

EMERGENCY POWER FUEL SYSTEMS

PowerPlex

Pump Motor Starters and VFD Drives for Critical Service



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Earthsafe Pump Motor Starters and VFD Drives are designed specifically for operation in critical facility environments. The units are applied for Earthsafe duplex pump and filtration systems, and are also used for standard petroleum submersible pumps such as Red Jacket and FE Petro.

Pump Control Motor Starters and Drives are an important aspect of critical facility fuel systems. Here is a good way to classify pump control motor starter configurations:

Class A: Motor starter has (a) code compliant motor protection, (b) a local power disconnect, (c) current sensor or other means of functional feedback, (d) manual start from line power – independent of control power. Earthsafe standard pump motor starters are Class A.

Class B: Motor starter has (a) code compliant motor protection, and (b) a local power disconnect. Many standard industrial motor starters are Class B. Earthsafe economy pump motor starters are Class B.

Earthsafe VFD Drives

Earthsafe VFD Drives are designed to soft start - stop and maintain a constant line pressure for feeding multiple day tanks or boilers. The important advantages are:

- (a) Constant pressure is maintained at day tank or boiler inlets, whether a single or multiple units are active at the same time.
- (b) Fluid hammer problems are avoided in longer piping runs by the soft start – stop working in coordination with end of line valve control.

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C231 Pump Motor Starter / Disconnect

Class A Critical Service, Single Pump

- Operates in Manual (Local) or Auto (Remote) Mode
- In Manual Mode Pump Starts on Line Voltage Alone
- Output Contacts for (a) Not-in-Auto Mode, (b) Current Sensor, (c) Overload Trip



C232 Pump Motor Starter / Disconnect

Class A Critical Service, Dual Pump

- 6 Pole Disconnect for 2 Power Circuits
- Operates in Manual (Local) or Auto (Remote) Mode
- In Manual Mode Pump Starts on Line Voltage Alone
- Output Contacts for (a) Not-in-Auto Mode, (b) Current Sensor, (c) Overload Trip

C233 Pump Motor Starter / Disconnect

Class B Economy Service, Single Pump

- Operates in Auto Mode Only
- 120 VAC Input to Start

C234 Pump Motor Starter / Disconnect

Class B Economy Service, Dual Pump

- 6 Pole Disconnect for 2 Power Circuits
- Operates in Auto Mode Only
- 120 VAC Input to Start

C235 Pump VFD Drive / Disconnect

Class A Critical Service, Single Pump VFD

- Operates in Manual (Local) or Auto (Remote) Mode
- In Manual Mode Pump Starts on Line Voltage Alone
- Output Contacts for (a) Not-in-Auto Mode, (b) Current Sensor, (c) Drive Fault
- Accepts 4-20 mA Signal for External Pressure Control If Needed.

C230 Pump Motor Starter

Dimensions	Single: 16" H x 8" W x 6" D Dual: 16" H x 12" W x 6" D
Approval	UL
Enclosure	NEMA 4 Color RAL 7035 (Light Gray)
Environmental	-20 to 131 F
Motor Protection	Allen Bradley Components Motor Starter / Protector Lockable Disconnect Switch Internal H-O-A Switch
Output Relays	Not-In-Auto Signal Current Sensor Overload / Trip Signal
Other	Remote Start Input
Options	50 Hz Power CE Approval

C231 Pump Motor Starter

Class A Critical Service, Single Pump

C232 Pump Motor Starter

Class A Critical Service, Dual Pump

C233 Pump Motor Starter

Class B Economy Service, Single Pump

C234 Pump Motor Starter Disconnect

Class B Economy Service, Dual Pump

C235 Pump VFD Drive

Class A Critical Service, Single Pump

Ordering Information

Ordering Part	Description
PPC23X.11050	120 VAC-1 PH-0.50 HP
PPC23X.11075	120 VAC-1 PH-0.75 HP
PPC23X.11100	120 VAC-1 PH-1.00 HP
PPC23X.11150	120 VAC-1 PH-1.50 HP
PPC23X.21050	208 VAC-1 PH-0.50 HP
PPC23X.21075	208 VAC-1 PH-0.75 HP
PPC23X.21100	208 VAC-1 PH-1.00 HP
PPC23X.21150	208 VAC-1 PH-1.50 HP
PPC23X.21200	208 VAC-1 PH-2.00 HP
PPC23X.23050	240 VAC-3 PH-0.50 HP
PPC23X.23075	240 VAC-3 PH-0.75 HP
PPC23X.23100	240 VAC-3 PH-1.00 HP
PPC23X.23150	240 VAC-3 PH-1.50 HP
PPC23X.23200	240 VAC-3 PH-2.00 HP
PPC23X.23300	240 VAC-3 PH-3.00 HP
PPC23X.43050	480 VAC-3 PH-0.50 HP
PPC23X.43075	480 VAC-3 PH-0.75 HP
PPC23X.43100	480 VAC-3 PH-1.00 HP
PPC23X.43150	480 VAC-3 PH-1.50 HP
PPC23X.43200	480 VAC-3 PH-2.00 HP
PPC23X.43300	480 VAC-3 PH-3.00 HP