

EXTENDING PRODUCT PORTFOLIO

## CANopen and J1939 keypads

Variohm Eurosensor has added a range of keypads and controllers from the Italian manufacturer Blink Marine to its product portfolio. The Powerkey, Powertrack, and Powerkey Pro series of keypads include CANopen, J1939, and EIA-485 communication profiles.



(Source: Variohm Eurosensor)

The keypads feature relegendable buttons with customizable/interchangeable inserts as well as configurable and personalized LED indicators plus LED backlights. Blink Marine keypads provide vertical or horizontal orientation. With IP67/IP69K protection ratings, UVB 400 sunlight protection as well as salt spray and chemical resistance to harsh substances, the keypad's construction will suit use in tough environments. The keypads can be used in machine control and switching applications ranging from agricultural, off road, transportation, and construction vehicles to motorsports, marine and military equipment.

Blink Marine's PowerKey1000 and 1400 are available in 10 and 14 key versions. With CANopen (CiA 401 device profile for generic I/O modules) and J1939 protocols, the range can be customized for both the key symbol imagery and the number of LED's assigned to each individual key. They include a backlight to

aid use and visibility in low light settings. The Powertrack series is based on the same style and design as the Powerkey but includes a rotary encoder together with six keys to allow management of scroll functions that can be assigned via CAN/J1939 and read into a compatible HMI (human-machine interface) display. Customization options are available including multicolor LEDs.

The Powerkey Pro builds upon the Powerkey, adding EIA-485 keypad addressing to CANopen and J1939 communication. The Powerkey Pro series has a low-profile design and can be flush or front mounted. The range covers a choice of 15-mm or 24-mm interchangeable keys where individual laser-etched key symbol inserts can be replaced from Blink Marine's library. User customized symbol inserts are also available. This allows the possibility for the user to adapt and change the keypad to match the switching task in hand or for the user's keypad spares or production inventory to be maintained at a minimum level, claimed the company. The 24-mm insert size is particularly appropriate for more heavy-duty applications where operators may need to wear protective gloves. Models are available through the Powerkey Pro series with four to twelve keys and as with all these keypads, the number of LEDs assigned to each key can be color-code personalized.

### Software features

Software features across the product range include 'event status transmission' where the keypad can message the communication bus indicating a button press or a button release - allowing digital systems to have similar input acknowledgements as that of the latching position of a mechanical switch. 'Periodic status transmission' indicates the press or release status of each button as a continuous broadcast of messages where the frequency can be adjusted over a range. Also, to ensure the keypad is functioning correctly, 'periodic heartbeat' broadcasts continuously, again with a frequency adjustment range. The keypads have plug-and-play configurability and are supported with programming manuals. The keypads are also available with a special motorsport protocol to enable communication with some motorsport controllers that have limited CAN programming capacity. Whilst the keypad software is more complex the controller software burden can be lighter, explained the company.

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