THE NEW

A New Dimension in Mobility Control

PG DRIVES TECHNOLOGY
The World’s Smallest Integral Wheelchair Controller

- Compact design
- 50A power rating
- High definition LED display
- Industry standard connections
- Flexible cable for easy routing
- Designed for ease of installation
- Integrated heat shield
- Improved drive control
- Advanced service functions
- Live diagnostic functions
The new VSI controller is the ideal choice for wheelchairs that require a standard drive only configuration. This is especially true where space is at a premium, such as on folding wheelchair applications. The new VSI has been designed specifically to meet this market.

The new VSI's reduced size allows the wheelchair manufacturer a real alternative to remote systems without compromising on the overall look of the wheelchair. The reduced overall size is achieved without compromising power, drive performance or reliability. The new VSI offers all the durability and functionality the wheelchair manufacturer and user has come to expect from the market leader in controllers for the mobility market.

Compact Design with No Compromise on Power or Reliability

Robust Design

The reduced footprint makes the new VSI less prone to impact damage, thus reducing warranty and service costs. Further improvements have been made to improve the reliability of the new VSI. Areas prone to wear and tear such as the keypad have been improved by using a more robust material, making the new VSI less susceptible to damage by the user.

The power cable exits horizontally from the base of the new VSI, aiding routing and allowing the cable to be neatly secured to the arm of the wheelchair. This helps prevent the cable becoming damaged, which is another major warranty and service concern.

PGDT have used advanced design and manufacturing techniques to make the speed and Trucharge display highly visible. The high definition LED displays are particularly noticeable when the wheelchair is being driven outdoors in bright sunlight.

Integrated Heat Shield

The electronic components that make up the new VSI generate heat. The heat is dissipated through a mass of metal called a heatsink. In previous generations of integral controllers the heatsink was an exposed part. With the new VSI the heat-sink is entirely enclosed by a plastic case. When the controller is mounted on the chair, the wheelchair user cannot come into direct contact with any metal parts.

The Small, Versatile Control System
The new VSI is supplied with industry standard cable options, with either Beau or Anderson connections to the battery and motors. This enables an easy transition from older generations of VSI, or for using the new VSI on a new application.

The thin power cable makes installing and routing as simple as possible.

Enhanced Drive Control

The new VSI drive control algorithm has been enhanced to offer the smooth drive feel the customer has come to expect from the world’s leading wheelchair controller manufacturer. The performance of the new VSI is comparable to our other market leading wheelchair controllers.
Service Reminder

The newVSI includes advanced service information, which can be programmed to indicate to the user when a service call is required. Setting the service reminder allows the wheelchair provider to offer an improved overall service with a more reliable product to the wheelchair user. Using the service reminder, the wheelchair provider can set up a program of preventive maintenance, saving money and time on unscheduled service calls.

The service reminder is triggered by the actual amount of time a particular wheelchair has been driven. This enables customisation of the service requirement of an individual wheelchair user. For example, if the wheelchair user is particularly active within a harsh 'out of doors' environment, the provider can make an estimation of when the batteries may need checking or replacing. This function allows the dealer to maintain a service log for a particular wheelchair. The type of information available for an individual wheelchair includes, total drive time, numbers of services and number of hours of driving between services.

Diagnostics

The DTT (Diagnostic Test Tool) allows the provider or service person access to live diagnostic and programming information as well as real time controller, motor and battery data. Useful details such as controller temperature, battery voltage and motor current allows the service person to quickly analyse the key performance indicators of the wheelchair.

Programming & Upgrading

Pre-existing VSI program files can be read from an existing controller via the PC programmer and then written to the newVSI. This aids an easy transition from the older generations of VSI to the newVSI.

General Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Voltage</td>
<td>16-35V</td>
</tr>
<tr>
<td>Drive Current</td>
<td>50A</td>
</tr>
<tr>
<td>Overvoltage Trip</td>
<td>35V</td>
</tr>
<tr>
<td>Undervoltage Trip</td>
<td>13.5V</td>
</tr>
<tr>
<td>Reverse Battery Protection</td>
<td>40V</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-25°C to 50°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to 65°C</td>
</tr>
<tr>
<td>Brake Current</td>
<td>1A max. per brake</td>
</tr>
<tr>
<td>Battery Charging Current</td>
<td>12A RMS max.</td>
</tr>
<tr>
<td>Charger Connector</td>
<td>Use Neutrik NC3M X</td>
</tr>
<tr>
<td>Moisture Resistance</td>
<td>IPX4</td>
</tr>
<tr>
<td>Safety</td>
<td>Multiple hardware and software strategy</td>
</tr>
</tbody>
</table>

EMC on Sample Powerchair

Susceptibility

Tested at 30V/m to EN12184 and ANSI/RESNA requirements

Emissions

To EN55022 class B

ESD

IEC801

For further details refer to the newVSI technical manual SK80151

Dimensions

Width 96mm
Depth 143mm
Length 187mm
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SERVICE
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SK80153/09/10