Datasheet

Pempek
made for mining

L0MT0501 Oracle Data Flameproof Ex d Wi-Fi Oracle Access Point MSHA Cable Gland

The L0MT0501 model Wi-Fi Oracle Data is an industrial, flameproof (Ex d) Wi-Fi Data Transceiver Module designed for reliable, high-speed data access in underground mining applications.

The L0MT0501 model is intended for MSHA-approved (USA) applications only.

This L0MT0501 model supports data and power cable with O.D. range of 6.6 to 9.5mm.
Pempek Gland Part Number: H0MT2801

Deployment-ready Wi-Fi solution for underground mining

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

Simple way to add Wi-Fi connectivity

Cost effective (one product solution)

Easy maintenance

Easy configuration

Heavy Duty Enclosure: Self-contained, certified, flameproof (Ex d) housing, stainless steel engraved facia

Wi-Fi Compliance: IEEE 802.11 b/g (2.4GHz)

Power Supply: 24VDC or PoE (IEEE 802.3af) (5W Max)

Ambient Temperature: -10°C to +60$^{\circ C}$

Ingress Protection: IP65

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

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
- Longwall face equipment
- Telemetry relay networks
- Mesh networks

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Electrical Characteristics

Supply	
Voltage	24VDC
Wattage MIN	1.2W
Wattage MAX	2.5W

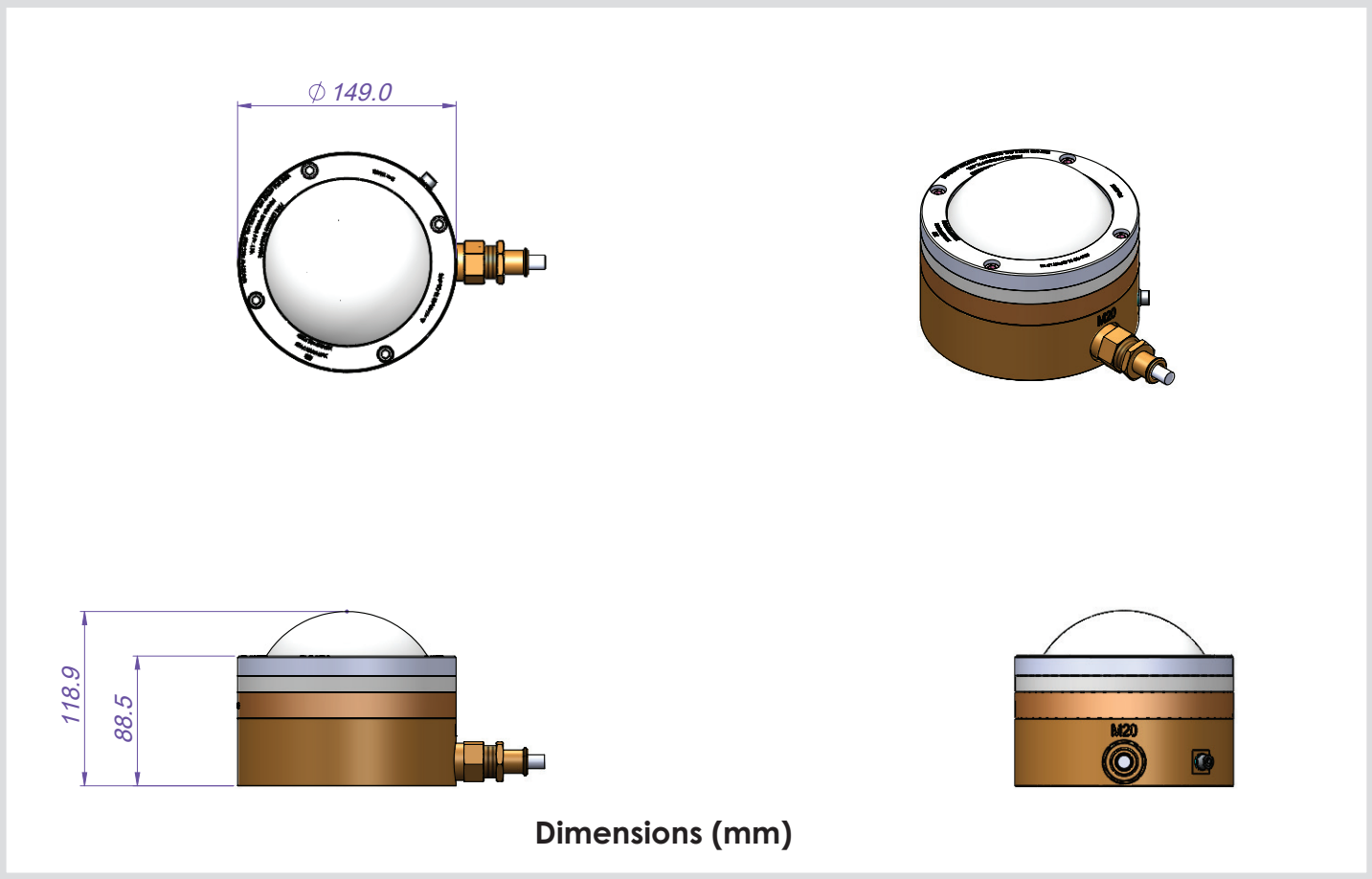| Radio Module	
Supply	5.0VDC @ 115mA / 3.3VDC @ 220mA
Frequency	UHF 2.4GHz / 5.0GHz
Power	100mW
Channels	32 (250KHz Spacing) / 16 (3.0MHz Spacing)
Modulation	Frequency Hopping Spread Spectrum
Range MIN	100 metres "Line of Sight"
Range MAX	500 metres "Line of Sight"
Data Integrity	CCITT CRC (16 Bit)
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

*Figure cited on usage rate equaling 16 hours per day, 6 days per week, 52 weeks per year where failures are due to manufacturing.

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Ø 149.0

118.9

88.5

Dimensions (mm)

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