Innovative Control Systems provides a toll-free number for customers and installers who have questions pertaining to the installation:

1-800-246-3469

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CHAPTER 1: Introduction

Congratulations on purchasing the newest member to our line up of unmanned automated cashless payment terminals. The Smartstart™ pro is a the perfect tool for your pay at the fuel pump car wash. This mighty terminal will help make your car wash more efficient, your customers happier, and your bottom line healthier. It’s a smart move to review this installation guide prior to installing so you and your staff can understand what is necessary to install the Smartstart™ pro.

Version Considerations

This is Version 1.0 of this document released August 30, 2017 and includes content based on the following ICS software versions:

- WashConnect Version 1.5.17.2
- WashConnectWeb Version 1.5.17.4
- Cage-PADSS Version 4.0.1.151
- Cage-Secure Version 5.0.0.81
- NetFuelEXP Version 1.1.8.5
- FuelConnect Version 1.5.17.1 (Europe Only)

Related Documents

The following documents are available for further reference:

- Smartstart™ pro User Manual

Audience

This document was written for installation technicians and electricians. A thorough understanding of electrical wiring, installation, codes, and safety protocols is required.
Additionally, some familiarity with car wash tunnel equipment and installation is recommended. No prior experience with the Smartstart™ pro is required.

This installation guide is provided to assist you in installing the Smartstart™ pro. This guide should be supplied to the electrician prior to the installation of conduit and wiring to ensure the system is installed properly.

Faulty installations are the major cause of system malfunctions. The Smartstart™ pro system must be installed exactly as described in this manual to ensure its reliability and proper operation.

**WARNING:** Failure to properly install the Smartstart™ pro system will void the warranty and could result in serious injury or death.

By reading the information and performing the procedures in this installation guide, you should be able to:

- Install the Smartstart™ pro system-level wiring
- Install the Smartstart™ pro communications wiring

### Planning for Installation

Careful planning for the layout of the site will help eliminate possible problems with the startup of your system and will ensure continued, reliable system operation.

- Before you begin, please read this entire installation guide.
- All permanent site wiring connections must be performed by a licensed electrician that must comply in accordance with all local and national codes.
- Permanent connections to be installed and used in accordance with building/fire codes.
- Wiring can be contained in rigid PVC conduit or metal conduit.
- High-voltage (AC) and low-voltage (DC) must not be combined in a common conduit, junction box, or wire trough.
- Power for the Smartstart™ pro and any peripherals must come from the dedicated UPS, as supplied by ICS.
- The Smartstart™ pro and any peripheral equipment must be grounded properly.
- Test connections in the manual override position prior to system start-up.
- Check through all boxes and cartons before disposing of them for manuals, cables, connectors, and more.
Training and Support

Contact Innovative Control Systems for additional training and support.

1-800-246-3469

Smartstart™ pro Power Requirements

- Electrician must provide a dedicated 15 A circuit to power the unit.
- The unit must be properly grounded. See “Grounding” on page 12 for more information.

Smartstart™ pro Wiring Guidelines

When running wires to and from the Smartstart™ pro unit, follow these guidelines:
- Run conduit and wires up through roto plastic base into the Smartstart™ pro unit.
- Use wiring ties and wire clamps inside unit to contain wires.
- All conduit runs should meet local and national codes. Conduits shall be properly connected and securely fastened to the boxes with listed conduit hubs, and should be tightened to the torque specs of the manufacturer.

Communication Installation Requirements

- All peripheral equipment connected to the RS-232 ports must be Listed, have an Electronics Industrial Association (EIA) standard RS-232 communications protocol and not be installed over a hazardous location.
- RS-232 communication must not exceed 100 feet. RS-232 communication wires must be in a separate PVC conduit from any AC wires.
- Communications equipment signal wires must also be run in separate rigid PVC or metal conduit, separate from any power conduits.
- If using Moneris Credit Card Processor, then it is required to run a separate communication cable to the EMV credit card reader.
- Plug network cables in the Network switch using any of the four ports.
Grounding

The Smartstart™ pro and peripheral equipment must be properly grounded.

**Recommended and Accepted Grounding Methods**

Proper system grounding is an extremely important part of the system installation. Grounds for all system devices should be wired to the breaker panel ground bus bar which, in turn, should be grounded to a ground rod. A conduit ground does not provide a sufficient ground. It is recommended that the neutral and ground bus bars be bonded together when it is not prohibited by local codes.

The universal ground symbol identifies the grounding terminal located inside the unit on the right-side, near terminal blocks.

This is the dedicated 120 V/220 V line for the heat exchanger.

**WARNING:** Ground wire must be connected to the ground lug. Failure to properly ground the unit could result in unit failure and/or bodily injury.

**IMPORTANT:** Improper grounding will void equipment warranty.
Wire Gauge and Conduit Size

When planning the orientation of the wiring runs, follow the applicable ICS wiring diagrams and consider the layout of the components at the site.

To determine conduit size needed, see Table 1.

Table 1: Max. Number of Wires (THHN) in a Given Conduit Size

<table>
<thead>
<tr>
<th>—</th>
<th>½</th>
<th>¾</th>
<th>1</th>
<th>1 ¼</th>
<th>1 ½</th>
<th>2</th>
<th>2 ½</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWG 14</td>
<td>13</td>
<td>24</td>
<td>39</td>
<td>69</td>
<td>94</td>
<td>154</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>AWG 12</td>
<td>10</td>
<td>18</td>
<td>29</td>
<td>51</td>
<td>70</td>
<td>114</td>
<td>164</td>
<td>—</td>
</tr>
<tr>
<td>AWG 10</td>
<td>6</td>
<td>11</td>
<td>18</td>
<td>32</td>
<td>44</td>
<td>73</td>
<td>104</td>
<td>160</td>
</tr>
<tr>
<td>AWG 8</td>
<td>3</td>
<td>5</td>
<td>9</td>
<td>16</td>
<td>22</td>
<td>36</td>
<td>51</td>
<td>79</td>
</tr>
<tr>
<td>AWG 6</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>11</td>
<td>15</td>
<td>26</td>
<td>37</td>
<td>57</td>
</tr>
<tr>
<td>AWG 4</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>7</td>
<td>9</td>
<td>16</td>
<td>22</td>
<td>35</td>
</tr>
<tr>
<td>AWG 3</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>8</td>
<td>13</td>
<td>19</td>
<td>29</td>
</tr>
<tr>
<td>AWG 2</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>11</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>AWG 1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>12</td>
<td>18</td>
</tr>
</tbody>
</table>
CHAPTER 2: Site Layout

Careful planning for the layout of the site will help eliminate possible problems with the startup of your system and will ensure continued, reliable system operation.

- All site wiring must be performed by a licensed electrician that must comply with all local and national codes.
- Permanent connections to be installed and used in accordance with building/fire codes.

Location

The Smartstart™ pro can be located outdoors. The unit has been designed to operate in an outdoor environment.

- The unit itself contains one hinged-panel door. The unit must be located with enough clearance for the door to open easily, without interfering with access.
- The unit must be located so that conduit connections can be easily made and the internal components can be accessed.
Placement of the Smartstart™ pro Front and Side Views

The placement of the Smartstart™ pro is important for the customer experience. Placing it on a raised curb that is 6” off the finished grade driving surface is ideal. If you do not pour a curb, you will need to purchase the 6” riser to heighten the purchase area to the average customer’s reach.

**NOTE:** ICS cannot accommodate raised curbs that are different than 6” in height. For example, if the raised curb is 4 inches off the finished grade line, there is not a 2” riser. Therefore, the customer will have to reach down lower by 2”, and that is not recommended.

**Figure 1. Placement of the Smartstart™ pro**

**Conduit Wiring Guidelines**

- All conduit must be rigid PVC or metal.
- High-voltage (AC) and low-voltage (DC) must not be combined in a common conduit, junction box, or wire trough.
When mounting the unit, minimum clearances must meet local codes.

**Table 2: Dimensions, Measurements and Ratings**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Amount</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>26 1/4”</td>
<td>—</td>
</tr>
<tr>
<td>Height</td>
<td>50 3/8”</td>
<td>To bottom of plastic only, no riser included.</td>
</tr>
<tr>
<td>Depth</td>
<td>15 3/4”</td>
<td>Includes heat exchanger cover panel.</td>
</tr>
<tr>
<td>Weight</td>
<td>150 lbs.</td>
<td>—</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-50 °F to 140 °F</td>
<td>-45 °C to 60 °C</td>
</tr>
<tr>
<td>Frequency</td>
<td>50/60 Hz</td>
<td>—</td>
</tr>
<tr>
<td>Supply Voltage</td>
<td>120 - 240 VAC</td>
<td>Intended for permanently connected supply.</td>
</tr>
<tr>
<td>Max. Amps.</td>
<td>10 Amps @ 120 VAC US 5 Amps @ 240 VAC EU</td>
<td>—</td>
</tr>
<tr>
<td>IPX Rating</td>
<td>NEMA 5X</td>
<td>Enclosures constructed for either indoor or outdoor use to provide a degree of protection to personnel against incidental contact with the enclosed equipment; to provide a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water, and hose-directed water from water jets at any direction; and that will be undamaged by the external formation of ice on the enclosure. Including protection against corrosion.</td>
</tr>
</tbody>
</table>
Conduit Detail

This drawing is only intended to show the conduits necessary, as a minimum, to complete the installation of the ICS equipment purchased. Additional conduits must be installed for all other equipment such as lights, menu signs, cameras, and similar.

Figure 2. Conduit Detail Layout

CONDUIT DETAIL LAYOUT

THIS DRAWING IS NOT TO SCALE. THIS DRAWING IS ONLY INTENDED TO SHOW THE CONDUITS NECESSARY, AS A MINIMUM, TO COMPLETE THE INSTALLATION OF THE ICS EQUIPMENT PURCHASED.

- ADDITIONAL CONDUITS MUST BE INSTALLED FOR ALL OTHER NON-ICS EQUIPMENT SUCH AS LIGHTS, MENU SIGNS, CAMERAS, INTERCOMS, ETC.
- WIRING OTHER THAN THE WIRING SHOWN FOR ICS EQUIPMENT MAY NOT BE RUN IN THE CONDUITS INSTALLED FOR ICS EQUIPMENT.
- DEVIATIONS FROM ICS SPECIFICATIONS MAY RESULT IN THE VOIDING OF ANY AND ALL WARRANTIES OF ICS EQUIPMENT.
CHAPTER 3: Installation

This chapter includes the hardware installation steps to take for a new installation.

Materials and Tools Needed List

This is the list of items you may need to accomplish proper installation that are not included with the delivery of your new Smartstart™ pro:

- (4) 1/2” J Bolts if setting in concrete or (4) 1/2” Anchor Bolts if drilling in concrete.
- 1/2” nuts and washers (site provided) for the 1/2” J bolts.

List of Items Included

The following items are included in the initial purchase and delivery of the Smartstart™ pro:

NOTE: Please go through all packing material and boxes to make certain you have all the items that have been included in the delivery.

- Smartstart™ pro main unit
- Metal Reinforcement Place (Installs inside the Base of the Smartstart™ pro).
- Graphic Plate to Cover Smartstart™ pro Base Opening

Laying the Concrete for the Raised Curb

Before you go any further, set the J bolts in concrete according to your site layout.

1. ICS recommends that setting the bolts in the concrete according to your site layout and Figure 3.
NOTE: If the concrete was already hardened, you can use anchor bolts to attach the unit.

Figure 3. Footprint of the Metal Reinforcement Plate

1. Wait for the concrete to dry.

Installing the Smartstart™ pro

If your site does not have a raised curb, contact ICS to order a riser to place your Smartstart™ pro upon. The riser gives the Smartstart™ pro the proper height that is necessary to deliver to your customers who are inside their vehicles the most ergonomic, easy to reach experience at the Smartstart™ pro payment terminal.
1. Pull all the cables through the hole in the base of the Smartstart™ pro and the Metal Reinforcement Plate.

2. Place the metal reinforcement plate inside the base of the Smartstart™ pro matching up the holes.

Figure 4. Metal Reinforcement Plate Placement
3 Select one of the following:

- If you have **J bolts** already set in the concrete, then follow these steps:
  1. Pull up the power cable and one Cat 6 cable (run a 2nd Cat 6 cable for Moneris credit card processing only) through the center of the Smartstart™ pro’s pedestal.
  2. As you line up the 1/2” J bolts to the holes in the base of the Smartstart™ pro, place the Smartstart™ pro on top of the concrete.

- **OR**-

- If there are **no J bolts** in the concrete, then follow these steps:
  1. Measure and mark the (4) holes on the concrete where you will place the Smartstart™ pro.
  2. Pull up the power cable and one Cat 6 cable (run a 2nd Cat 6 cable for Moneris credit card processing only) through the center of the Smartstart™ pro’s pedestal.
3 As you line up the markers for the anchor bolts, place the Smartstart™ pro on top of the concrete.

4 You can drill (4) 1/2” anchor bolts.

4 Tighten the 4 nuts and washers to the 4 J bolts.
CHAPTER 4: System Wiring

The Smartstart™ pro main power input is wired to the terminal block which is located inside the top of the Smartstart™ pro, along with the heat exchanger.

Warning Symbol

The Warning Symbol follows. This symbol (in this manual, on equipment, or hardware) indicates you should consult accompanying documentation before proceeding.

WARNING: The terminals and power supplies contained in the Smartstart™ pro enclosure are for the ICS Equipment Only! Connecting external components and wiring to the Smartstart™ pro power circuits can damage the circuit boards and components and WILL VOID THE WARRANTY.

Wiring Guidelines

When running wires to and from the Smartstart™ pro unit, follow these guidelines:

- Run conduit and wires up through roto plastic base into the Smartstart™ pro unit.
- Use wiring ties and wire clamps inside unit to contain wires.
- All conduit runs should meet local and national codes. Conduits shall be properly connected and securely fastened to the boxes with listed conduit hubs, and should be tightened to the torque specs of the manufacturer.
AC Power Terminations

The terminal blocks in the Smartstart™ pro power up the Smartstart™ pro, the Sonic Car Sensor, and the heat exchanger.

See “Smartstart™ pro Wiring Guidelines” on page 11.

See “Grounding” on page 12.

After the Smartstart™ pro is securely anchored in place, follow these steps to connect the Power Wires:

1. Open the Smartstart™ pro door.
2. Remove the four screws from the wire cover. See Figure 6.

Figure 6. Wire Cover inside the Smartstart™ pro
The foam gasket is now exposed, and the wires that are revealed have been connected to the Sonic Car Sensor. See Figure 7.

Figure 7. Sonic Car Sensor Wiring

3 Pull the power wire and communication wire up through the center of the base through the hole that the wire cover was protecting.
4 Connect the power wire cable to the terminal blocks as shown in Figure 8:

- The Black Conductor to the 10A Line
- The White Conductor to the Neutral block.
- The Green conductor to the Ground (Green) block.

---

**Figure 8. AC Power Terminations**

---

***NOTE: The wiring and terminations are the responsibility of the car wash owners, electrician, and/or supplied contractor. Please have an electrician and/or car wash owner supplied contractor complete all of the site’s wiring pulls and terminations prior to the ICS technician coming onsite.***
5 Pull the communication wire up from the base of the unit through the center hole that the wire cover was protecting, and connect it in any one of the open ports on the System Network Switch. See Figure 9.

![Figure 9. System Network Switch](image)

6 After securing the cables to their respective connection points, replace the wire cover with the slotted opening closest to the power termination blocks to protect the wires from being pinched.

7 Use the (4) screws that were removed in Step #2, and install them in the wire cover tightly.
Power Wiring Layout

3 – 12 GA. THHN from a dedicated 15 amp breaker in the Main Service Electrical Panel providing an individual Line, Neutral, and Ground to each Smartstart pro for the Heat Exchangers. Terminations must be completed as per the provided AC Power Termination Diagram. The Ground wire must be terminated on the mechanical ground lug in the electrical panel.

ICS SUPPLIED 14/3 SHIELDED

A – UNCONDITIONED POWER TO MAIN SERVICE ELECTRICAL PANEL 15 AMP

-OR-

B – UNCONDITIONED POWER TO ICS POWER DISTRIBUTION BOX

C – CONDITIONED POWER FROM ICS POWER DISTRIBUTION BOX 10 AMP

Figure 10. Power Wiring Layout
### Power Wire Schedule

***NOTE:*** The wiring and terminations are the responsibility of the car wash owners, electrician, and/or supplied contractor. Please have an electrician and/or car wash owner supplied contractor complete all of the site’s wiring pulls and terminations prior to the ICS technician coming on site. All permanent site wiring connections must be performed by a licensed electrician that must comply with all local and national codes.***

<table>
<thead>
<tr>
<th>ID</th>
<th>WIRE TYPE</th>
<th>PROVIDED BY</th>
<th>TERMINATION LOCATIONS</th>
<th>TERMINATED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>14/3 SHIELDED</td>
<td>ELECTRICIAN</td>
<td>FROM SMARTSTART PRO TO CUSTOMER’S ELECTRICAL PANEL 15 AMP BREAKER</td>
<td>ELECTRICIAN</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>OPTIONAL – ICS POWER DISTRIBUTION BOX IS OPTIONAL</strong></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>14/3 SHIELDED</td>
<td>ICS</td>
<td>ICS POWER DISTRIBUTION BOX TO MAIN ELECTRICAL PANEL 10 AMP BREAKER</td>
<td>ELECTRICIAN</td>
</tr>
<tr>
<td>and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>14/3 SHIELDED</td>
<td>ICS</td>
<td>FROM ICS POWER DISTRIBUTION BOX 10 AMP BREAKER TO SMARTSTART PRO</td>
<td>ELECTRICIAN</td>
</tr>
</tbody>
</table>

**Figure 11. Power Wire Schedule**
ICS Power Distribution Box

**Figure 12. ICS Power Distribution Box**

- **Line Feed from Dedicated 120 VAC, 20 Amp Circuit**: In the site's main service electrical panel, terminated by an electrician.

- **Line Feed to Appropriate ICS Outlet or Equipment**: Run in 14/3 shielded cable or better, terminated by an electrician.

- **Neutral Feed to Appropriate ICS Outlet or Equipment**: Run in 14/3 shielded cable or better, terminated by an electrician.

- **Ground Feed to Appropriate ICS Outlet or Equipment**: Run in 14/3 shielded cable or better, terminated by an electrician.

- **Only Laser Printer Ground Terminated Here** (if one is part of the system).

- **Shorting Clips**: Preinstalled by ICS.

- **Conditioned Power**.

- **Unconditioned Power – Not Protected by UPS Battery Backup**.

- **Conditioned Neutral**.

- **Unconditioned Neutral – Not Protected by UPS Battery Backup**.

- **UPS Conditioned Ground**: Protected by UPS battery backup.

- **Unconditioned Ground – Not Protected by UPS Battery Backup**.

- **Note**: All shield drains are to be terminated on the enclosure ground lug.

- **Line Feed from Dedicated 120 VAC, 20 Amp Circuit in Site's Main Service Electrical Panel, Terminated by Electrician**.

- **Line Feeds to Appropriate ICS Outlet or Equipment. Run in 14/3 Shielded Cable or Better, Terminated by Electrician**.

- **Neutral Feeds to Appropriate ICS Outlet or Equipment. Run in 14/3 Shielded Cable or Better, Terminated by Electrician**.

- **Ground Feeds to Appropriate ICS Outlet or Equipment. Run in 14/3 Shielded Cable or Better, Terminated by Electrician**.

- **Only Laser Printer Ground Terminated Here** (if one is part of the system).
ICS Power Distribution Box Familiarization

ICS makes all terminations on this side of power distribution panel prior to shipping.

Site electrician needs to make all terminations on this side of power distribution panel.

UGND = UPS conditioned ground
GND = Unconditioned ground

Figure 13. ICS Power Distribution Box Familiarization
In-Bay Controller Wire Terminations

Figure 14. In-Bay Controller Wire Terminations

NOTE: ALL SHIELD DRAINS ARE TO BE TERMINATED ON THE ENCLOSURE GROUND LUG

INDIVIDUAL LEGS FROM THE 14/3 SHIELDED CABLES RUN TO EACH PIECE OF ICS EQUIPMENT OR ITS OUTLET
Figure 15. Smartstart pro Wire Layout with Server

WIRING LAYOUT

*** THIS DRAWING IS MEANT ONLY TO SHOW THE TYPES OF CABLES THAT MUST BE RUN BETWEEN PIECES OF ICS EQUIPMENT. THE INDIVIDUAL WHO RUNS THE CABLES MUST ENSURE THAT AMPLE CABLE IS AVAILABLE AT EITHER END TO FACILITATE TERMINATION. THE TERMINATION POINTS OF THE CABLES ARE NOT SHOWN ON THIS DOCUMENT. THIS DRAWING IS NOT TO SCALE.***

NOTES:
- IF USING MONERIS EMV, AN ADDITIONAL CAT 6 CABLE FROM PETRO TO THE SWITCH.
Figure 16. Smartstart pro Wire Layout without Server

WIRING LAYOUT

*** THIS DRAWING IS ONLY INTENDED TO SHOW THE TYPES OF WIRING THAT MUST BE RUN BETWEEN PIECES OF ICS EQUIPMENT. THE INDIVIDUAL RUNNING THE WIRING MUST ENSURE THAT AMPLE WIRE IS AVAILABLE AT EITHER END TO FACILITATE TERMINATION. THE TERMINATION POINTS OF THE CABLES ARE NOT SHOWN ON THIS DOCUMENT. ALL PERMANENT SITE WIRING CONNECTIONS MUST BE PERFORMED BY A LICENSED ELECTRICIAN THAT MUST COMPLY WITH ALL LOCAL AND NATIONAL CODES. THIS DRAWING IS NOT TO SCALE.***

NOTES:
- IF USING MONERIS EMV, RUN AN ADDITIONAL CAT 6 CABLE FROM THE SMARTSTART PRO TO THE SWITCH.
CHAPTER 5:
Parts Identification

Both exterior and interior components, wires, accessories, and more are available for purchase or reorder.

NOTE: If you cannot find the part in the following diagrams, contact ICS sales for more information:

1-800-642-9396

Locating and Identifying Components

This section provides details on exterior and interior component locations.
Exterior Components (Front View)

Figure 17. Exterior Components (Front View)
<table>
<thead>
<tr>
<th>#</th>
<th>ICS Part Number</th>
<th>Description</th>
<th>#</th>
<th>ICS Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ASDRLOCK</td>
<td>Door lock</td>
<td>6</td>
<td>ASLOOPELECEYEAS</td>
<td>Sonic Sensor assembly.</td>
</tr>
<tr>
<td></td>
<td>ASDRKEY</td>
<td>Door lock key (Not Show)</td>
<td></td>
<td>SENSOR-18MML</td>
<td>Replacement Sensor only.</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Wash entry keypad</td>
<td>7</td>
<td></td>
<td>Decal, Graphics</td>
</tr>
<tr>
<td>3</td>
<td>CPMOCONTREADUS</td>
<td>Lavego Chip Card Reader, Moneris card reader</td>
<td>8</td>
<td>CPMOCONTREADUS</td>
<td>Levago Contactless Reader</td>
</tr>
<tr>
<td></td>
<td></td>
<td>assembly (Not shown)</td>
<td></td>
<td></td>
<td>Moneris Contactless reader (Not Shown)</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Decal, Graphics</td>
<td>9</td>
<td>CPMOPINPAD</td>
<td>Levago PIN Pad</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Moneris PIN Pad</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Roto plastic molding</td>
<td>10</td>
<td></td>
<td>Receipt Chute</td>
</tr>
<tr>
<td>11</td>
<td>BARCODERDR1</td>
<td>Barcode protective window</td>
<td></td>
<td></td>
<td>Barcode Reader</td>
</tr>
</tbody>
</table>

**Table 3: Exterior Components Part Descriptions**
Back and Side View

The back and side view of the Smartstart™ pro is shown in Figure 18. The blue roto plastic molding is all in one piece including the front side too.

Figure 18. Back and side of the Smartstart™ pro
Table 4: Interior Door Components

<table>
<thead>
<tr>
<th>#</th>
<th>ICS Part Number</th>
<th>Description</th>
<th>#</th>
<th>ICS Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CPMOCONTREADUS</td>
<td>Levago Contactless Reader Moneris Contactless reader (Not Shown)</td>
<td>6</td>
<td>AS3ENCBUSHBSDL</td>
<td>Bushing Bolt</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>AS3ENCBLTBSDL</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>CPMOPINPAD</td>
<td>Levago PIN Pad Moneris PIN Pad</td>
<td>7</td>
<td>AS3DRSW</td>
<td>Door Switch (2 pieces)</td>
</tr>
<tr>
<td>3</td>
<td>ASPRHEC</td>
<td>USB Receipt Printer</td>
<td>8</td>
<td>AS3DRSW</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CPMOCONTREADUS</td>
<td>Levago Chip Card Reader Moneris card reader assembly (not shown)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>BARCODERDR1</td>
<td>Barcode Reader</td>
<td></td>
<td>ASSPEAKER</td>
<td>Speaker (Not shown)</td>
</tr>
</tbody>
</table>
Left side of Interior Components

![Image of left side of Interior Components]

Figure 20. Left side of Interior Components

Table 5: Left side of Interior Components

<table>
<thead>
<tr>
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<th>ICS Part Number</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Motherboard, SBC</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Fuel Interface</td>
</tr>
<tr>
<td>3</td>
<td>H/CONTROLBD</td>
<td>Heater/cooler control board</td>
</tr>
<tr>
<td>4</td>
<td>ASEMIFILTER</td>
<td>EMI filter for AC V</td>
</tr>
<tr>
<td>5</td>
<td>ASBSIO</td>
<td>SIO Board</td>
</tr>
</tbody>
</table>
Right side of Interior Components

![Image of interior components with labeled parts](image)

**Figure 21. Right side of Interior Components**

**Table 6: Right side of Interior Components**

<table>
<thead>
<tr>
<th>#</th>
<th>ICS Part Number</th>
<th>Description</th>
<th>#</th>
<th>ICS Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>H/CCTRLBD</td>
<td>Heater/cooler control board</td>
<td>5</td>
<td></td>
<td>(2) Heat exchanger assembly</td>
</tr>
<tr>
<td>2</td>
<td>ASEMIFILTER</td>
<td>EMI filter for AC V</td>
<td>6</td>
<td>AS2TERMB</td>
<td>Terminal blocks</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Fuel Interface</td>
<td>7</td>
<td>Wire Hole Gasket</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>SIO Board</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fuse Locations for Electronic Boards**

The following images help locate the fuses that you may need to replace in the future.
Heat Exchange Control Board

![Image of Heat/Cool Control Board]

**Figure 22.** Heat/Cool Control Board

H/CCONTROLBD

no fuses needed
Figure 23. Wash Selection Keypad Board
SIO Board Fuse Location

Figure 24. SIO Board Fuse Location
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### Table 1: Document Version History

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<th>Reviewer Initials</th>
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<td>1.0</td>
<td>04/07/2008</td>
<td>WS, KK, SD</td>
<td>First release.</td>
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Mission Statement:

It is our passion to leverage our experience as car wash operators, our position as a Market Leader, and our ability to incorporate advanced technology into Visionary products, which enables our Customers to differentiate their operations, achieve a distinct competitive advantage, and maximize their earnings.