

L0MT0803 Oracle RC Flameproof Ex d Radio Control Transceiver 915MHz 5VDC Supply

The L0MT0803 Oracle RC is a self-contained, flameproof (Ex d) radio control data transceiver supporting radio remote control of mobile mining machinery. The module communicates with a variety of Pempek manufactured handheld remote control consoles via a 2-way radio data stream (based on the 915 MHz band).

A single cable entry to the product supplies power and data communications. A range of field bus options are support - including RS-422, Ethernet and Ethernet/IP. A host PLC communicates with the Oracle via field bus to receive key-press commands from the remote handset, and send machine status and data logging information back to the handset.

The PLC can also configure the operating channel.

The L0MT0803 model is only suitable for 5VDC supply.

Self-contained, certified, flameproof (Ex d) housing

No external antenna cable required

Antenna is built into the housing of the product

Flexible power supply options (PoE or 24VDC)

Single gland entry for power and data cable

Built in radio control data integrity protection

Supports PLC safety functions such as handset model verification and handset serial number pairing

Simple, easy way to add remote control to any flameproof application

Easy maintenance

Easy configuration



Radio Band: 902 to 928 MHz

Radio Signal Strength: Less than 100 mW

Power Supply: 5VDC

Ambient Temperature: -10°C to +60°C

Ingress Protection: IP 65

Field Bus: RS-422 / Ethernet (Ethernet/IP Available, Contact Sales Representative) Default Firmware: POTE0001 (RS-422 / Ethernet)

Material

Enclosure is free machining brass.
Enclosure retainer is stainless steel.
Radome is Teflon.

Fasteners: M6 x 50mm x 4

Mass: 7.5kg (16.5lb)

Typical Application

- Underground mining vehicles
- Continuous Miners
- Bolter Miners
- Road Headers
- Longwall Shearers
- Feeder Breakers
- Mobile Bolters
- Shuttle Cars

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Electrical Characteristics

Supply	
Supply	24VDC
Max Power consumption	5W

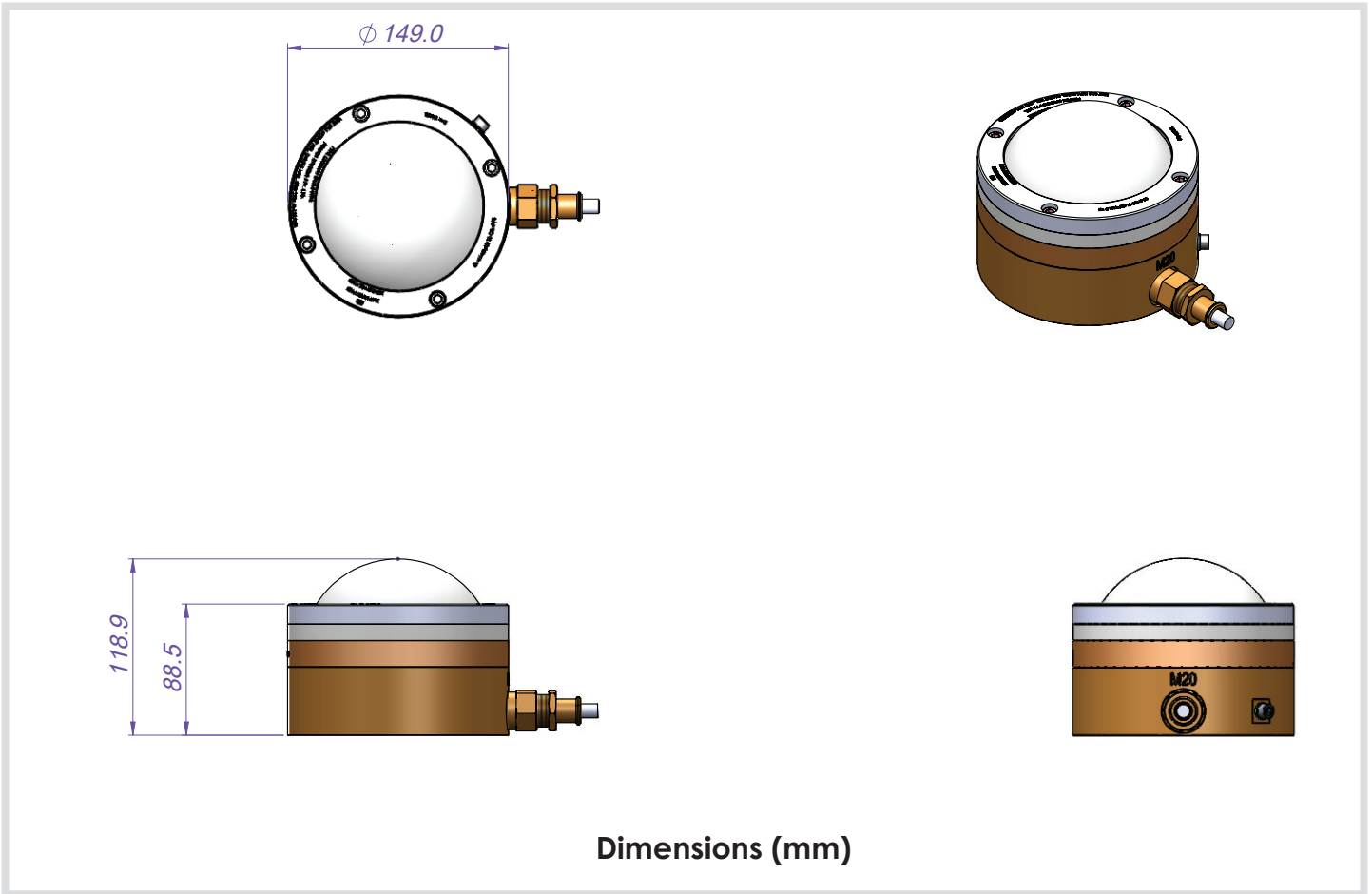
Radio Module	
Frequency	UHF ^{902-928MHz PLL} SYNTHESIZED
Power	100mW
Channels	26
Modulation	Half Duplex NRZ
Range ^{MIN}	100 metres "Line of Sight"
Range ^{MAX}	500 metres "Line of Sight"
Data Integrity	CCITT CRC
Antenna	Internal Passive Loop Antenna
Classification	Transceiver
Deviation	+20KHz
Receive Sensitivity	-107dBm @ 40kbps
Bit Rate	2.5Kbits .. 80Kbits ^{40Kbits Default}

Communications	
Baud	115Kbs / 1.5Mbs RS-422
Format	8N1
CRC	CCITT 16-bit
Frame	Packet Oriented, Bit Masks
Throughput	T.B.A.

Environmental	
Operating Temperature	-20°C + 40°C
Temperature Class	T6
Ingress Protection	IP65

Approvals	
IEC ^{Australia}	IECEX TSA 07.0016X ^{Group I/IB}
MSHA ^{USA}	18-XPA090007-0
Ingress Protection	IP65

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Wiring Specification

Connector 19mm Ex id Gland		
PIN	Description	Signal
1	24VDC Supply	24VDC Supply
2	24VDC Supply Return	24VDC Supply Return
3	RS-422 TX+	Communications
4	RS-422 TX-	Communications
5	RS-422 RX+	Communications
6	RS-422 RX-	Communications