



**P VERSION**

Includes 2 rotary encoders with a solid plastic knob.



**R VERSION**

Includes 2 rotary encoders with a rubber knob that allows for a standard PKP-SI insert to be fitted.



## PKP-2300-SI-MT

**PKP-2300-SI-MT** brings together compact dimensions, advanced functionality and refined design in a next-generation CANbus keypad. Featuring four push buttons with replaceable icon inserts and two push-enabled rotary encoders, it also offers four additional analog and digital inputs for direct connection of 5V sensors to the CANbus network. Its efficient layout helps reduce dashboard space requirements while increasing control versatility. With IP67/IP69K protection, it is designed to perform reliably in harsh working conditions.

### SOFTWARE FEATURES

**CAN Keypad Addresses** – Assign any valid CAN address to the keypad.

**CANopen Communications Protocol** – Fully compliant with Device Profile 401d.

**J1939 Address Claim Transmission** – Keypads no longer have to be pre-programmed to a specific address. This enables customers that work in applications in the field without access to a GUI to use any replacement keypad on-hand. The keypad can be configured to automatically announce its address and accept a new address assignment as appropriate.

**Event Status Transmission** – The keypad can send messages to the BUS indicating a button press or a button release event has occurred. This confirmation allows digital systems to have the same input acknowledgements as that of the latching position of a mechanical switch.

**Periodic Status Transmission** – The keypad sends a continuous broadcast of messages indicating the press or release status of each button at that instance. The frequency of these messages can be adjusted in a wide range.

**Periodic Heartbeat** – The keypad sends a continuous broadcast of messages indicating it is functioning correctly. The frequency of these messages can be adjusted in a wide range.

**Online Set-up** – An online set-up system makes it possible to select and design your own prototype, then order it directly on [blinkmarine.com](http://blinkmarine.com).

### HARDWARE FEATURES

**IP67/IP69K Waterproof Rating** – Dust-tight sealing and protection for water immersion in accordance with IP67 test conditions. IP69K protection ensures resistance to high-pressure, high-temperature washdowns.

**UV Protected** – UVB 400 hours: Keypad is highly resistant to deterioration caused by exposure to sunlight.

**Customizable Inserts** – The replacement system for individual inserts makes modifying the keypad layout simpler and more economical. Thousands of different stock inserts can be viewed at [blinkmarine.com](http://blinkmarine.com), and it is possible to order customized ones.

**A membrane compensation valve** which self compensate the internal pressure within the keypad, alleviating mechanical stresses that can be produced by shifts in external temperatures.

**The keypad's symmetrical design** and spacing between keys makes it easier to install multiple keypads alongside one another.

**The rubber is molded on the backside** in such a way that it acts as a gasket, blocking liquids and preventing them from leaking in through the attachment holes located on the support upon which the keypad is installed.

**Independent Key** – The device is able to support any multiple pressure key combination.

**Encoder With Pushbutton** – Use of the knob is both comfortable and immediate. For example, the knob allows its user to manage scroll & select operations without letting go of the handle.

**4 Additional 5V Inputs** – Allows the possibility to connect items such as analogue active sensors (such as pressure and temperature sensors), discrete switches (highside/lowside) and Hall Effect sensors."

**Independent LED Indicator Lights** – Each rotary encoder has 16 Blue LED light indicators, while all 4 pushbuttons are equipped with RGB LED rings. All LEDs can be independently programmed.

**STANDARD FEATURES**

- Reconfigurable keys
- Replaceable icon inserts
- Configurable LED
- High intensity LED status indicators
- LED backlit icons
- Multicolor indicator rings
- Laser etched icons
- Programmable functions (momentary, toggle, scroll...)
- Thousands of stock icons to choose from
- Encoders with pushbuttons
- Vertical or horizontal mount
- Two different knob types: with or w/o replaceable icon inserts
- Protected from inverted polarity

**SOFTWARE FEATURES**

- Change CAN keypad addresses independently
- Periodic status transmission
- Heartbeat
- Event status transmission
- LED acknowledgement
- Address claim transmission
- CANopen and J1939 communication protocol
- Plug-and-play reconfigurability
- Detailed user manuals available

**OTHER BENEFITS**

- Specific connectors and cables are available on request

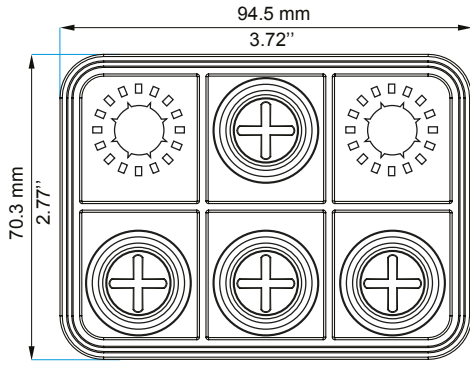


**SPECIFICATIONS FOR STANDARD KEYPADS**

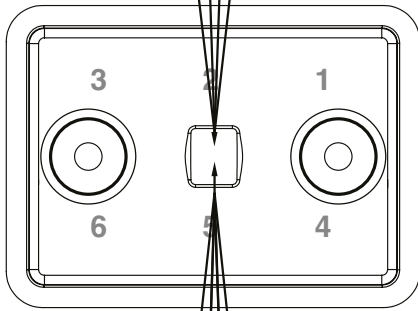
ELECTRICAL	PKP-2300-SI-MT
Supply Voltage	12-24Vdc Nominal (8-32VDC)
Standby Current	<50 mA
Communication BUS	CANopen, J1939
MTBF	60832 hours (in accordance with MIL-HDBK-217-operating environment ground mobile)
MECHANICAL	PKP-2300-SI-MT
Standard Connector	Deutsch DT04-4P
Inputs Connector	Deutsch DTM04-6P
Switch Life	3 million operations
Mounting Studs	2x #10-32 Stainless Steel
Rubber Specs	Silicone rubber with polyurethane hardcoat
PCB	1,6mm thick, Nema Grade FR-4, double clad with 1 oz copper
Operating Temperature	-40°C to +70°C
Storage Temperature	-40°C to +85°C
Thermal Shock	-40°C to +85°C According to table 2 of ISO16750-4
Mechanical Shock Test	IEC 60068 2-27 3-axis X,Y,Z 50Gs 11 ms
Vibration Test	IEC 60068 2-6 3-axis X,Y,Z 10-150Hz 0.15mm
UV Protection	UVB 400 hours
Salt Spray	Per ASTM B117
Chemical Resistance	Engine Cleaner, Isopropyl Alcohol, Suntan Lotion, Multi-Purpose Cleaner, Muriatic Acid
Ingress protection Rating	IP67 / IP69K
Weight	160 gr (Inserts excluded)



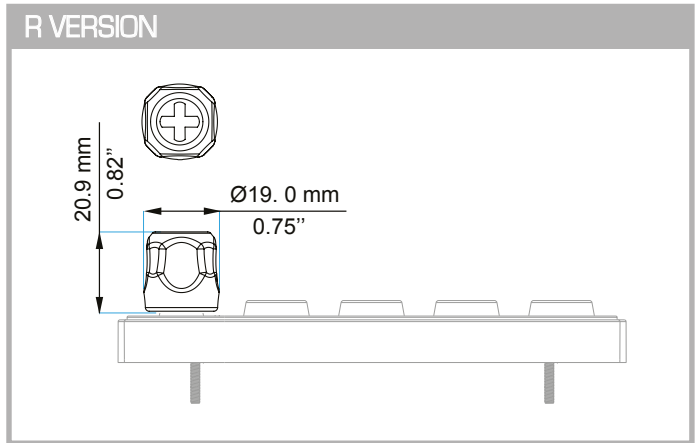
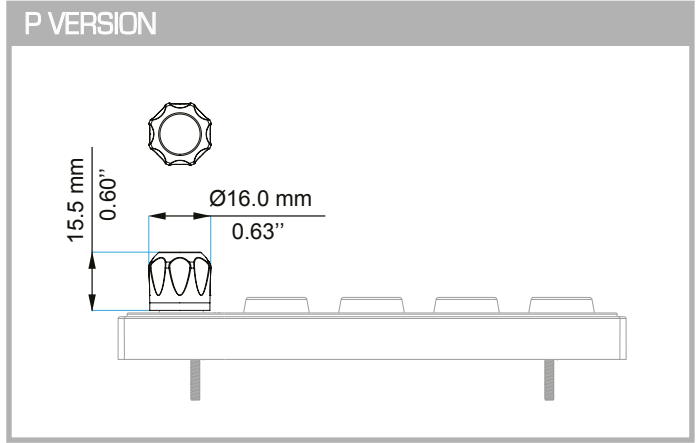
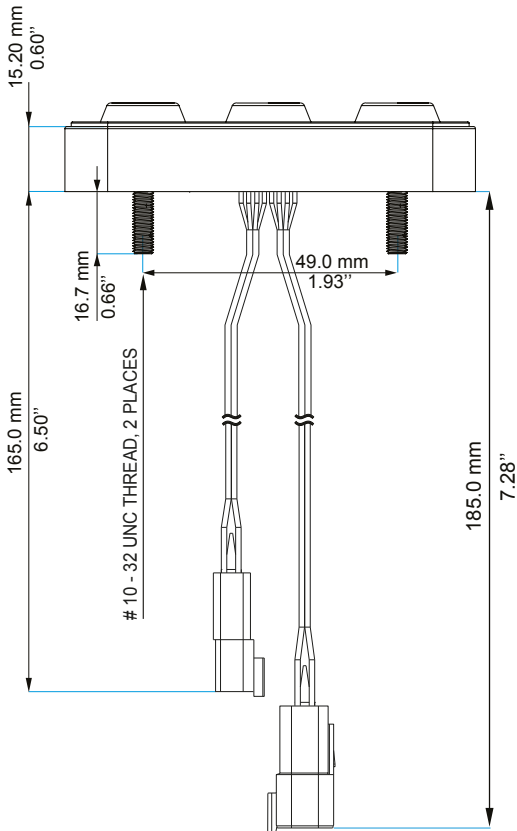
Icons shown on this keypad are for visual demonstration only.



BLUE=CAN LOW      RED=POWER  
 WHITE=CAN HIGH      BLACK=GROUND



RED=POWER +5V      BLACK=GROUND  
 YELLOW=IN0      GREEN=IN3  
 BLUE=IN1      GREY=IN2



**MOUNTING NOTES:**  
 Nuts thread: 2x #10-32  
 Maximum torque: 1,8Nm - 16lbf-in

All connection wires are the same length

**CONNECTORS STANDARD PINOUT\***



WIRE SIDE

PIN	COLOUR	FUNCTION
1	Blue	CAN L
2	White	CAN H
3	Black	Negative battery
4	Red	Vbatt. (12-24V)



WIRE SIDE

PIN	COLOUR	FUNCTION
1	Red	Power +5V
2	Yellow	IN0
3	Blue	IN1
4	Grey	IN2
5	Green	IN3
6	Black	GND

\*The one illustrated above is the standard pinout; however, some keypads may be supplied with alternative pinouts or connectors.



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