

CLAIMS:

1. A control module for an industrial device, the control module comprising:
 - a coupling feature configured to facilitate removable attachment of the control module with the industrial device;
 - a communicative coupling feature configured to facilitate communication between the control module and the industrial device when coupled with a corresponding communicative coupling feature of the industrial device; and
 - a port configured to communicatively couple with a connector capable of supplying power and data communication, wherein the port is configured to receive power via the connector and exchange data with a computer via the connector, and wherein the port is inaccessible while the control module is coupled with the industrial device.
2. The control module of claim 1, wherein the port is configured to communicatively couple with a universal serial bus (USB) connector.
3. The control module of claims 1 or 2, wherein the communicative coupling feature comprises power circuitry configured to receive power from the industrial device when coupled with the corresponding communicative coupling feature of the industrial device.
- ~~4. The control module of any one of the previous claims, wherein the port is inaccessible while the control module is coupled with the industrial device.~~
- ~~54.~~ 54. The control module of any one of the previous claims, wherein the port is configured to receive power from a computer via the connector.
- ~~65.~~ 65. The control module of any one of the previous claims, wherein the port is disposed on a surface of the control module such that the port faces toward internal components of the industrial device while the control module is coupled with the industrial device.

~~76.~~ The control module of any one of the previous claims, wherein the port is configured to engage with a blocking feature of the industrial device to prevent access to the port while the control module is coupled with the industrial device.

~~87.~~ The control module of any one of the previous claims, wherein the coupling feature comprises a bolt-coupling or a snap-fit coupling.

~~98.~~ The control module of any one of the previous claims, wherein the coupling feature is configured to couple with a motor drive, smart motor, or uninterruptable power supply.

~~109.~~ The control module of any one of the previous claims, wherein the port is not electrically isolated from the communicative coupling feature.

~~110.~~ An industrial automation system, comprising:
an industrial device;
a control module removably coupled with the industrial device such that the control module communicates with and receives power via the industrial device; and
a port integral with the control module and configured to communicatively couple with a connector capable of supplying power and data communication, wherein the port is configured to receive power via the connector and exchange data with a computer via the connector, and wherein the port is inaccessible while the control module is coupled with the industrial device.

~~12. — The industrial automation system of claim 11, wherein the port is disposed on the control module such that it is inaccessible while the control module is removably coupled with the industrial device.~~

~~43~~11. The industrial automation system of claims ~~41 or 42~~10, wherein the port is engaged with a blocking feature of the industrial device while the control module is removably coupled with the industrial device.

~~44~~12. The industrial automation system of ~~one of claims 41-43~~10 or 11, wherein the port is not electrically isolated from the industrial device while the control module is removably coupled with the industrial device.

~~45~~13. The industrial automation system of one of claims ~~41-44~~10-12, wherein the port comprises a universal serial bus (USB) port.

~~46~~14. A method for programming a control module of a high voltage industrial device, comprising:

maintaining a communicative coupling between the control module and a connector via a port disposed on the control module, the port being inaccessible while the control module is coupled with the high voltage industrial device;

preventing communicative coupling between the control module and the high voltage industrial device while maintaining the communicative coupling between the control module and the connector;

receiving power into the control module from the connector via the port; and

exchanging data between the control module and a computer via the port and the connector.

~~47~~15. The method of claim ~~46~~14, wherein maintaining the communicative coupling between the control module and the connector comprises coupling the port to a universal serial bus (USB) connector.

~~48~~16. The method of claims ~~46-47~~14 or 15, comprising initially decoupling the control module from the high voltage industrial device via activated removable attachment features.

~~19~~17. The method of one of claims ~~16-18~~14-16, comprising operating the control module without isolation of the port from other power supply circuitry of the control module.

~~20~~18. The method of one of claims ~~16-19~~14-17, wherein receiving power into the control module from the connector via the port comprises receiving power via the computer.