

## PWTR6



DESIGN YOUR OWN  
PROTOTYPE ONLINE



CANopen  
J1939



## CANBUS ROTARY ENCODER

**PWTR6** embodies an advanced CANbus keypad, featuring a rotary encoder and robust IP67 protection. The 6 quick-select buttons seamlessly complement the functionality of the pushable rotary encoder, which is also available in a joystick version (PWTR6-J).

This combination provides precise and intuitive control of onboard displays, putting everything at your fingertips. Customization is tailored to your needs: you can personalize the rubber artwork and LED color of each button and backlighting. Powertrack is available with both CANopen and J1939 protocols.

### SOFTWARE FEATURES

**CAN Keypad Addresses** - You are able to assign any valid CAN address to the keypad.

**CANopen Communication 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.

**Smart LED Management** - Each light spot consists of three different colored LEDs (RGB). In this way it is possible to independently adjust color and intensity gradient of each light spot by simply changing the intensity of individual LEDs.

**Event Status Transmission** - The keypad can send messages to the BUS indicating a button press event or a button release event has occurred. The event that triggers the message can also be caused by the movement of the joystick or the rotation of the encoder.

**Concave Keys** - The ergonomic design simplifies touch navigation of the quick-pick keys.

**Periodic Status Transmission** - The keypad sends a continuous broadcast of messages, indicating the status of each button, as well as the positions of the joystick and the encoder 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.

**Backward-compatible:** PWTR6 uses the same CAN protocols as the legacy Powertrack model. This means that it is possible to replace a Powertrack with a PWTR6 with minor changes to the control unit.

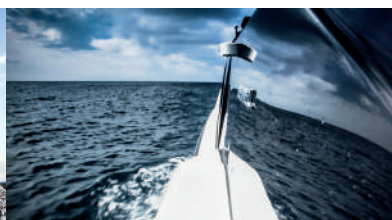
### HARDWARE FEATURES

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

**IP67 Waterproof Rating** - Guaranteed to be dust tight and sealed against water immersion to a depth of 1 meter for up to 1 hour.

**Independent KEY** - The device is able to support any multiple pressure key combination.

**Ergonomic Knob** - This controller is designed for a comfortable grip in any situation, thanks to the textured sides of the aluminum knob.

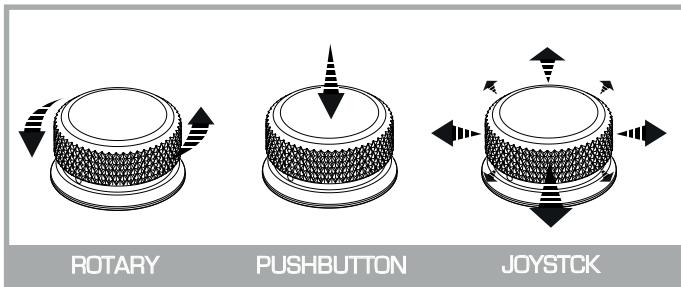


## STANDARD FEATURES

- High intensity led status indicators
- Multicolor LED backlight
- RGB LED indicators
- Event status transmission
- Periodic status transmission
- Flush mount design
- Vertical or horizontal mount
- Protected from inverted polarity
- Encoder with pushbutton
- Periodic Heartbeat
- LED acknowledgement
- CANopen and J1939 communication protocol
- Available with or without joystick function

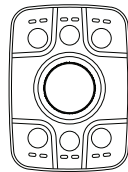
## CUSTOM FEATURES

- Custom laser etched icons
- Anodized color options for the knob
- Custom knob shape
- Custom logo on the knob



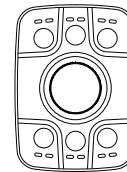
## SPECIFICATIONS FOR STANDARD KEYPADS

PWTR6



Without Joystick

PWTR6-J



With Joystick

### ELECTRICAL

Supply Voltage	12-24Vdc Nominal (8-32VDC)
Standby Current	<50 mA
Communication BUS	CANopen, J1939

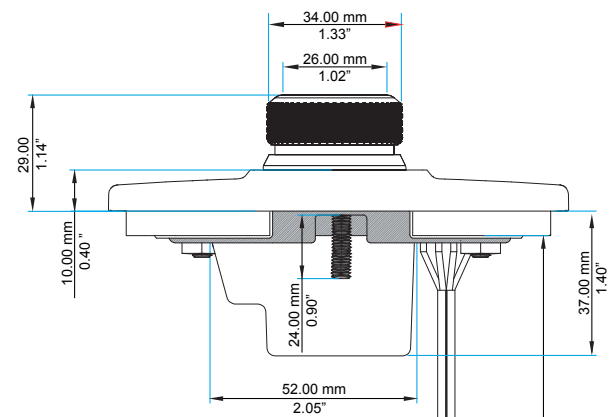
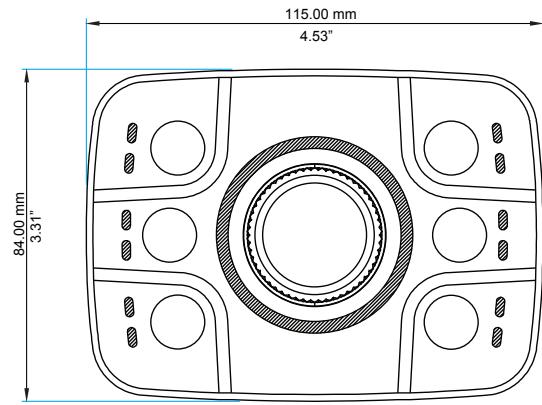
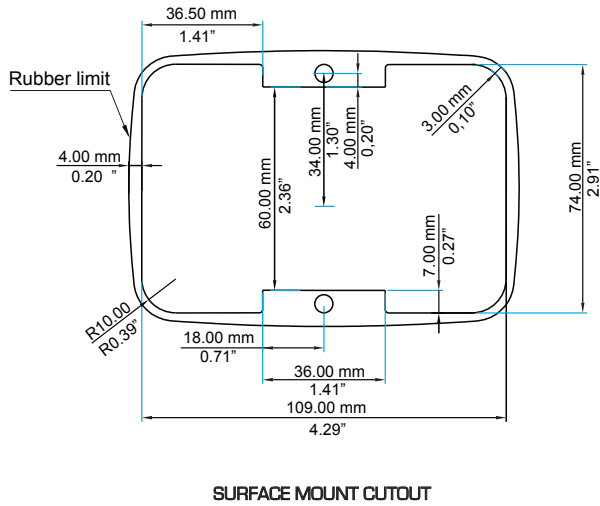
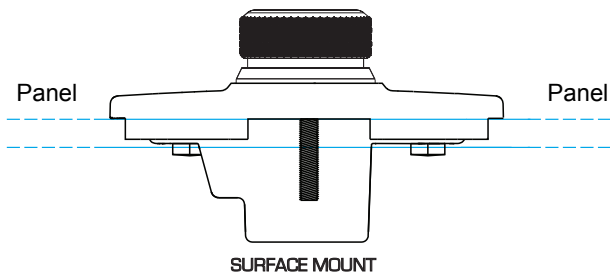
### MECHANICAL

Connector	Deutsch DT04-4P
Switch Life	3 million operations min.
Encoder pushbutton life	1 million operations min.
Encoder rotation life	1 million operations min.
Mounting Studs	#10-32 Steel
Keypad	Silicone rubber with polyurethane hardcoat
PC Board	1,6mm thick, Nema Grade FR-4, double clad with 1oz copper
Operating Temperature	-40°C to +70°C
Storage Temperature	-40°C to +85°C
UV Protection	UVB 400 hours
Salt Spray	Per ASTM B117
Chemical Resistance	Deet, Engine Cleaner, Isopropyl Alcohol, Suntan Lotion, Multi-Purpose Cleaner, Orange Citrus Cleaner
Ingress protection Rating	IP67
Weight	230 gr
	240 gr

### JOYSTICK

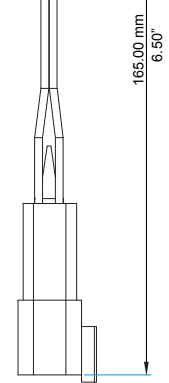
Activation force	N/A	5.5±3.5N (560±350gf)
Max. angle	N/A	6°
Operational life	N/A	500,000 cycles min.

## OPTION MOUNT

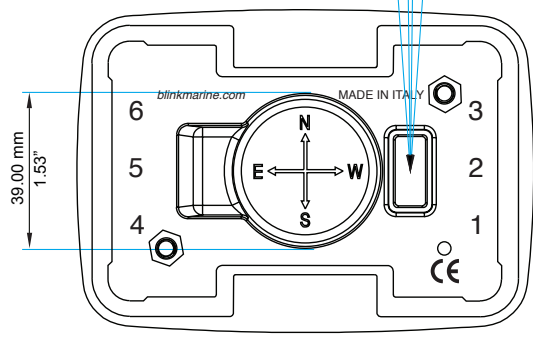


**MOUNTING NOTES:**  
Nuts thread: #10-32  
Maximum torque: 1,8Nm - 16lbf-in

**NOTE: ALL CONNECTION WIRES ARE THE SAME LENGTH**



BLACK=GROUND      WHITE=CAN H  
RED=POWER          BLUE=CAN L



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## CONNECTOR STANDARD PINOUT



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

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