CLAIMS

[Claim 1] An electrical distribution system for receiving at least one circuit breaker having a power-source-side terminal, the electrical distribution system comprising:

a busbar unit for receiving the circuit breaker in a fixed spatial relation thereto, the busbar unit including:

a plurality of spaced apart busbars, and

a plurality of biasing strips, each biasing strip being spaced apart from a corresponding one of the plurality of busbars to define a space therebetween; and

a connector, separate from the busbar unit, that is releasably connectable to the power-source-side terminal of the circuit breaker to allow the circuit breaker to be plugged to the busbar unit in the space between one of the plurality of biasing strips and a corresponding one of the plurality of busbars so as to be electrically connected to the one of the plurality of busbars;

wherein the connector is selectable from connectors having at least two different lengths depending on which of the plurality of busbars the circuit breaker is to be connected to.

[Claim 2] The electrical distribution system according to Claim 1, wherein each of the connectors comprises:

an intermediate section that defines the length of the connector, the intermediate section having a first surface and a second surface opposite the first surface;

a first end section extending from the first surface at a first end of the connector, the first end section being pluggable to the busbar unit; and

a second end section extending from the second surface at a second end of the connector, the second end section being connectable to the power-source-side terminal of the circuit breaker.

[Claim 3] The electrical distribution system according to Claim 1 or Claim 2, wherein the plurality of spaced apart busbars comprises four spaced apart bus bars, and the

circuit breaker is positioned in relation to the busbar unit such that the power-source-side terminal is located in a medial position of the four spaced apart busbars, and only conductors of two different lengths are required for the power-source-side terminal to be connected to any one of the four spaced apart busbars.

[Claim 4] The electrical distribution system according to any one of the preceding claims, further comprising an adapter that is releasably attachable to the circuit breaker to allow the circuit breaker to be slidable along a base to be plugged to the busbar unit.

[Claim 5] The electrical distribution system according to Claim 4, wherein the base comprises at least one guide slot and the adapter comprises at least one corresponding guide protruding from a bottom surface thereof that is insertable into the at least one guide slot in the base to be thereby guided when slid on the base.

[Claim 6] The electrical distribution system according to Claim 5, wherein the adapter further comprises a latch that is biased to engage a corresponding detent hole in the base when the adapter is in a locked position on the base.

[Claim 7] The electrical distribution system according to any one of Claims 4-6, wherein the adapter further comprises means for releasably attaching it via its side to at least another adapter.

[Claim 8] The electrical distribution system according to any one of Claims 4-7, wherein the circuit breaker includes a DIN rail receiver channel, and the adapter is releasably attachable to the circuit breaker via the DIN rail receiver channel.

[Claim 9] The electrical distribution system according to Claim 1, wherein each biasing strip comprises a plurality of leaf spring contacts spaced apart along its length, each leaf spring contact for urging a corresponding inserted connector to be in contact with the busbar.

[Claim 10] The electrical distribution system according to Claim 1 or Claim 9, wherein the busbar unit further comprises:

a slotted housing having channels defined therein, wherein each busbar is slidable into a channel; and

a plurality of locking crossbars that is arranged transversely to the busbars, each locking crossbar having spaced apart fingers, each finger urging against a section of a corresponding busbar to lock it in place in the slotted housing.

[Claim 11] The electrical distribution system according to any one of Claims 1, 9 and 10, wherein the busbar unit further comprises a retractable cover plate for covering an opening in the circuit breaker through which a locking screw connected to the power-source-side terminal is exposed.

[Claim 12] The electrical distribution system according to Claim 11, wherein the cover plate is biased to an outward position to cover the opening in the circuit breaker.

[Claim 13] The electrical distribution system according to any one of the preceding claims, further comprising a power block, the power block comprising:

a housing;

a plurality of layers arranged in a stepped configuration in the housing, each layer having a planar slot defined therein that is exposed at an end of the housing, each layer further having a top opening defined therein that is connected to the planar slot; and

a plurality of planar connectors having different lengths, each planar connector being receivable in a corresponding planar slot for coupling to a cable via the top opening.

[Claim 14] The electrical distribution system according to Claim 13, wherein the power block further comprises a dividing wall that separates the layers into a first half and a second half, and wherein the top openings of the layers are alternately located in the first half and the second half.