

Connections



DIN Rail & Terminal Blocks

This month, I want to talk about something rediscovered. The lowly DIN Rail & Terminal Block. It is the backbone of most control cabinets, but it is barely

Change the way you look at things & the things you look at change.

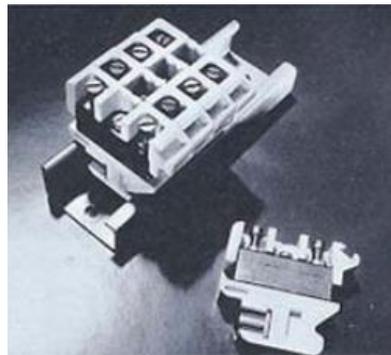
--Wayne Dyer

As New England Drives & Controls constantly strives to become a better asset to our customers, our whitepaper series will feature new technologies or helpful insights that may be pertinent to the reader. It is our sincere hope that this information will be beneficial in both relating, and applying content to your industrial needs.

We hope you find this whitepaper series an enjoyable and informative read.

We always welcome your questions and comments.

seen. It can hold a multitude of parts, power supplies, network switches, relays, wire terminations, you name it. The list really can go on and on.



DIN rail was developed in the late 1920's in Germany. As nuts and bolts were used to make electrical connections, once designs grew so did the space needed to make electrical connections. There was a need to increase the electrical connections while at the same time minimizing the space requirement. The idea for the terminal block was born, and the design to mount it was

the DIN Rail. For those of you wondering; the term "DIN" was short for **Deutsche Industrie Norm**, which when translated means the German Industrial Standard. We now sometimes hear it referred to as Top Hat or U-Rail, based on its side profile.

Then there is the DIN Rail's complimentary brother, the terminal block. A lot of thought went into these simple devices. They needed to handle vibrations as well as large mechanical shocks or impacts. They were not housed in plastic as today's products are, but instead had porcelain bodies.

NS 32 Perforated



NS 35 Perforated



NS 35/15 Unperforated



Their basic design is still much unchanged. The terminal block was invented by Josef Eisert. He was an electrical engineer and worked for Phoenix Contact.

It allowed for a fully expandable way of interconnecting wires in the control box.

In the 1950's when Siemens and Westinghouse were building the original nine nuclear power plants for Germany, Phoenix Contact supplied most of the connection technology. At that time terminal block were made both with ceramics and thermo setting plastics. They became part of design rules for the German Nuclear Safety Standards. Today they are literally used everywhere.

I once had a colleague comment to me that an engineer could have a box of 100 different types of screws to use but they still would want to design a new one. I understood his point, but the reality is that certain needs require certain solutions. The terminal block is one such device. Simple as it is, there are catalogs upon catalogs of similar, but yet different terminal blocks.



New designs still come up and most likely will for eternity. There can always be a better mouse trap. Contact your friendly New England Drives Representative, and we can supply you with more information on however much or little information you may need about Terminal Blocks or DIN Rail.

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