 Step model



PFR LCD120P1-230-50

Technical Data

CURRENT INPUT (EACH PHASE)

Nominal Current	: 5 A rms
Operating Limits	: 0.01-10 A rms
Rated frequency	: 50 Hz or 60 Hz

VOLTAGE INPUT (EACH PHASE with respect to neutral)

Nominal Voltage	: 230 Vrms
Operating Limits	: 0 - 277 V L-N
Consumption	: 0.05 VA
Rated Frequency	: 50 Hz or 60 Hz
Catagory	: III

THERMISTOR INPUT

Thermistor Temperature range	: 0 – 100 °C
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AUXILIARY

Auxiliary Input Voltage Range	: 85 - 265 Vrms
Consumption	: 10 VA max
Rated Frequency	: 50 Hz or 60 Hz

OUTPUT CONTACTS

Number of outputs	: 14 (model dependent)
Rated voltage	: 250 V AC
Contact rating	: 5 A
Expected electrical life: 100,000 operations at rated current	
Expected mechanical life: 5 x 10 ⁶ operations	

CONTROL RANGE

Target Power factor	: 0.80 Inductive – 0.80 Capacitive
C/K setting	: 0.03 – 1.20 / Automatic detect
Sensitivity	: 5 - 300s / Step
Reconnection time	: 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 – 264 V/ OFF
Under Voltage	: 195 – 204 V/ OFF
Over Current	: 5.50 – 7.00 A/ OFF
Under Current	: 0.01 – 0.15 A/ OFF
Under Compensate	: On / OFF
Over Compensate	: On / OFF
*CT Polarity Error	: On / OFF
Step Error	: On / OFF
Temperature	: 36 – 70 °C / OFF

DISPLAY

%THDI & %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 – 300 VAC
Current	: 0.00 – 10.0 A rms
Temperature	: 0 – 100 °C
Frequency	: 45 – 65Hz
Power Factor	: -1.00 – 1.00
Displacement Power Factor	: -1.00 – 1.00

ENVIRONMENT CONDITIONS

Temperature	: -5°C to +55°C
Humidity	: 56 days at 93%RH and 40°C non-condensing
Pollution Degree	: II
Dielectric Withstand	: IEC61010-1
Altitude	: 2000 m

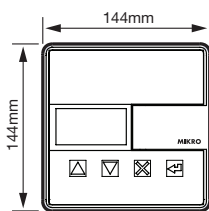
ELECTROMAGNETIC COMPATIBILITY (EMC)

Part 6-2: Generic standards	: IEC61000-6-2
Immunity for industrial environments	
Part 6-4: Generic standards	: IEC61000-6-4
Emission standard for industrial environments	

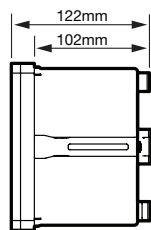
MECHANICAL

Mounting	: Panel mounting
Dimension (mm)	: 144(w) x 144(h) x 122(d)
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)

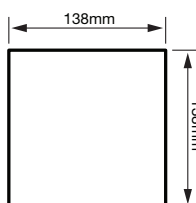
Case Dimensions



Front View



Side View



Panel Cutout

Ordering Information

MODEL

PFRLCD120P3-230-50
PFRLCD80P3-230-50
PFRLCD120P1-230-50
PFRLCD80P1-230-50
PFRLCD120P3-230-60
PFRLCD80P3-230-60
PFRLCD120P1-230-60
PFRLCD80P1-230-60

DESCRIPTION

12 Step, 3 Phase, 230Vrms, 50Hz Model
8 Step, 3 Phase, 230Vrms, 50Hz Model
12 Step, 1 Phase, 230Vrms, 50Hz Model
8 Step, 1 Phase, 230Vrms, 50Hz Model
12 Step, 3 Phase, 230Vrms, 60Hz Model
8 Step, 3 Phase, 230Vrms, 60Hz Model
12 Step, 1 Phase, 230Vrms, 60Hz Model
8 Step, 1 Phase, 230Vrms, 60Hz Model