

TELEMATICS LIFT CONTROL

Customizable Full-Feature Control System for Slab Scissor Lift – Enables Asset Management and Remote Monitoring

Background

Lift truck equipment owners and operators have a number of telematics system needs. Three core feature sets include:

- Centralized Information – An internet-connected database/platform (cloud storage), brings all asset data together to help drive preventive maintenance.
- Remote Monitoring and Operation – Real-time machine data and bidirectionality data flows. The means allowing equipment information to be read from a distance and also sent to the machine from an external device.
- Asset Management – Location tracking via GPS and/or virtual geo-fencing. This allows owners to track and control the equipment remotely.

All functions monitored and analyzed from the cloud using the new telematics system.

Solution

Sensata's Telematics Lift Control System is a solution that includes Platform Control Unit (PCU) and Electronics Control Unit (ECU) to deliver the information operators need.

Sensata's PCU has been redesigned to include a USB charge port, collision avoidance sensor and standard CANopen communication. The ECU has been redesigned to be FuSa certified, includes an integrated tilt sensor, large display screen and standard CANopen communication able to communicate to a telematics module with cellular and GPS capabilities. This enables access to vehicle data and controls remotely through a secured internet connection.

The system's GPS function allows owners to see the location of any machine out in the field, and also gives the capability for a Virtual Fence, defining areas where the machine is (or is not) allowed to operate.







When the machine leaves this designated area, it can be shut down or slowed down using bidirectional communication from the system. This communication between the machine and the cloud server allows for full vehicle information to be shared and also allows tracking of maintenance schedules and needs. Information on all machines is available in a centralized location to enable active preventative maintenance scheduling and planning. The cloud server stores all the data - both real-time and historical - and can be accessed by any web-connected device.

The ECU Connects to sensors and the motor controller. Sensata's M700 provides a high-powered hydraulic pump controller with fully programmable control of DC-wound motors, and features a micro-processor with configurable parameters.



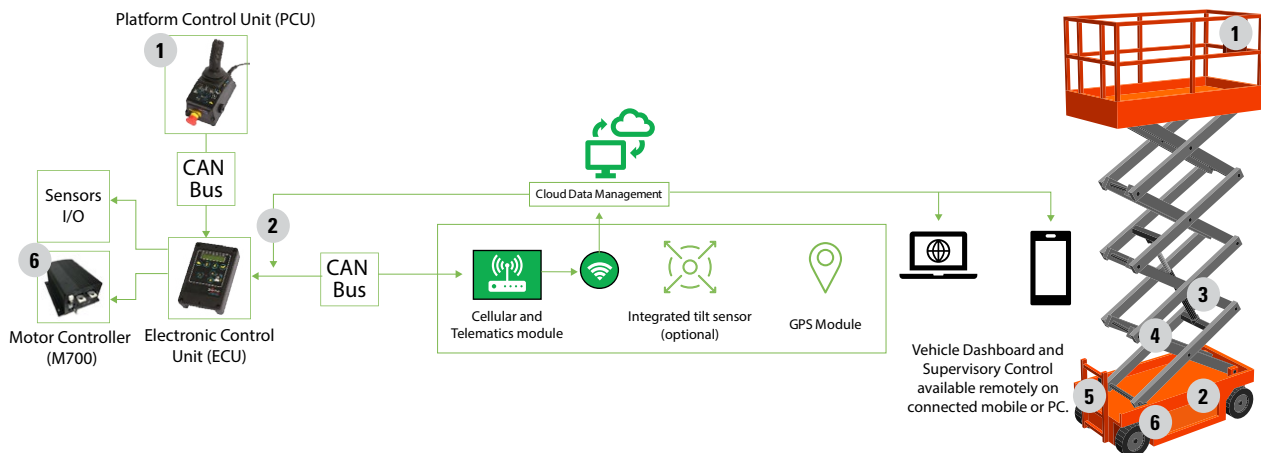


RECOMMENDED PRODUCTS

Reference on Diagram	Product	Features	Function
1	 PCU	<ul style="list-style-type: none"> • USB Port for charging mobile device • Additional connector – collision avoidance with ultrasonic sensor • Standard CANopen communication • More buttons for more options 	Platform Operator Control Unit
2	 ECU	<ul style="list-style-type: none"> • High performance Core Controller • FuSa design follows ISO 113849 • Integrated tilt sensor (Optional) 	Electronics Main Control Unit
3	 PTE7100	<ul style="list-style-type: none"> • High Pressure • MSG (Micro Silicon Strain Gauge) 	Pressure Sensor
4	 9360 Series	<ul style="list-style-type: none"> • Hall effect sensor • IP67 	Angle Sensor
5	 T Series	<ul style="list-style-type: none"> • High resolution 0.01° • High accuracy 0.1° 	Inclinometer
6	 M700	<ul style="list-style-type: none"> • Pre-charge control • Redundant design hardware and software • Short duration boost capability • Can communication to ECU 	DC Motor Controller



LIFT TRUCK OPERATOR CONTROLS



Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at www.sensata.com SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

CONTACT US

Americas
+1 (800) 350 2727
sensors.deltatech@sensata.com
Europe, Middle East & Africa
+359 (2) 809 1826
ost-info.eu@sensata.com
Asia Pacific
sales.isasia@list.sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7117
Korea +82 (31) 601 2004
India +91 (80) 67920890
Rest of Asia +886 (2) 27602006
ext 2808