BRIEF DESCRIPTION

[0004] In accordance with one aspect~~embodiment~~, a programmable logic controller assembly for facilitating assembly of a programmable logic controller is provided. The programmable logic controller assembly includes a bottom housing that has a base, a first plurality of ~~elongate~~ alignment features extending from the bottom housing in a direction transverse to the base, and a first connection feature. The programmable logic controller assembly also includes a central processing unit that has a circuit board and at least two receptacles through the circuit board configured to engage and slide along at least two of the first plurality of alignment features, wherein the at least two of the first plurality of alignment features are positioned asymmetrically with respect to the base. Further, the programmable logic controller assembly includes an upper housing with a second connection feature configured to slidably couple with the first connection feature and a second plurality of ~~elongate~~ alignment features configured to slidably engage ~~at least~~ two or more of the first plurality of alignment features, wherein the ~~at least~~ two or more of the first plurality of alignment features are positioned asymmetrically with respect to the base.

[0005] In another aspect~~embodiment~~, a programmable logic controller is provided. The programmable logic controller includes a bottom housing comprising a base, a first plurality of alignment features, and a first plurality of attachment features. Additionally, the programmable logic controller includes an upper housing comprising a second plurality of alignment features and a second plurality of attachment features, wherein a first pair of the second plurality of alignment features are slidably engaged with a first pair of the first plurality of alignment features and wherein the first pair of the first plurality of alignment features are asymmetrically positioned relative to the base, and wherein a first pair of the first plurality of attachment features is coupled with a first pair of the second plurality of attachment features. Further, the programmable logic controller includes a central processing unit board positioned between the lower housing and the upper housing, the central processing unit board comprising a first pair of receptacles

coupled about a second pair of the first plurality of alignment features, wherein the second pair of the first plurality of alignment features are asymmetrically positioned relative to the base.

[0006] In accordance with another aspect, ~~Present embodiments also include~~ a method of assembling a programmable logic controller is provided. The method includes aligning at least two receptacles in an input/output board with at least two alignment projections extending from a base of a bottom housing in a direction transverse to the base, wherein the at least two alignment projections are positioned asymmetrically with respect to the base, and directing the input/output board slidably along the at least two alignment projections until components of the input/output board engage with abutment or coupling features of the bottom housing. Additionally, the method includes aligning at least two receptacles in a central processing unit board with at least two projections extending from the base and directing the central processing unit board slidably along the at least two projections until a connector of the input/output board couples with a connector of the central processing unit board. Further, the method includes aligning at least two alignment features of an upper housing with at least two alignment features of the bottom housing, and directing the upper housing slidably along the at least two alignment features of the bottom housing until a coupling feature of the upper housing interlocks with a coupling feature of the bottom housing, wherein the at least to alignment features of the bottom housing are asymmetrically positioned with respect to the base.

DRAWINGS

[0007] These and other features, aspects, and advantages of the present invention will become better understood when the following detailed description is read with reference to the accompanying drawings in which like characters represent like parts throughout the drawings, wherein:

[0008] FIG. 1 illustrates a schematic view of an industrial automation and control system in accordance with aspects of the present technique.