



STEP DOWN POWER DISTRIBUTION UNIT



Step Down Power Distribution Unit (SDPDU)

DESCRIPTION

The Step Down Power Distribution Unit (SDPDU) steps down the voltage of shore power (480 VAC) or host power (240 VAC) to 120/208 VAC. It converts the input power configuration from 3-phase delta (3 wire) to 3-phase wye (4 wire) and supports safety ground. There is an input selector switch that selects either the 480 or 240-volt input with a center off position. It also indicates whether all 3 phases are being provided and are in the proper phase sequence. These indicators can be turned off for blackout conditions. The input line frequency can be either 50 or 60 Hz and will be the output frequency as well. All input and output lines are protected with circuit breakers.

The SDPDU weighs approximately 650 pounds and cannot be moved manually. It can be lifted using lift rings or be moved with a forklift. The input connectors are CAM-style rated for 690 amps for shore power and 140 amps for host country power. SDPDU is designed to be left outside in the environment and, once configured for the input voltage and connected, requires no additional attention. Monthly maintenance consists of checking for clogged air filters which can be cleared with compressed air applied from the inside by removing the top cover.

APPLICATIONS

- One SDPDU replaces up to a 30 kW Tactical Quiet Generator (TQG) with local grid power and saves fuel
- Operates from host country power at standard US voltages using PDISE distribution equipment
- Converts Navy shore power to standard voltages for single and 3-phase equipment
- Provides isolation, filtering, and optional lightning protection

KEY FEATURES & BENEFITS

- Saves fuel by using local grid/ shore power instead of diesel generators
- Voltage 240 VAC or 480 VAC 3-phase delta to 120/ 208 3-phase wye, 50/ 60 Hz
- Input Selector Switch
- Proper indicator phase sequence
- Input/ output circuit breakers
- Blackout switch
- Indicators
- Easy to maintain

SPECIFICATIONS

| | | |
|----------------------|----------------------------|---|
| INPUT | | |
| | INPUT VOLTAGE RANGE | 480 VAC, ± 10 percent, 3-phase delta or 4-wire wye service (neutral not used). In this mode, the output voltage will be $\frac{1}{4}$ the input voltage 240 VAC, ± 10 percent, 3-phase delta or 4-wire wye service (neutral not used). In this mode, the output voltage will be half the input voltage |
| | FREQUENCY | 47 Hz to 63 Hz |
| | CIRCUIT BREAKERS | 20A at 480 VAC, 40A at 240 VAC, weather resistant |
| | CONNECTORS | CAM-style input female connectors rated for 690A for 480 VAC (Levitation 17D21-E, -W, -R or equivalent) and 140A for 240 VAC (Levitation 15D21-E, -R, -B or equivalent) |
| OUTPUT | | |
| | OUTPUT VOLTAGE | 120/208 VAC, 3-phase, 4-wire wye service Can be used as three 120 VAC, single-phase 3-wire service Provides power up to 30 kW continuously for either input service |
| | FREQUENCY | Same as input |
| | CIRCUIT BREAKERS | 80A at 120 VAC |
| | CONNECTORS | MIL-DTL-22992, Class L, connector (MS90555C44413S) with neutral bonded to ground internally Ground lug for earth grounding (requires grounding kit) |
| FEATURES | | |
| | DISPLAY | Indicators for each phase Indicator for incorrect phase sequence Panel light blackout feature extinguishes all illuminated indicators |
| MECHANICAL | | |
| | OVERALL SIZE | 37 in (L) x 29.9 in (D) x 26.4 in (H) |
| | WEIGHT | 650 lb |
| | HANDLING | Four lift rings, clearance for forklift |
| | FINISH | Desert Sand (23525) or Army Green (24070) standard |
| MISCELLANEOUS | | |
| | ACCESSORIES | Set of three 140A CAM-style male connectors Grounding kit Manual |
| | OPTIONS | Input filter Lightning protection |