



# CL-6000 SERIES RUGGED CAN KEYPADS

## CANlink 6000 CAN Keypad Series Rugged & Highly Configurable

Designed for the Commercial Vehicle and Off-Highway Equipment markets, HED's new CAN Keypad lineup is highly configurable and will stand up to the harshest environments while also delivering durability and an economical price point.

### Fully Configurable

Configure the exact keypad you need for your specific requirements.

- Full spectrum RGB colors
- Customize icon and tri-color indicator LEDs
- Individually controlled and configured buttons and indicators
- Dimmable LED backlit icons and indicators
- Configurable graphics

### Rugged Reliability

Built to withstand severe-duty mobile applications.

- IP67 and IP6K9K - submersible and high pressure wash
- Long life cycle
- Over 30,000 hours Keypad life
- Shock, vibration and chemical resistant
- Built-in switch fault detection
- Sunlight readability options

### Affordable Specs

We included everything you need and nothing you don't - keeping costs down.

- J1939 or CANopen
- Easy installation
- Great tactile feedback
- Integrated connector
- Seven sizes (4-16 buttons)
- Single pole, double throw switching function
- Bar graph capable
- New, lower price point



IP67 + IP6K9K  
sealed



Shock & Vibration  
Resistant



-40C to  
+70C



Long Life  
Cycle



Withstands Caustic  
Chemicals

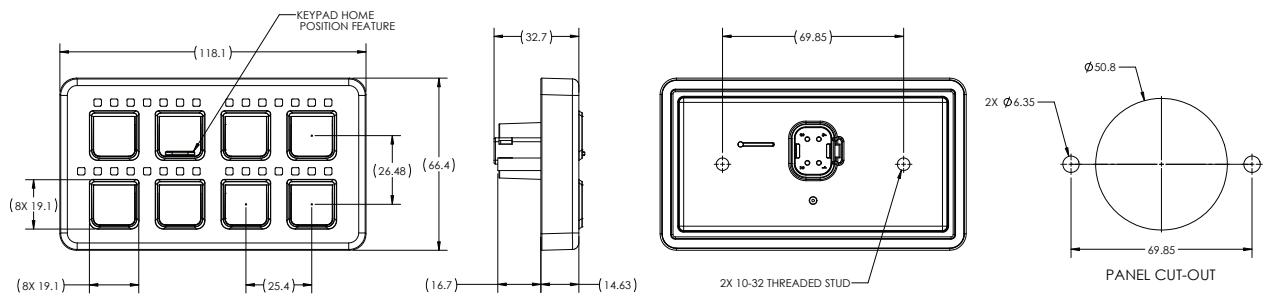
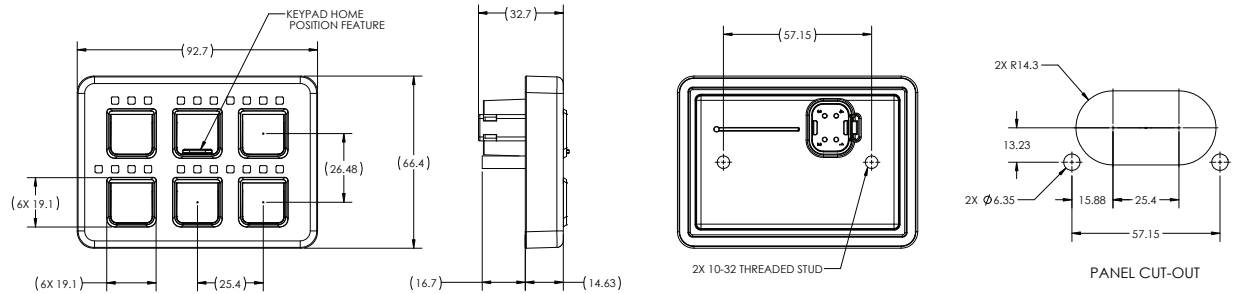
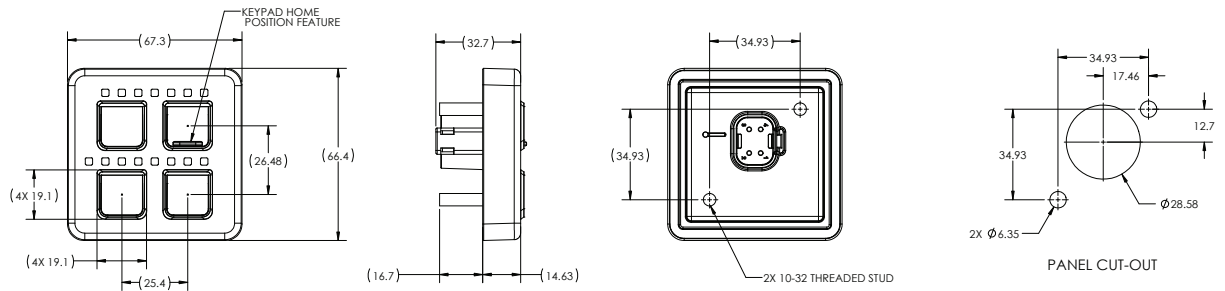
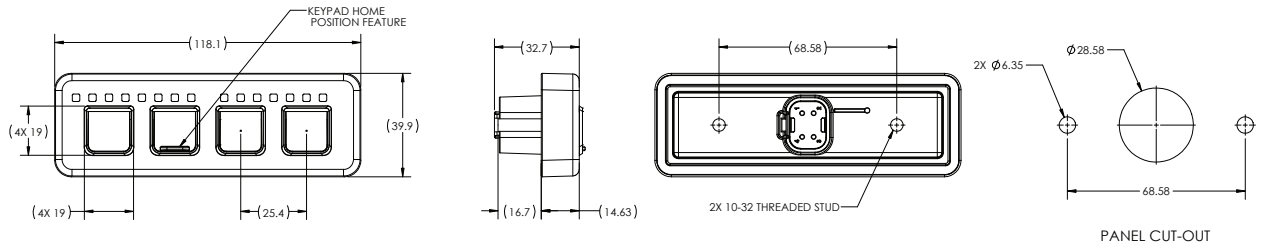
# CL-6000 CAN Keypad Series | Preliminary Specifications

COMPUTING CORE	
<b>Overview</b>	Arm™ Cortex-M7 Microcontroller running at 120 MHz
<b>MCU</b>	S32K310
<b>Flash</b>	512 KB
<b>RAM</b>	112 KB
INTERFACES	
<b>CAN</b>	1x CAN-FD port
OPERATING SYSTEM	
<b>Operating System</b>	FreeRTOS
<b>Boot up Time</b>	150msec (approximate)
SOFTWARE FRAMEWORK & TOOLS	
<b>CAN Protocol</b>	J1939 and CANopen
<b>Software Configurations</b>	Ability to change Node ID in CANopen and J1939 Client
INSTALLATION	
<b>Housing Material</b>	Nylon 6/6 15% glass filled
<b>Dimensions (mm)</b>	See drawings below
<b>Weight (preliminary estimations)</b>	CL-6014 : 0.20 lbs CL-6022 : 0.22 lbs CL-6023 : 0.25 lbs CL-6024 : 0.30 lbs CL-6026 : 0.35 lbs CL-6028 : 0.45 lbs CL-6043 : 0.35 lbs
<b>Connectors</b>	Deutsch DT06-4S (with W4S wedge)
<b>Contacts</b>	Deutsch 0462-201-16141 16AWG Sockets
<b>Plugs</b>	n/a- need wires in all 4 pins
<b>Wire Size</b>	16 AWG
<b>Mounting &amp; Torque</b>	Fastener for #10-32 threaded stud Mounting Torque: Typical: 10-18 in-lbs Max: 22 in-lbs Note: Lock washer should be utilized
PINOUT	
PIN	Description
<b>Pin 1</b>	Battery(+)
<b>Pin 2</b>	Battery(-)
<b>Pin 3</b>	CAN-H
<b>Pin 4</b>	CAN-L

PRODUCT RATINGS			
<b>Operating Voltage</b>	8-32VDC		
<b>Temperature Range</b>	Operating: -40C to +70C Storage: -40C to +85C		
<b>Current</b>	<200mA no LEDs on 9mA/LED multi-color (typical) 3mA/LED single-color R, G or B (typical) Note: 2 LEDs per button backlight R,G,B		
<b>IP Class</b>	IP67, IP6K9K (from front with appropriately assembled mating connector)		
<b>Vibrations</b>	IEC 60068-2-64 Random Vibration Test VII Test: Random Vibe, Freq. Range: 10-2000Hz Level: 57.9m/s <sup>2</sup> per, Figure 11 / Table 12 Duration/axis: 8hrs (32Hrs total exposure)		
<b>Shock</b>	IEC 60068-2-27 Mechanical Shock Level: 500 m/s <sup>2</sup> - 6ms, Shape: Half-sinusoidal # Pulses: 100 per direction/axis (600 total shock pulses) Level: 500 m/s <sup>2</sup> - 11ms, Shape: Half-sinusoidal # Pulses: 4,400 per direction/axis (26,400 total shock pulses)		
<b>Solar</b>	ISO 4892-2		
<b>Salt Fog</b>	ISO 16750-4		
<b>Chemical</b>	ISO 16750-5		
<b>EMC Conformity</b>	Radiated Emissions: ISO 13766-1, EN 13309, ISO 14982 Conducted Emissions: CISPR 25, Section 6.3 (Voltage Method) Radiated Immunity: ISO 11452-2 Conducted Immunity: ISO 11452-4 (BCI method), 20-200MHz at 100mA		
<b>Electrostatic Discharge</b>	ESD: ISO 10605, IEC 61000-4-2		
<b>Conducted Transient Immunity</b>	ISO 7637-2, Pulse 1, 2a, 2b, 3a, 3b		
<b>Starting Profile</b>	ISO 16750-2, Section 4.6.3		
<b>Reverse Polarity</b>	ISO 16750-2, Section 4.7.2.3		
<b>Load Dump</b>	ISO 16750-2, Section 4.6.4, 40V clamped		
COMPLIANCE			
<b>FCC / ISED Compliance</b>	FCC Part 15 (b) and ISED Canada		
<b>EU / CE Compliance</b>	CE 2014/30/EU		
PART NUMBERING			
Size	Base	CAN Protocol Options	
		CANopen	J1939
<b>1x4</b>	CL-6014-100-__	50	30
<b>2x2</b>	CL-6022-100-__	50	30
<b>2x3</b>	CL-6023-100-__	50	30
<b>2x4</b>	CL-6024-100-__	50	30
<b>2x6</b>	CL-6026-100-__	50	30
<b>2x8</b>	CL-6028-100-__	50	30
<b>4x3</b>	CL-6043-100-__	50	30



# CL-6000 CAN Keypad Series | Drawings and Dimensions



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