829PFM

Power Frequency Module

E-PLEX

Powering Systems - Empowering Designers

Key Features:

- E-Plex powered.
- Two independent channels.
- Each channel measuring.
  - True RMS AC voltage.
  - True RMS AC current
  - Frequency
  - Power
- Easy to fit split core current sensors with 1m leads.
- All supply inputs isolated from E-Plex with 4kVrms dielectric strength.
- LEN value 4.

Part Number:
EP3-829PFM

General Description

The E-Plex 829PFM can be used to measure the voltage, current and frequency on up to two independent AC mains supplies.

Can be configured to emulate a 336PFM to the connected E-Plex bus. (Note features limit to the capabilities of the 336PFM)

Flammability: - PCB Assembly and enclosure UL94V-0

Weight: - 300g including current sensors

Connections

A Mains L1,N1, L2,N2

Pluggable screw terminal

Connector wire data

Solid min 0.2mm² max 6mm²

Flexible min 0.2mm² max 4mm²

Flexible with ferrule min 0.25mm² max 4mm²

B Current Clamps

Opening clamp type.
Max cable diameter 16mm

Connector wire data

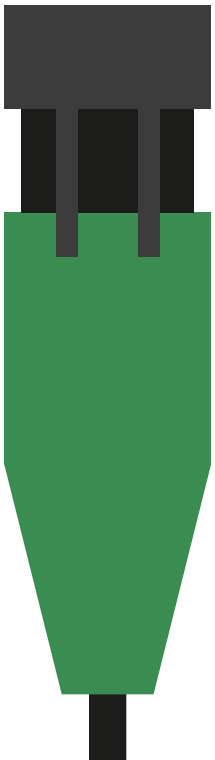
Lead length 1m approximately

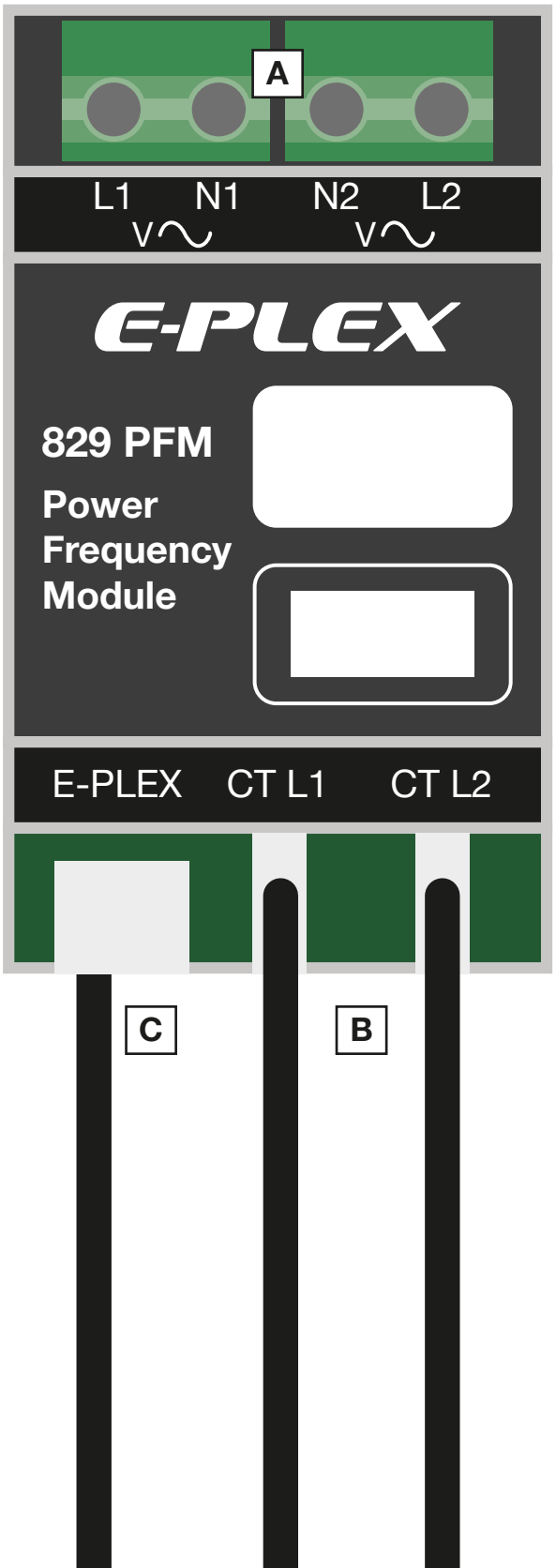
C E-Plex

Way molex mini-lock

Connector wire data

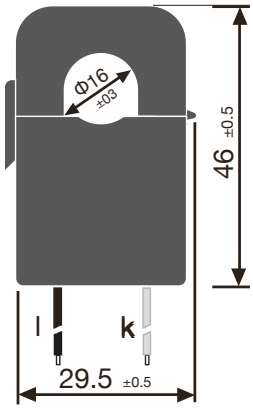
Supplied with 1m lead to the standard EP3 E-Plex connector

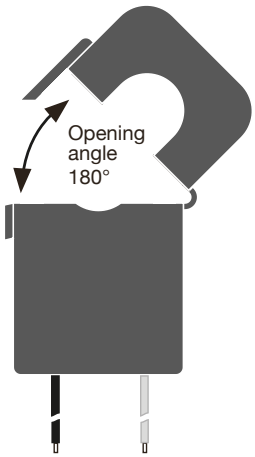




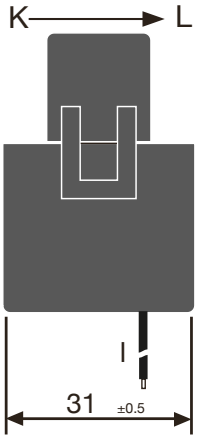
Dimensions Current Sensor

Front view

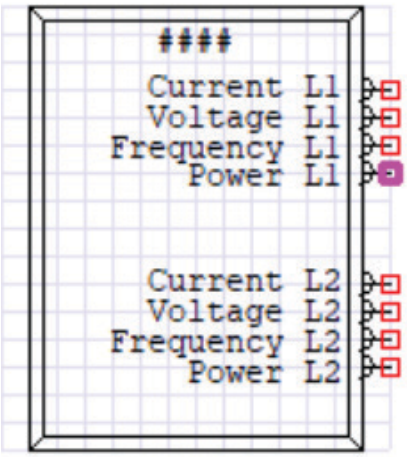




Side view

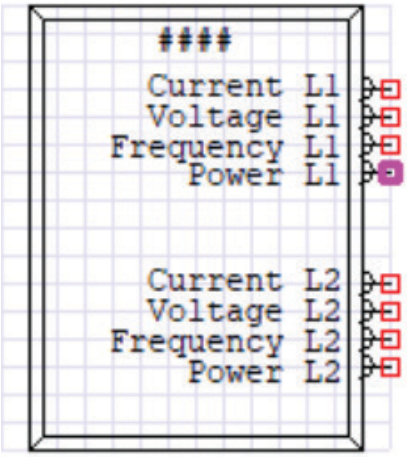


E-Logic Symbols - 829PFM



MODULE TERMINAL	SYMBOL PIN	RESOLUTION	EPLEX NET
L1,N1	Current L1	1V/bit	10 bits
	Voltage L1	1V/bit	10 bits
	Frequency L1	0.1Hz/bit	10 bits
	Power L1	0.1kW/bit	10 bits
L2,N2	Current L2	1V/bit	10 bits
	Voltage L2	1V/bit	10 bits
	Frequency L2	0.1Hz/bit	10 bits
	Power L2	0.1kW/bit	10 bits

E-Logic Symbols - 829PFMx10



MODULE TERMINAL	SYMBOL PIN	RESOLUTION	EPLEX NET
L1,N1	Current L1	0.1V/bit	16 bits
	Voltage L1	0.1V/bit	16 bits
	Frequency L1	0.1Hz/bit	16 bits
	Power L1	1W/bit	16 bits
L2,N2	Current L2	0.1V/bit	16 bits
	Voltage L2	0.1V/bit	16 bits
	Frequency L2	0.1Hz/bit	16 bits
	Power L2	1W/bit	16 bits

Maximum Ratings

PARAMETER	MIN	MAX	UNIT
Applied voltage to L1, L2	0	270	VacRMS
Nominal voltage between L1 & L2 Insulation between L1 and L2 not suitable for primary to secondary (accessible circuit) isolation.	-	300	VacRMS
Split core sensor current	0	160	A
Split core sensor to uninsulated wire	0	300	VacRMS
Ambient temperature	-20	60	°C
Humidity (non-condensing)	0	95	%
Storage temperature	-30	85	°C

Operational Characteristics (Temperature range -10ºC to 50ºC)

PARAMETER	MIN	TYPE	MAX	UNIT
Measuring voltage range	0	-	263	VacRMS
Voltage accuracy	-2	-	+2	FS%
Measuring current range	0	-	120	VacRMS
Current accuracy	-2	-	+2	FS%
Measuring frequency range	40	-	70	Hz
Frequency accuracy	-1	-	+1	%
Calculated power range	0	-	53	kW
Calculated power accuracy Current sensor direction will affect phase and therefore the calculated power. Ensure Sensor is placed with expected current flow in indirection L to K on dimensions diagram.	-10	-	+10	%

Standards

EN61000-6-1-2019 - Generic standards - Immunity standard for residential, commercial and light-industrial environments

EN60000-6-3 A1 Generic standards - Emission standard for residential, commercial and light-industrial environments

EN60945:2002 Section 8 & 9 - Maritime navigation and radio communication equipment and systems - General requirements

Spare Parts

Replacement E-Plex EP3 cable - EP3-CA-F/EP3-MINILOCKLEAD

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