

ELECTRICAL POWER DISTRIBUTION SYSTEM

ABSTRACT OF THE DISCLOSURE

5 An electrical power distribution system that can provide power to load equipment at any point along its length includes two main components: a power track housing assembly with current carrying conductors that can be mounted to the wall, ceiling or under the floor, and a plug-in power tap. The power track housing assembly includes a housing, insulators, and two or multiple conductors. In order to increase
10 the housing assembly length, the housing assembly is preferably arranged such that multiple housing assemblies can be spliced together using cam operated splicing assemblies that form straight, “90 degree” and/or “T” splices to configure the system to match the equipment arrangement, and that allow all conductors in respective housing assemblies to be connected to each other simultaneously. The plug-in power
15 taps also employ a system such as a shaft-cam mechanism that allows the assemblies to be electrically connected to all phase conductors within the power track housing assembly simultaneously. In addition, the power taps may include circuit breakers or other protective devices, and/or other sub-modules.

20 **FIGURE 1**