

L12C0201 Wireless Remote Control - Theremin Toggle Switch Handset for Bolter and Continuous Miner

The L12C0201 Remote Console is an intrinsically safe (Ex ia) radio control handset featuring toggle switches designed for both bolter and continuous miners.

The internal re-chargeable battery provides up to 16 hours of continuous use between re-charge cycles.

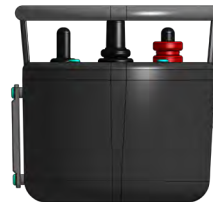
An internal motion sensor provides customisable safety shutdown options - such as console drop, console tilt or sudden impact shock.

Pempek's two-way radio control technology also offers options for collecting and storing machine data while the machine is being controlled.

The data is collected at the end of each shift by the charging station. Data is then available for machine reporting and performance analytics.

This model has been customized specifically for general purpose bolter and continuous miners.

The remote console can be used to quickly switch control between up to four (4) separate roof support machines.



Remote Console Features

- Compact size
- Close to operator body fit, wearable on utility belt
- Super heavy duty switch sets

Charging Connector

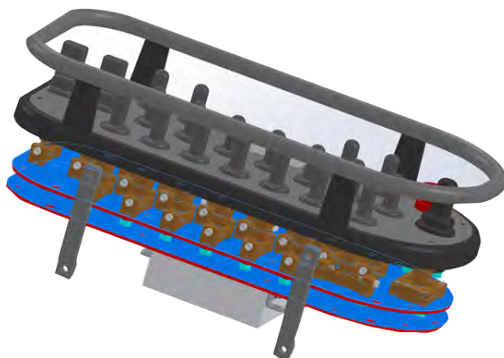
4 Colour Display



Antenna



Super Heavy Duty Switches



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Specifications

- Radio Band: 902 to 928 MHz
- Radio Signal Strength: Less than 100 mW
- Power Source: Internal Battery (rechargeable)
- Switch Type: 3-position Momentary Toggle (1-OFF-2)
- Number of Switches: 12
- Switch Layout: 11 x North-South / 1 x East - West
- Motion Sensor: Drop / Tilt / Impact Detection
- Ambient Temperature: -10°C to +50°C
- Ingress Protection: IP 66 / IP 67

Standards Compliance

- AS/IEC 60079 (Exi)
- AS 4240.1:2009
- AS/IEC 61508 SIL 2

General

Parameter	Value
Type	Intrinsically-safe, battery-powered, radio remote control handset
Keypad	Momentary Toggle Switch (ON-OFF-ON) – 2 Functions per switch Option: Replace one Toggle Switch with latching, push-button STOP
Control Switches	12 Toggle Switches (Option: 11 Toggles and 1 latching push-button STOP)
Display	2.4 Colour Graphics

Radio Data Link

Parameter	Value
Protocol	Pempek K27
Type	Connection-oriented, half-duplex radio data link
Frequency Band	800 MHz Band or 900 MHz Band (depending on model configuration)
Operating Range	100 metres (typical)

Battery

Parameter	Value
Type	Internal, lithium-ion pack
Capacity	5.4 Ampere-hours
Charge Endurance	24 Hours (continuous operation)
Lifespan	600 charge/discharge cycles (approximately 2 years normal operation profile)

Radio Data Link

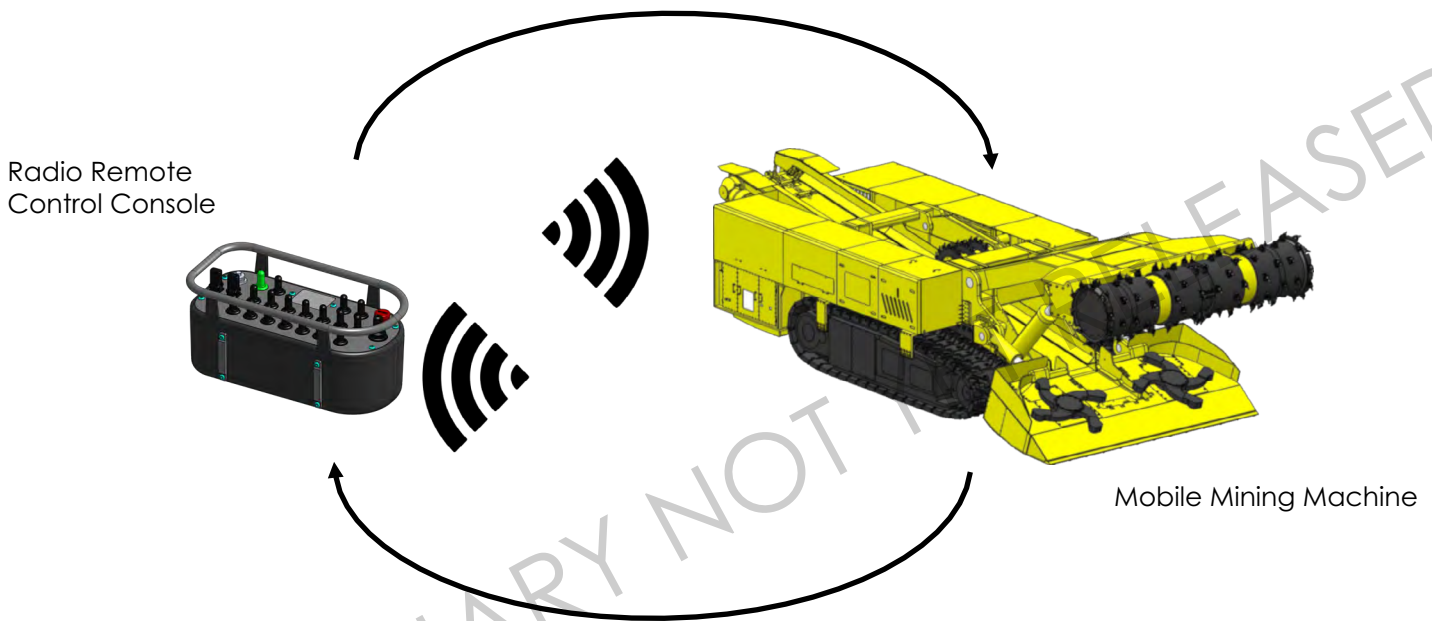
Parameter	Value
Operating Temperature	-10°C to +50°C
Environmental Protection	IP66/67
Mass	3.5 kilograms

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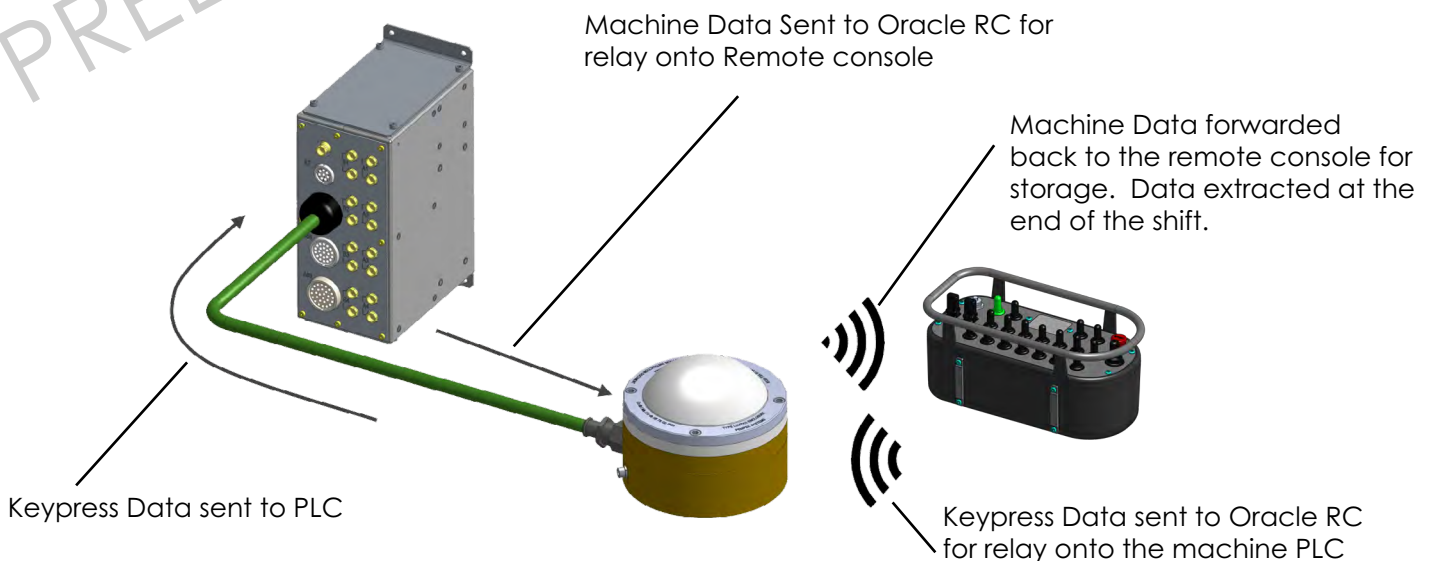
Integration of radio remote control in a machine control system application requires installation of a Pempek "Oracle" radio data transceiver. The Oracle manages 2-way radio data communications with the remote console. The machine control system can then communicate with the Oracle using any one of a range of industry-standard fieldbus options. Fieldbus options include RS-422 (Pempek K27 Protocol), canOPEN, Ethernet Powerlink, Ethernet/IP (CIP) or openSAFETY (Ethernet Powerlink).

Pempek Remote Control – Principle of operation

Remote console sends switch information to control machine



Machine sends data logging and display information to remote console

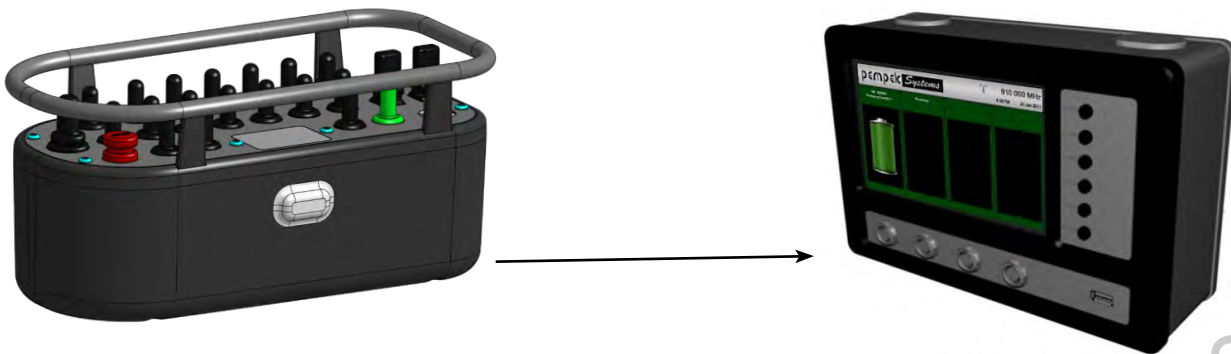


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L0SS0101 Charging Station

The Remote Console may be charged using an L0SS Remote Console Charging station (in the non-hazardous zone only). Connection in hazardous zones using the umbilical cord is only permitted using a Pempek-supplied charger which is still under development.

Connect the Remote Console to the L0SS Remote Console Charger via the cable provided with the charger. Charger and remote must be in the non-hazardous zone.



Connect via L0SS Charging Cable

PRELIMINARY NOT YET RELEASED