

L0MT1201 Oracle RC Flameproof Ex d Radio Control Transceiver 915MHz MSHA

The L0MT1201 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 L0MT1201 model is intended for MSHA-approved (USA) applications only.

This L0MT1201 model supports data/power cable with O.D. range of 6.6 to 9.5mm. (Gland P/N: H0MT2801)

A special MSHA-approved cable gland configuration is required - contact your sales representative for details.

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: 24VDC

Ambient Temperature: -10°C to +60°C

Ingress Protection: IP 65

Default Cable Gland: 6.6 to 9.5mm O.D.

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

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 | |
|------------------------|-------|
| Voltage | 24VDC |
| Wattage ^{MIN} | 1.2W |
| Wattage ^{MAX} | 2.5W |

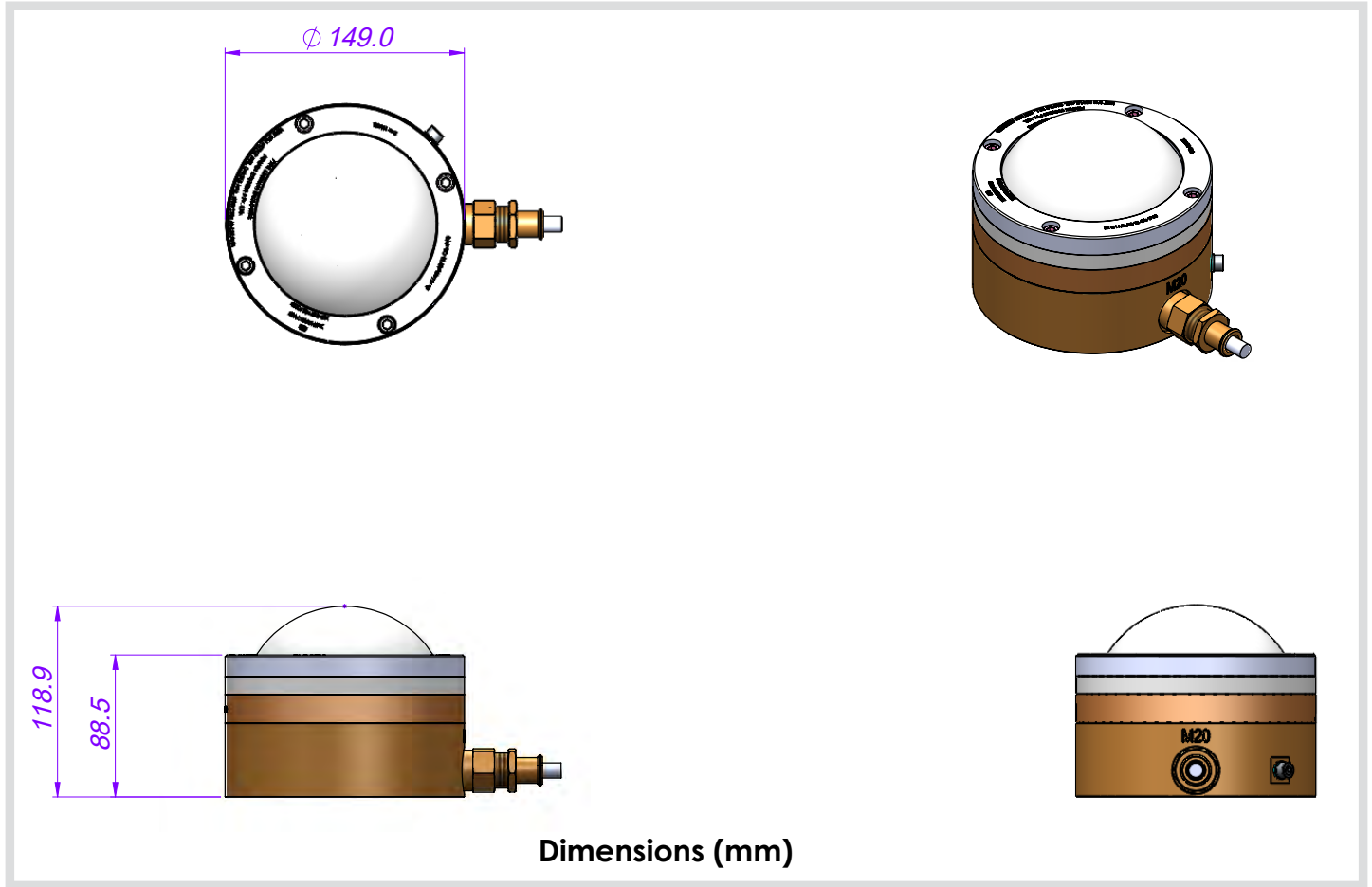
| Radio Module | |
|----------------------|---|
| Supply | 5.0VDC @ 115mA / 3.3VDC @ 220mA |
| Frequency | UHF 2.4GHz / 5.0GHz |
| Power | 100mW |
| Channels | 32 (250KHz Spacing) / 16 (3.0MHz Spacing) |
| Modulation | Frequency Hopping Spread Spectrum |
| Range ^{MIN} | 100 metres "Line of Sight" |
| Range ^{MAX} | 500 metres "Line of Sight" |
| Data Integrity | CCITT CRC (16 Bit) |
| Bandwidth | 250KHz / 3.0MHz @ 115Kbs / 1.5Mbs |
| Antenna | Internal Passive Loop Antenna |
| Classification | Transceiver |

| 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 | Minus 10°C to +55°C |
| IP Rating | IP67 |
| Humidity | T.B.A. |
| MTBF | 10,000 hours* |

| Certification | |
|---------------|------|
| USA | MSHA |

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Wiring Specification

| PIN | Connector 19mm Ex id Gland 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 |