Tuesday, November 3, 2009

Why Use DIN Rail Mount Power Supplies?

DIN Rails are metal strips that provide a convenient means for mounting electric and electronic devices in a compact and neat manner. For example, DIN Rails are frequently used for mounting circuit breakers (Fig #4), terminal strips (Fig #3), power supplies (see photo above) and all sorts of industrial control equipment within racks/enclosures or attached to backboards. In this way, any combination of devices can be mounted next to each other to meet the system requirements.

Standard DIN rails are shaped as shown in Figure #1 (end view) and #2 (photo). They typically measure 35mm from edge to edge. The distance from the back to the rail of the front bends can be either 7.5mm or 15mm. These metal DIN Rail strips can be provided in any length to suit the application and multiple rows of rails can be used.

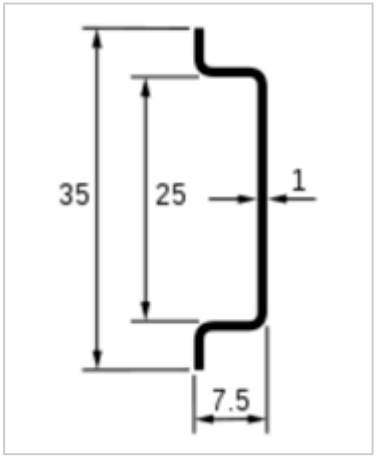

Figure #1 – End view of typical DIN Rail

Figure #2 – DIN Rail with slotted mounting holes

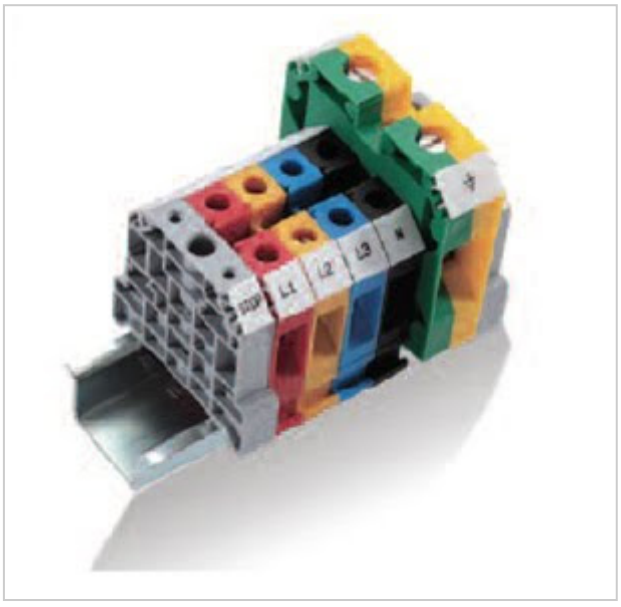

Figure #3- Terminals Strips mounted on DIN Rail

Figure #4- Circuit Breaker mounted on DIN Rail

The use of DIN Rail mounting systems saves installation time since all devices just snap onto the metal rails. A complete system can be quickly put together in an organized configuration that provides high density, flexibility, safety and design time savings. Associated devices can be mounted adjacent to each other, thus reducing the length of interconnect wiring.

The DIN Rail concept is widely used in industrial control, instrumentation and automation applications. Today, even DIN Rail mountable micro-computers are available and being used.
DIN rail mounted AC-DC power supplies provide a convenient means for powering DC operated devices including sensors, transmitters/receivers, analyzers, programmable controllers, motors, actuators, solenoids, relays, etc., to mention a few. Since these power supplies are convection cooled, no cooling fans are needed. Output voltages from these supplies range from 5V up to 56V with power ratings from 7.5W up to 480W. Many of these supplies can be connected in parallel for higher power applications.

In some cases, conventional power supplies can be utilized in DIN Rail systems by means of "DIN Rail Mounting Kits/Adapters". See Figure #5 below and more details at this web site:http://www.us.tdk-lambda.com/lp/products/ldin-series.htm

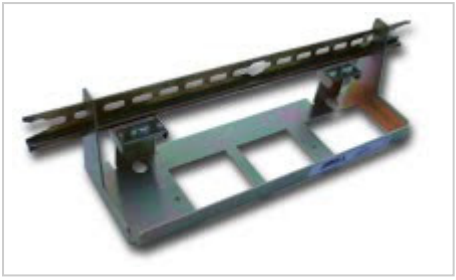

Figure #5 - DIN Rail Mounting Adapter Kit for conventional power supplies

Detailed information about TDK-Lambda's wide range of DIN Rail mount power supplies is available at this web link: http://www.us.tdk-lambda.com/lp/products/finder6.htm

Posted by Power Guy