



Packed with new features, Digital Switching Systems releases it's new line of POWERKEY ULTIMATE Keypads these new features allow for enhanced functionality and flexibility.

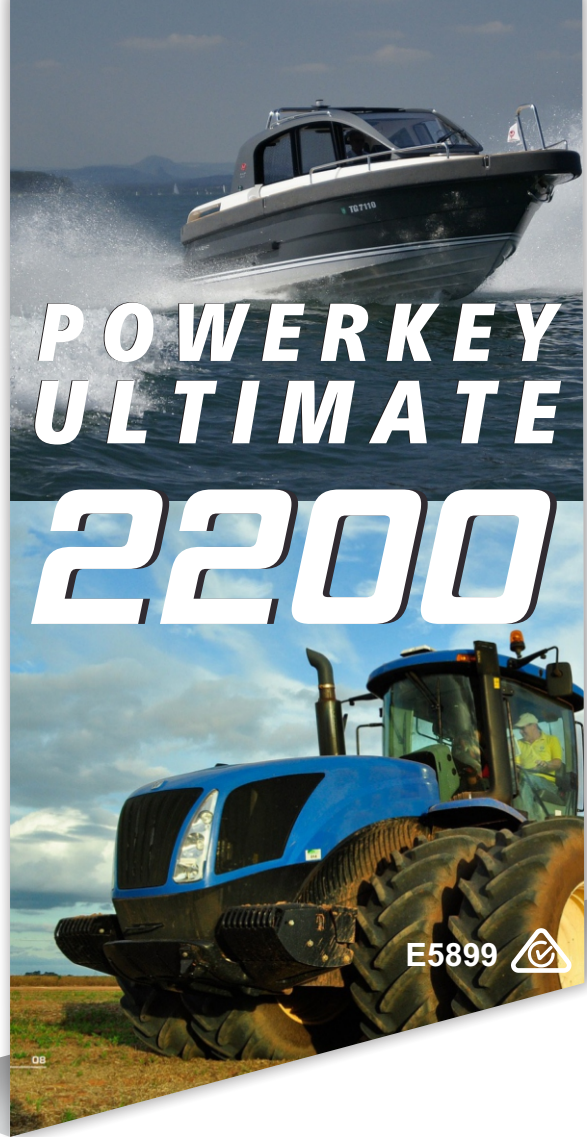
The PKU Series including the PKU2200 model is now available with CANopen and RS232 protocol architecture.

In addition, the PKU series will be available with industry first auxiliary I/O functionality.

Known as ADD-On buttons, each model from the PKU Series will be able to incorporate up to 3 additional external switches. Whether it be a mechanical rocker switch or an emergency stop switch, the POWERKEY ULTIMATE is now more versatile than ever.

**STANDARD FEATURES:**

- Reconfigurable Keys
- Relegendable Buttons
- LED State & Status Configurable
- Multicolour Indicator Rings
- LED Backlit Icons



Icons shown on this keypad are for visual demonstration only.

**FLEXIBLE - SMART - RUGGED**

 CANopen / J1939 / RS-485

[WWW.DIGITALSWITCHING.COM.AU](http://WWW.DIGITALSWITCHING.COM.AU)

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## STANDARD FEATURES

- Vertical or horizontal mount
- Flush-mount or front-mount
- Overlay
- Laser etch
- Customisable inserts
- Pad Print
- ON/OFF, momentary, toggle & scroll
- Over 1000 stock icons to choose from
- Snap dome positive tactile feedback
- Application Programming Interface (API) using development kit

### OPTIONAL

- Up to 3 Add-ON buttons/switch ports

## HARDWARE & SOFTWARE FEATURES

- IP67/NEMA 6 Rating
- Guaranteed to be dust tight & sealed against water immersion to a depth of 1 metre for up to 1 hour.
- UV Protected - UVB 400 Hours: Keypad is highly resistant to deterioration caused by exposure to sunlight.
- Change CAN or RS485 Keypad addresses independently
- Periodic status transmission
- Heartbeat
- Event status transmission
- LED Acknowledgement
- Address claim transmission
- CANopen

## MECHANICAL

Connector	Deutsch DT04-4P, Molex 19418-0004, Micro-C
Switch Life	3 Million Operations
Mechanical Shock	X, Y, Z 50Gs 11ms
Vibration	X, Y, Z 10 - 150Hz 0.15mm amp
Mounting Studs	#10-32 CDS-510 phosphor bronze, electroplated bright tin
Keypad	Silicone rubber with polyurethane hardcoat

## ENVIRONMENTAL

Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Thermal Shock	-40° to +72°C @4°C/Min
Humidity	0 to 98% (No Condensation)
UV Protection / Salt Spray	UVB 400 hours / Per ASTM B117
Chemical Resistance	DEET, Engine Cleaner, Isopropyl Alcohol, Suntan Lotion, Multi-Purpose Cleaner
Ingress Protection Rating	IP67 / NEMA 6

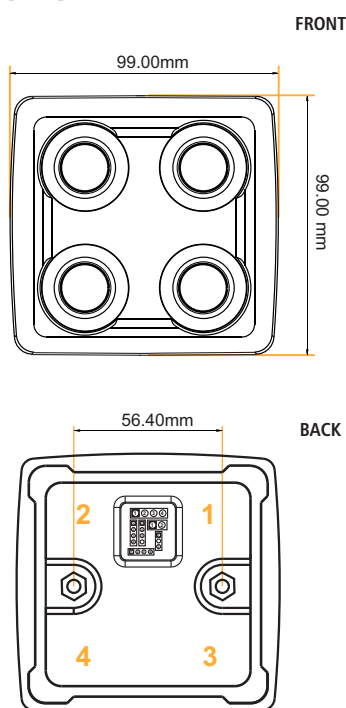
## ELECTRICAL

Supply Voltage	12-24VDC Nominal 8-32VDC
Standby Current	<50mA
Communication Bus	RS-485, CANopen or J1939

## OTHER FEATURES

Size MM	99 x 99 x 22.38
Weight	210.55g

## DIMENSIONS

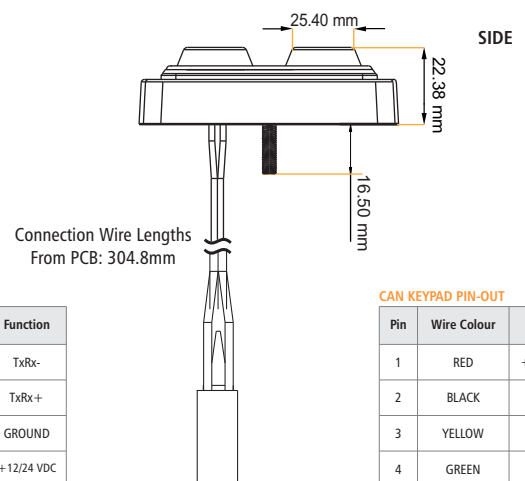


\* Diagrams are NOT to Scale

### MOUNT ON A FLAT SURFACE ONLY

Part Number:	DSS-PKU2200
Nut Size*:	10-32 UNF S/S
Washer Sizes:	M5 Spring Washer S/S, M5 Flat Washer S/S
Torque Maximum:	7 +/- 1 in. lbs

\* DO NOT USE NYLOC NUTS



#### RS485 KEYPAD PIN-OUT

Pin	Wire Colour	Function
1	GREY	TxRx-
2	ORANGE	TxRx+
3	BLACK	GROUND
4	RED	+12/24 VDC

#### CAN KEYPAD PIN-OUT

Pin	Wire Colour	Function
1	RED	+12/24VDC
2	BLACK	GROUND
3	YELLOW	CAN H
4	GREEN	CAN L

## SOFTWARE FEATURES

**CAN and RS485 Keypad Address** - Assign any valid Can (J1939) address to the keypad while also assigning the same or a different RS485 address. Communicate on Either BUS simultaneously.

**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 it's 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 can be configured to send messages to the CAN BUS per button, on a predetermined frequency. This frequency can be set low as every 100 milliseconds. This feature can be used to monitor the continuity of the system and is also helpful in troubleshooting a fault.

**Periodic Heartbeat** - The keypad sends a continuous broadcast of messages indicating it is functioning correctly. The message indicates the press or release status of each button at that instance. The frequency of these messages is preset to one message every 100 millisecond, but can be adjusted as needed.

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

**Extra I/O Ports** - Up to 3 add-on switch ports are available for additional push-button switches, rocker switches, toggle switches or whatever you require. Each port comes with an indicator circuit as well, to power an indicator lamp or LED on the switch. These extra ports appear on the BUS as though they were additional buttons on the keypad.

*This feature is an industry exclusive.*

