Ultra Compact Three-Phase DIN Rail Power Supplies Feature Exceptionally Slim Form Factor

Two new ultra compact 24 Vdc output DIN rail mounting ac-dc power supplies, featuring direct operation from three-phase inputs, have been announced by Emerson Network Power. The new ADN-C series three-phase DIN rail mounting power supplies are ideal for a wide range of heavy duty industrial applications - especially those involving large inductive loads - including machine control, semiconductor fabrication, conveyor and material handling systems.

Designed to operate direct from standard three-phase inputs, the ADN-C series power supplies have a wide 320 to 540 Vac input range, capable of accommodating virtually all standard line voltages worldwide. They are also capable of operating from a dc input, in the range 450 to 760 Vdc. The power supplies are very high efficiency designs - typically 94 percent - and also employ advanced active power factor correction techniques to further maximize efficiency and help minimize running costs. They can accommodate phase loss, automatically shutting down if thermal thresholds are exceeded under this condition.

Both of the ADN-C series power supplies produce a single 24 Vdc output, which is user adjustable up to 28 Vdc. The output is tightly regulated to within plus or minus 2 percent for all normal line, load and temperature conditions, and ripple is held to less than 100 mVpp. The ADN20-24-3PM-C is rated at 480 W and the ADN40-24-3PM-C at 960 W - the power supplies can deliver up to 20 A and 40 A respectively. Each power supply can also easily be paralleled for higher current operation using a front panel switch; the ADN40-24-3PM-C uses active current balancing to ensure load equality and maximum efficiency.

A PowerBoost facility overcomes the disadvantage of output fold-over under the high peak current demands of switching large inductive loads, such as heavy duty relays, solenoids or motors. This can result in the device failing to activate or start. PowerBoost provides 1.5 times the supply's nominal current for a minimum of 4 seconds, while maintaining a 20 V output to ensure successful operation.

Emerson Network Power ADN-C power supplies are industrial-grade designs, housed in rugged IP20-rated metal cases. A patented metal clip allows fast and secure snap-on DIN rail mounting, without tools. All electrical connections are made via easily accessible front panel screw terminals.

Both three-phase power supplies have exceptionally slim form factors - the 20 A model has a width of 3.3 inches (85 mm), while the 40 A model has a width of 7 inches (180 mm). Compared to their predecessors, these power supplies are much more compact; the 20 A supply is 2.6 inches (65mm) narrower and 1.1 lb (500 g) lighter, while the 40 A model shaves 4 inches (100 mm) off the width and 1.3 lb (600 g) off the weight.

Depending on system configuration, this can save as much as 45 percent valuable DIN rail space, conveying significant layout and wiring flexibility - and often enabling further function modules to be accommodated on the same DIN rail.

Source URL (retrieved on *10/20/2014 - 5:19pm*):
http://www.wirelessdesignmag.com/product-releases/2011/03/ultra-compact-three-phase-din-rail-power-supplies-feature-exceptionally-slim-form-factor?qt-most_popular=0