## 125 VDC Fused Distribution Panel



## DC - Fused Distribution Panels

DC Fused Distribution Panels are available for 24 VDC, 48 VDC and 125 VDC applications. Higher voltage ratings, 250 VDC and 500 VDC are also available on special order. The FDP-DCs are available in Main Lug Only (MLO), Main Breaker (MB), and Main Fuses in series with the Main Breaker (FD) configurations.

FDP-DCs for 24 VDC and 48 VDC are packaged in the same enclosures and interiors as the standard FDP configurations for single phase AC applications, 20, 30 , and 42 circuits and utilize single pole fuse holders in series with single pole circuit breakers that are used to open the circuit under load as the fuse holders are not rated as load break devices.

Vh

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## 125 VDC System Configuration

Historically, 125 VDC Distribution systems have always been floating systems consisting of a battery, charger, and distribution panel containing two pole breakers. One for Positive(+) and one for Negative(-) Polarity. The main reason for this system configuration is reliability. In a floating distribution system, if one polarity becomes grounded, the total system will remain operational. The chances of both Positive and Negative Polarities becoming grounded at the same time is extremely low. In addition, most DC systems contain a simple "GROUND DETECTOR" consisting of two nominally rated DC pilot lights connected to "Ground". Normally, both lamps will glow at a low intensity because they are connected in series between the full system voltage. Therefore, if a "Ground" occurs on one polarity, one lamp will light at full intensity while the other lamp will not be lit. The source of the ground may be determined and corrected before any system damage can occur.

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The 125 VDC FDP has two pole branch circuits with a two-pole DC rated branch circuit breaker, which is used as a switch to open the circuit under load. It also has two 150 VDC fuses, one for both the Positive and Negative legs of the DC circuit.

They are available with main bus ratings of $125 \mathrm{amps}, 250 \mathrm{amps}$ and 400 amps .
Because all of the 125 VDC circuits are two-pole circuits(standard), the number of branch circuits are 8(in an 18, single-pole circuit panel), 14 (in a 30 single-pole circuit panel) and 20 (in a 42 single-pole circuit panel).

On special order, 125 VDC-FDPs can be provided with a higher number of branch circuits. For example, the maximum number of branch circuits for the 400 amp Main Breaker panel is thirty-two 2 pole circuits. The maximumfor the 250 amp Main Breaker panel is forty-four 2-pole circuits.

Fuses for this equpiment are Ferraz Shawmut type A15QS(X) X= Current rating
Fuse current ratings from 1 to 30 amps at 150 volts DC with a 100 KIAC rating at 150 VDC
Physical size: 13/32" dia x $1.5^{\prime \prime}$ long NEC Midget size
Tested to UL STD 198L and UL recognized
Fuse Holders:
2 pole Ultra-Safe touch free
Rated at 30 amps at 125 VDC NON-LOAD Break
The modular fuse holder can be supplied with blown fuse indicators as an option

