| K120

PLATFORM CONTROL SYSTEM FOR ROUGH TERRAIN SCISSOR LIFT

The K120 Platform Control System provides the reliability required in demanding applications such as Mobile Elevating Work Platforms; K120 is committed to the full control of rough terrain self-propelled scissor lift. The key parts of the K120 Kit are the PCU100 (Platform Control Unit) and the ECU120 (Ground Control Unit). The 2 units have been conceived as building block elements able to connect a variety of digital and analog machine interfaces such as joysticks, sensors, limit switches, LEDs , motor controller, pushbuttons, e-stop, alarms and control them through a CAN-bus system.

Features

- CoDeSys platform, module design and easy software adjustable
- Visual debug interface and on-line diagnostic.
- 8 channels PWM with current feedback and closed-loop control
- 70+ I/O port
- Support Analog current & Analog voltage multiplex Input
- 2 Isolated CAN
- Powerful MCU
- Direction control switches integrated in the joystick grip
- Large LCD Display for an easy setting and control
- Emergency Stop Pushbutton
- Auto Calibration/ chassis leveling

Custom Modifications

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

Certification

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

SPECIFICATIONS

Electrical

	PCU100	ECU120
Supply Ratings	**System Voltage:** 12V or 24V DC **Voltage Range:** 10V~30V	
	Max. output voltage: V supply DC	N/A
	Certified to CE regulations	
Other Electrical Characteristics	N/A	Certified to CE Regulations **ESD:** +/- 6KV Contact, +/-8KV Air Discharge per IEC 61000-4-2 **Functional safety:** Design for PL-d (loading function), refer to BS EN ISO13849

Mechanical

	PCU100	ECU120
Operating Temperature	-20 °C to 70 °C	
Protection Level	IP65 (after installed)	IP25
Life	Joystick > 5 million cycles Pushbuttons > 1million cycles	N/A

PCU100 Platform Control Unit

Connector: 6 Pin, DEUTSCH DTM04-6P;
Pin Current Rating 10Amps

Pin 1	Ground
Pin 2	Serial Data High
Pin 3	E-Stop Out (+24V out)
Pin 4	+24V in
Pin 5	Serial Data Low
Pin 6	Unused

ECU120 Ground Control Unit

Connector: J1 & J2 = 36 Pin, AMP 344108-1.
J3=18 PIN, AMP 344103-1.
J4/J5: Standard DB9

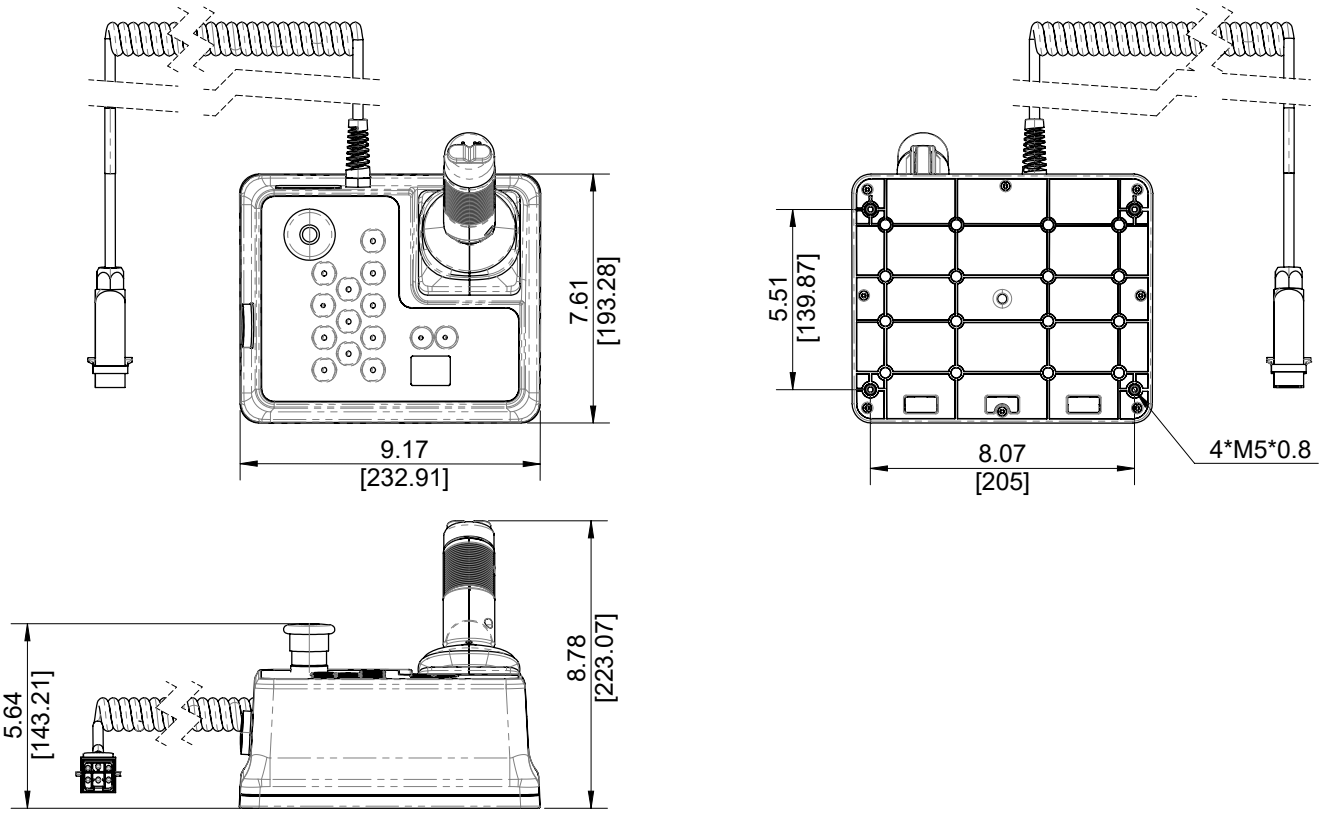
Pin	Signal Type	Characteristic	Pin	Signal Type	Characteristic	Pin	Signal Type	Characteristic
J1-1A	Digital output	12VDC@2.5A	J1-1C	Digital input	0VDC/12VDC	J2-1B	Analog input	0-5VDC
J1-2A	Digital output	12VDC@2.5A	J1-2C	Digital input	0VDC/12VDC	J2-2B	GND	0VDC@1A
J1-3A	Digital output	12VDC@2.5A	J1-3C	Digital input	0VDC/12VDC	J2-3B	Analog Input	0-5VDC/4-20mADC
J1-4A	Digital output	12VDC@2.5A	J1-4C	Digital input	0VDC/12VDC	J2-4B	power GND	0VDC@1A
J1-5A	Digital output	12VDC@2.5A	J1-5C	Digital input	0VDC/12VDC	J2-5B	Analog Input	0-5VDC/4-20mADC
J1-6A	Digital output	12VDC@2.5A	J1-6C	Digital input	0VDC/12VDC	J2-6B	Analog input	0-5VDC
J1-7A	Digital output	12VDC@2.5A	J1-7C	Pulse input	0VDC/12VDC	J2-7B	Digital output	12VDC@0.2A
J1-8A	Digital output	12VDC@2.5A	J1-8C	Digital input	0VDC/3.3VDC Pull-up	J2-8B	Digital output	12VDC@0.2A
J1-9A	Digital output	12VDC@2.5A	J1-9C	Digital input	0VDC/3.3VDC Pull-up	J2-9B	comm.	CAN level hi
J1-10A	Digital output	12VDC@2.5A	J1-10C	Digital output	0VDC/12VDC	J2-10B	Digital output	12VDC@0.2A
J1-11A	Digital output	12VDC@2.5A	J1-11C	Digital output	12VDC@2.5A	J2-11B	Digital output	12VDC@0.2A
J1-12A	Digital output	12VDC@2.5A	J1-12C	Power	5VDC@0.25A	J2-12B	Digital output	12VDC@0.2A
J1-1B	PWM output	12VDC@2.5A	J2-1A	Digital input	0VDC/12VDC	J2-1C	12V power	12VDC@5A
J1-2B	PWM output	12VDC@2.5A	J2-2A	Digital input	0VDC/12VDC	J2-2C	12V power	12VDC@5A
J1-3B	PWM output	12VDC@2.5A	J2-3A	Digital input	0VDC/12VDC	J2-3C	12V power	12VDC@5A
J1-4B	PWM output	12VDC@2.5A	J2-4A	Digital output	12VDC@0.1A	J2-4C	Digital output	12VDC@0.2A
J1-5B	PWM output	12VDC@2.5A	J2-5A	Digital input	0VDC/12VDC	J2-5C	comm.	CAN level lo
J1-6B	PWM output	12VDC@2.5A	J2-6A	Digital input	0VDC/12VDC	J2-6C	Analog input	0-5VDC
J1-7B	PWM output	12VDC@2.5A	J2-7A	Digital input	0VDC/12VDC	J2-7C	GND	0VDC@1A
J1-8B	PWM output	12VDC@2.5A	J2-8A	Digital input	0VDC/12VDC	J2-8C	Digital output	12VDC@2.5A
J1-9B	Digital output	12VDC@2.5A	J2-9A	Digital input	12VDC@0.2A	J2-9C	Digital output	12VDC@2.5A
J1-10B	Digital output	12VDC@2.5A	J2-10A	Power GND	0VDC@1A	J2-10C	Digital output	12VDC@2.5A
J1-11B	Digital output	12VDC@2.5A	J2-11A	comm.	CAN level hi	J2-11C	Digital output	12VDC@2.5A
J1-12B	Digital output	12VDC@2.5A	J2-12A	comm.	CAN level lo	J2-12C	Power	12VDC@1A

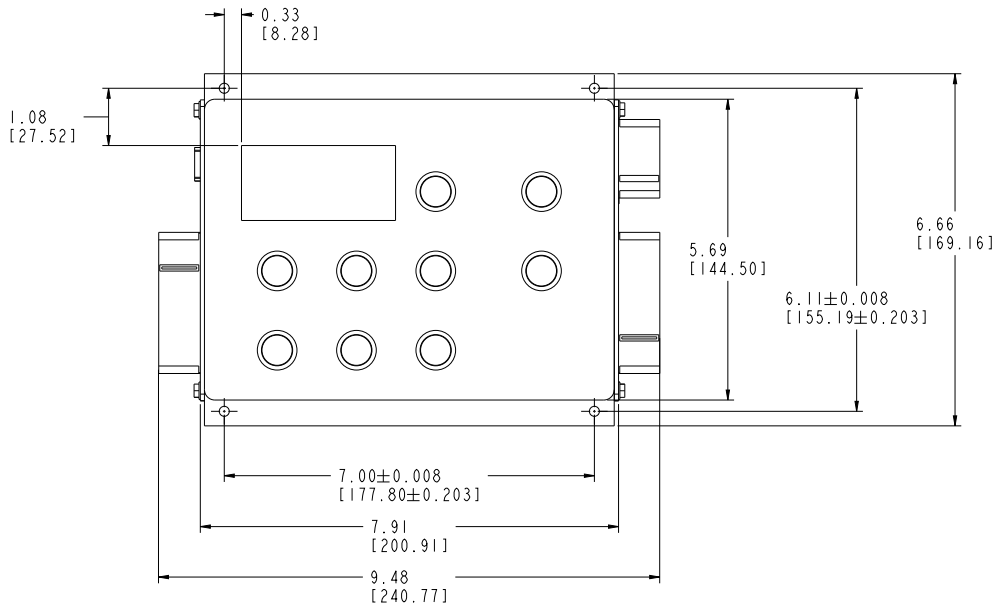
Pin	Signal Type	Characteristic
J3-1A	Digital input	0VDC/12VDC
J3-2A	Digital input	0VDC/12VDC
J3-3A	Digital input	0VDC/12VDC
J3-4A	Digital input	0VDC/12VDC
J3-5A	Digital input	0VDC/3.3VDC Pull-up
J3-6A	Digital input	0VDC/3.3VDC Pull-up
J3-1B	Analog input	0-5VDC/4-20mADC
J3-2B	Analog input	0-5VDC/4-20mADC
J3-3B	Analog input	0-5VDC/4-20mADC
J3-4B	Analog output	0-5VDC
J3-5B	Analog output	0-5VDC
J3-6B	Analog output	0-5VDC
J3-1C	comm.	CAN level hi
J3-2C	comm.	CAN level lo
J3-3C	/	/
J3-4C	/	/
J3-5C	GND	0VDC@1A
J3-6C	GND	0VDC@1A

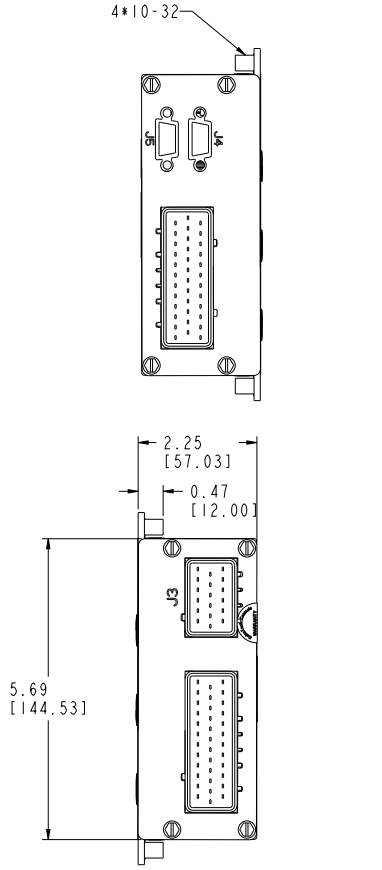
Pin	Signal Type	Characteristic
J4-A2	Comm.	RS232_TX
J4-A3	Comm.	RS232_RX
J4-A4	Comm.	RS232_GND
J5-A2	Comm.	RS232_TX
J5-A3	Comm.	RS232_RX
J5-A4	Comm.	RS232_GND

DIMENSIONS

Dimensions in inches [mm]







ORDERING OPTIONS

Example : K120-VR1

Part Number	Product	Description
K120-VR1	K120	Platform Control Kit
E120-VR1	ECU120	Ground Control Unit
P100-VR1	PCU100	Platform Control Unit

* Individual control unit can be ordered independently

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