



# K610

## PLATFORM CONTROL SYSTEM FOR BATTERY POWERED SCISSOR LIFT

The K610 is a next-generation scissor lift controller featuring the CoDeSys platform. CoDeSys programming framework is integrated directly into the ECU, which enables manufacturers to create their own customized functionality. The K610 is committed to the full control of slab self-propelled scissor lifts. The key parts of the K610 Kit are the P610 (Platform Control Unit) and the E610 (Electronic Control Unit). The 2 units have been conceived as building block elements able to connect all digital and analog machine interfaces such as joysticks, sensors, limit switches, LEDs, motor controllers, pushbuttons, e-stop, and alarms and control them through a CAN bus system.



P610  
Platform Control Unit



E610  
Electronic Control Unit

### Main Features

- CoDeSys platform, module design and user-friendly software
- Visual debug interface and on-line diagnostic.
- 3 PWM channels with current feedback and closed-loop control
- Support analog current & analog voltage multiplex Input
- 2 Isolated CAN channels
- Powerful MCU
- Direction control switches integrated in the joystick grip
- Large and multi-language LCD Display for an easy setting and machine control
- Emergency Stop Pushbutton

### Custom Modifications

- Custom overlay graphics
- Custom grip
- Configurable analog input ports



### Certification

- TUV Certified
  - Tested according to:
  - UL 61010-1:2012/R:2019-07
  - UL 61010-2-201:2018
  - CSA C22.2 No. 61010-1:2012/A1:2018-11
  - CSA C22.2 No. 61010-2-201:2018



## SPECIFICATIONS

### Electrical

	P610	E610
<b>Supply Ratings</b>	<b>System Voltage:</b> 12V or 24V DC	
	<b>Voltage Range:</b> 10V~36V	
	<b>Max. output voltage:</b> V supply DC	N/A
	Certified to CE regulations	
<b>Other Electrical Characteristics</b>	N/A	<b>Certified to CE regulations ESD:</b> +/- 6KV Contact, +/-8KV Air Discharge per IEC 61000-4-2 Functional

### Mechanical

	P610	E610
<b>Operating Temperature</b>	-25 °C to 65 °C	
<b>Protection Level</b>	IP65 (after installed)	IP65
<b>Life</b>	Joystick > 5 million cycles Pushbuttons > 1million cycles	N/A

## P610 Platform Control Unit

A1 Connector

Connector: 6 Pin, SIBAS HQ-005-M; Pin Current Rating 7.5Amps

<b>Pin 1</b>	Ground
<b>Pin 2</b>	CAN High
<b>Pin 3</b>	E-Stop Out (+24V out)
<b>Pin 4</b>	+24V in
<b>Pin 5</b>	CAN Low
<b>Pin 6</b>	Unused

A2 Connector

Connector PLT-166-RL-R

<b>Pin 1</b>	Power	9~36VDC
<b>Pin 2</b>	Analog Input 0	0~30VDC
<b>Pin 3</b>	Analog Input 1	0~30VDC
<b>Pin 4</b>	Analog Input 2	0~30VDC
<b>Pin 5</b>	Ground	0VDC

## E610 Electronic Control Unit

Connectors: CN1 = 35 Pin, AMP 776231-1, CN2 = 14 Pin, AMP 776262-1.

### CN1 Connector

Pin	Signal Type	Characteristic	Pin	Signal Type	Characteristic
CN1-1A	Digital Input	24VDC/0VDC	CN1-7B	Digital Output	24VDC@2.5A
CN1-2A	Digital Input	24VDC/0VDC	CN1-8B	Digital Output	24VDC@2.5A
CN1-3A	Digital Output	24VDC@2.5A	CN1-9B	Digital Output	0VDC@1A
CN1-4A	Power Input	24VDC@7A	CN1-10B	Digital Input	24VDC/0VDC
CN1-5A	Power Input	24VDC@7A	CN1-11B	Digital Input	24VDC/0VDC
CN1-6A	Digital Output	24VDC@2.5A	CN1-1C	Comm.	CAN
CN1-7A	Digital Output	24VDC@2.5A	CN1-2C	Power Input	24VDC@2A
CN1-8A	Digital Output	24VDC@2.5A	CN1-3C	Analog Input	0-5VDC/4-20mA
CN1-9A	Analog Output	0-5VDC@10mA	CN1-4C	Analog Output	0-5VDC@10mA
CN1-10A	Digital Input	24VDC/0VDC	CN1-5C	Digital Input	5VDC/0VDC pull-up
CN1-11A	Analog Input	0-5VDC/4-20mA	CN1-6C	Digital Output	24VDC@2.5A
CN1-12A	Digital Input	24VDC/0VDC	CN1-7C	Digital Output	24VDC@2.5A
CN1-1B	Comm.	CAN	CN1-8C	Digital Output	24VDC@2.5A
CN1-2B	Digital Input	24VDC/0VDC	CN1-9C	Digital Output	24VDC@2.5A
CN1-3B	Power Ground	0VDC@2A	CN1-10C	Digital Input	24VDC/0VDC
CN1-4B	Analog Input	0-5VDC	CN1-11C	Digital Input	24VDC/0VDC
CN1-5B	Digital Input	5VDC/0VDC pull-up	CN1-12C	Digital Input	24VDC/0VDC
CN1-6B	Digital Output	24VDC@2.5A			

### CN2 Connector

Pin	Signal Type	Characteristic
CN2-1A	Digital Output	24VDC@2.5A
CN2-2A	Analog Input	0-5VDC
CN2-3A	Comm 2.	CAN 2 level H
CN2-4A	Comm 1.	CAN 1 level H
CN2-5A	Comm 1.	CAN 1 level L
CN2-1B	Analog Input	4-20mA
CN2-2B	Analog Input	4-20mA
CN2-3B	PWM Output	24VDC@2.5A
CN2-4B	PWM Output	24VDC@2.5A
CN2-1C	Comm 2.	CAN 2 level L
CN2-2C	Digital Input	24VDC/0VDC
CN2-3C	Digital Input	24VDC/0VDC
CN2-4C	Digital Input	24VDC/0VDC
CN2-5C	PWM Output	24VDC@2.5A

2 USB ports (mini USB type):

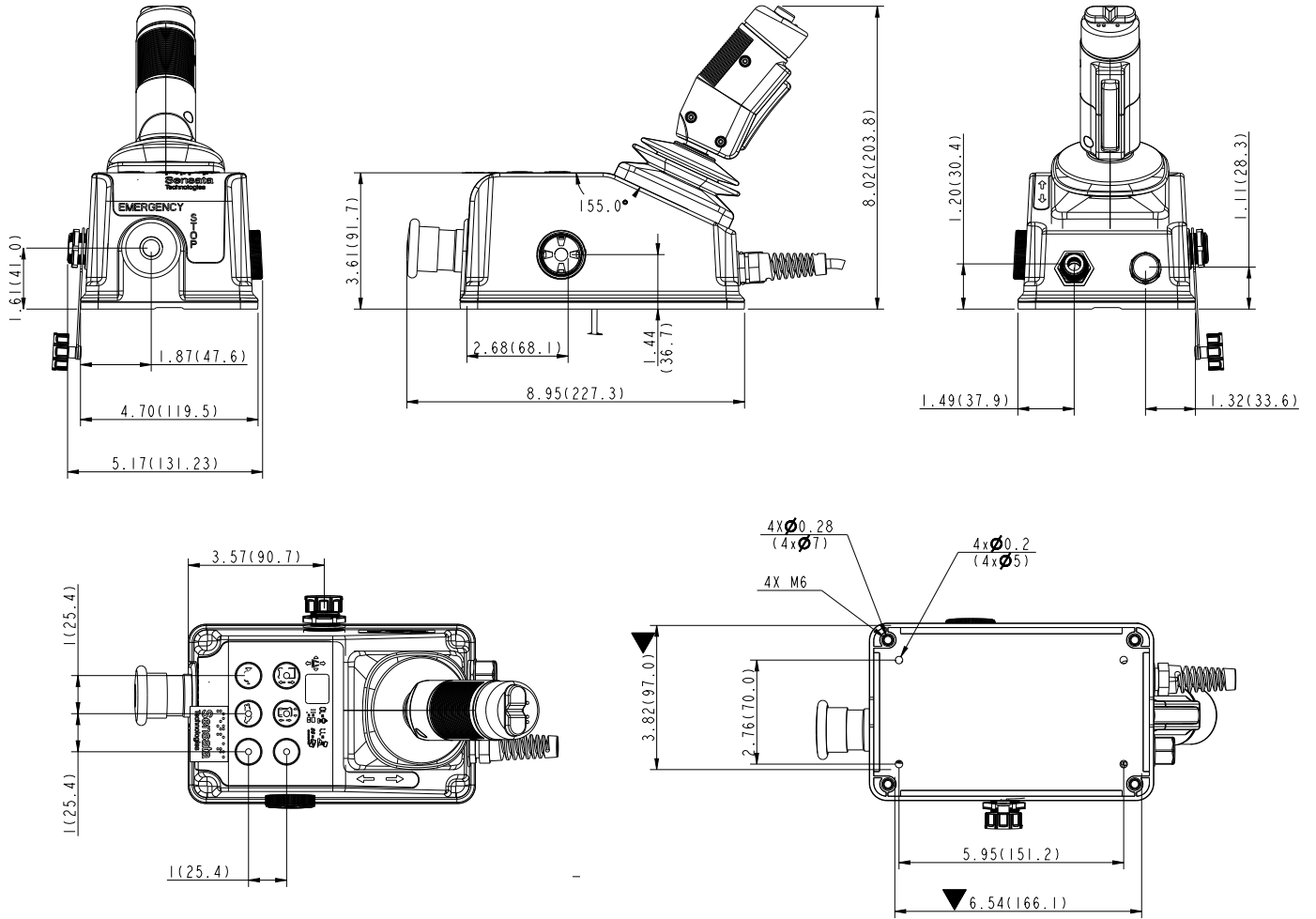
- USB 1 used for RTS (Run-Time System) and SW update (core side).
- USB 2 used for base board application update



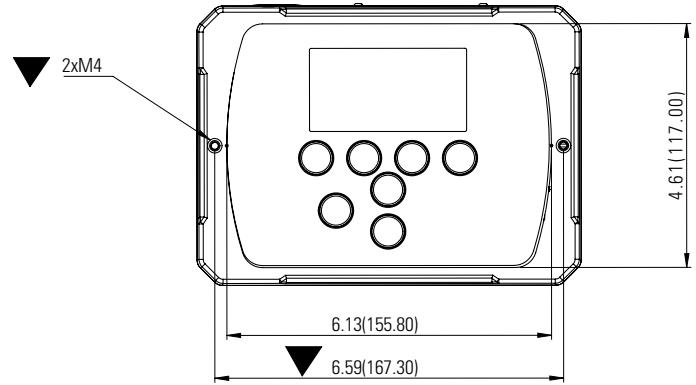
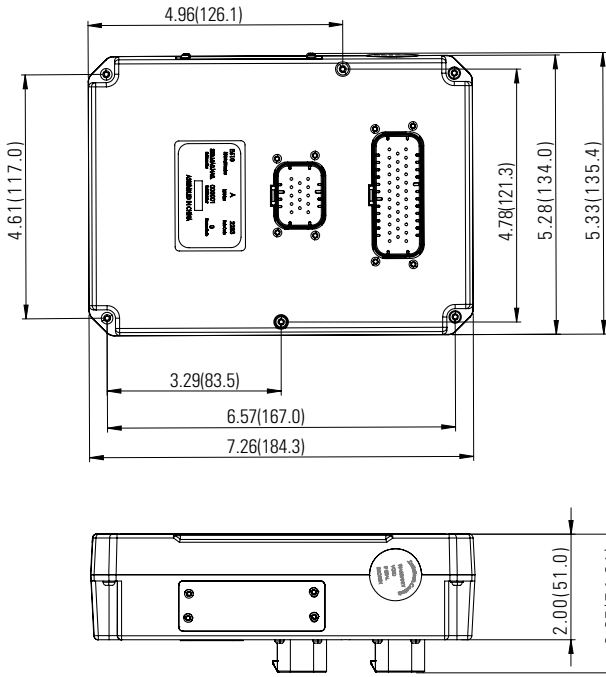
# DIMENSIONS

All dimensions are in inches [millimeters]

## P610 Platform Control Unit



## E610 Electronic Control Unit



## ORDERING INFORMATION

K610-00-01

Part Number	Product	Description
K610-00-01	K610	Platform Control Kit for Slab Scissor Lift

### K610 Kit includes:

Part Number	Description
E610	Electronic Control Unit
P610	Platform Control Unit

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