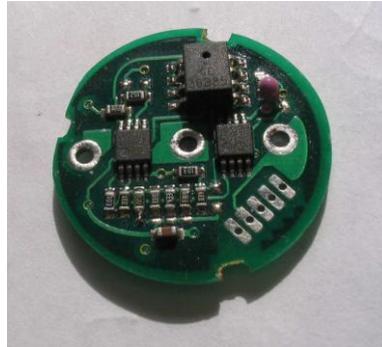


TPMS sensor PCB BW1d



Latest development of the Brightwater TPMS motorsport sensor. Designed to transmit reliable and accurate tyre pressure data in an extreme operating environment.

This new improved design is a further development of the BW1c sensor,. The BW1d sensor has reduced current consumption (to BW1c), RS232 port (for PC setup), and increased memory. This allows for improved sensor diagnostics and service history storage, and additional program functionality.

Transmitted data is encrypted and carries a unique serial number ensuring reliable error free data transmission. Each sensor is individually calibrated to a traceable standard, resulting in very high accuracy across the wide operating temperature range (155°C).

Pressure measuring range	0..2.5bar* (0..38psi)*
Measuring resolution	5mbar (0.075psi)
Pressure accuracy	+/- 0.1psi at 35psi abs
Temperature measuring range	10..155°C
Resolution	1°C
Housing	none
Weight	7g (PCB & Battery)
Transmit rate	Adaptive (see text) up to 2Hz
Battery	High-temp Lithium Thionyl cell
Battery Life	Up to 1,500,000 Transmissions
Radio Frequency	433.92MHz
RF Emission category	MPT1340, ETS 300-220
Typical TX range	20m (free space)

Operating modes (Standard Configuration)

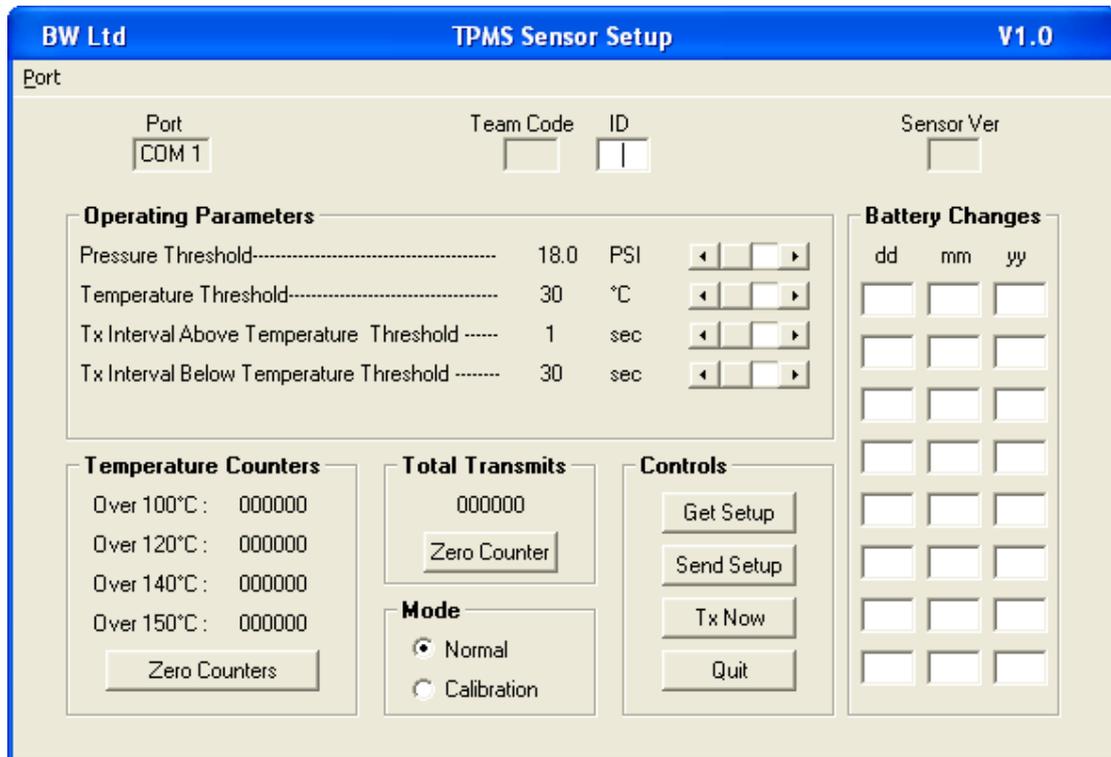
- Active mode - When pressure is above 0.17bar (2.5psi) and temperature is above active threshold (typically 30°C). Transmit interval 1sec.
- Power save mode - When pressure is above 0.17bar (2.5psi) and temperature is below active threshold. Transmit interval 30sec. If pressure change ≥ 25 mbar additional transmissions made.
- Sleep Mode - If pressure is below 0.17bar (2.5psi) the sensor makes no transmissions.
- Expected battery life:>1,500,000 transmissions (approx. 500hrs active, 6,000hrs power save, 15,000hrs sleep mode). Subject to high temperature operating limits

Tyre Monitoring System TMS

Comparison BW1c & BW1d Sensor

	BW1C	BW1D
Analogue Current	4.3mA	1.6mA
Transmit Current (for same RF output)	7.4mA	6.6mA
Program Memory (bytes)	1024	2048
Eeprom (bytes)	128	256
Sleep current	<1uA	<1uA
RS232 Programmable (operating parameters)	no	yes
Programmable (operating parameters)	no	yes
Non-volatile Total Transmit counter	no	yes
Non-volatile Over-temperature counters	no	yes
Non-volatile Date records	no	yes
Tx always mode	no	yes
Battery Voltage monitoring (while transmitting)	yes	yes

BW1d Sensor Setup software.



Provides local PC configuration of BW1d transmit strategy, sensor serial number and reading and resets of temperature flags and transmit counters. Also allows battery change history to be read and updated (held in non-volatile memory).

Ordering Information: **Order Code** **Description**
 301200201 BW1d (iss 2)

Further information: Contact us to discuss bespoke sensor designs