

L12D0101 I.S. Oracle Transceiver IECEx TSA 23.0001X with Marking Ex ib I MB

Type L12D Ex ib I Mb Machine Mounted Transceiver is an industrialised radio control interface module designed for the rigours of underground mobile mining machinery.

Designed to exacting requirements of IEC 60079.0 and IEC 60079.11 and MSHA CFR 30, this Ex i Transceiver Module is designed for world-wide explosive atmosphere regulatory approval allowing it to be installed into any underground environment after certification assessment.

Designed to interface with Pempek Systems L12E barrier to integrate with non-I.S. systems using RS422 communication interface, the Type L12D** I.S Oracle

Transceiver can be integrated into almost any control system with relative ease.

It consists of a radio transceiver which can operate in various ISM frequency bands, depending on the country of use and application. The L12D** comes in a number of custom variations which only differ in operating frequency which include 866, 868 and 915 MHz bands but can be also easily reprogrammed to other frequencies.



- Highly ruggedised, industrial design using all industrial grade components.
- A nominal operating temperature range spanning -20°C..+40°C class with an IP66/67 ingress protection rating.
- IECEx i approval and pending in other parts of the world.
- Two-way communication empowers your operators and provides a means for remote data-logging.
- Simplifies machine installation and promotes line-of-sight operation.

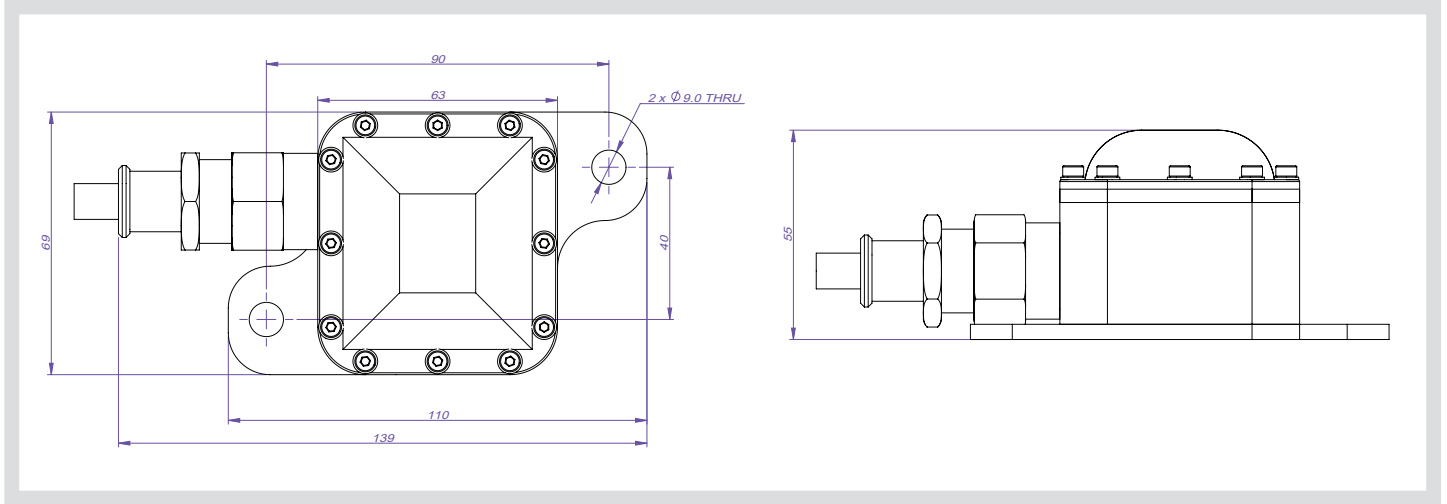
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Specifications

Power		Electronics	
Ui	3.5-5.5V	Interfaces	RS-422
In	< 50mA (receive)	Mechanical	
In	< 150mA (transmit)	Material	Brass / Teflon / Stainless Steel
Li	< 0.3uH	Width	110mm
Ci	< 16uF	Height	55mm
Max Power consumption	1W	Depth	69mm
		Mass	750g
Radio		Environmental	
Frequency	UHF 865.025-866.975MHz PLL SYNTHESIZED UHF 868.125-869.925MHz PLL SYNTHESIZED UHF 902-928MHz PLL SYNTHESIZED	Operating Temperature	-20°C..+40°C
Deviation	+20KHz	Ingress Protection	IP66/67
Transmit Power	+18dBm ±2	Approvals	
Receive Sensitivity	-107dBm @ 40kbps	IEC Australia	IECEx TSA 23.0001X Group I
Bit Rate	2.5Kbits .. 80Kbits 40Kbits Default	MA China	Pending
Modulation	Half Duplex NRZ	MSHA USA	Pending
Range MIN	100m Line of Sight	ATEX Europe	Pending
Range MAX	500m Line of Sight	MASC RSA	M/23-8592X
Data Integrity	CCITT CRC		
Channel Spacing	1MHz		
Antenna	Internal Passive		
Classification	Transceiver		

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Dimensions (mm)



Wiring

	B12J3 Board	External Wiring
Item	PIN	LABEL
1	J1-1	+ VIS
2	J1-2	OVIS
3	J1-3	RS422-Rx+
4	J1-4	RS422-Rx-
5	J1-5	RS422-Tx+
6	J1-6	RS422-Tx-
7	J1-7	OVIS

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