2D DATA RECORDING
2D Debus & Diebold Messysteme GmbH
Bannwaldallee 60 • 76185 Karlsruhe
Tel: +49 (0) 721 944 85-0 • E-Mail: support@2d-datarecording.com

BC-TMS_REC_V3-201 — Telemetry receiver tire monitoring system

Function

The 2D Tire Monitoring System (TMS) consist of battery powered wireless sensors fitted to wheel rims which send data over a RF link to a compact receiver (this module!) placed within the vehicle.

The receiver sends the values via CAN line to a connected 2D datalogger.

Features

- Real time transmission of temperature, pressure, status and RSSI on 433.92 MHz using FSK (frequency shift keying)
- Usable for measurement on bike and car by using different wheel unit sensors
- Easy CAN identifier setup and configurable by 2D software WinIt
- Compact, durably, lightweight modular concept

Technical specifications

Electrical characteristics		
Power supply	V DC	8-18
Current consumption @12V	mA	30
RF Frequency	MHz	433.92
Emission RF	Manchester	FSK
Sensitivity	dBm	-100

CAN interface		
Possible baud rates	kBaud	100/125/250/500/1000
CAN identifiers		
CAN 2.0A (standard)	Bit	11
CAN 2.0B (on request)	Bit	29
CAN send IDs	IDs	2
CAN frame		
Date rate	Hz/ID	1
Channel allocation	Wheels/ID	2
Number of CAN IDs	IDs	2
Sum data rate	Samples/s	16

Mechanical characteristics		
Weight	g	35
Dimensions	mm³	45x30x11
Housing material		Plastic
RF antenna length	mm	173
CAN Cable		
Type		Raychem DR-25
Wire cross		4x AWG24
Length	mm	170
Connector		Binder 712, 5PM

Environmental		
Operating temperature	°C	-10 to +75
Humidity	%	5-95
Sealing class	IP	67
Vibration resistance		
Shock	G	40
	ms	10
Vibration tested at	G	12
	Hz	1000

Ordering information
BC-TMS_V3-201

20.05.2025/JDC

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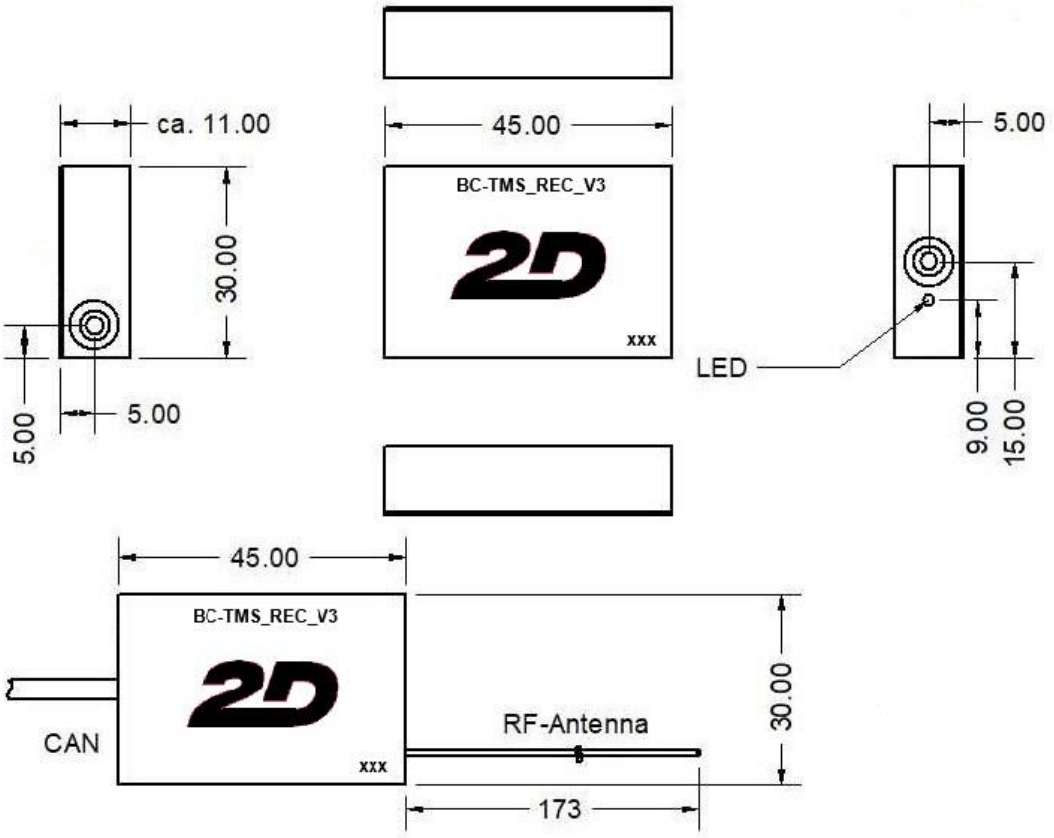
CAN frame layout

Mnemonic signification			Resolution
Temp_	=	Temperature -20°C to +125°C	1°C/bit
Pres_	=	Pressure 0 to 3.5 bar (abs. ambient pressure)	13.7mbar/bit
STAT_	=	Status	
RSSI_	=	**R**eceived **S**ignal **S**trength **I**dentification (RSSI)	

Identifier	Byte 0	Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
0x600h	RSSI _FL	STAT_FL	Temp_Fl	Pres_FL	RSSI _FR	STAT _FR	Temp _FR	Pres_FR
0x604h	RSSI _RL	STAT_RL	Temp_RL	Pres_RL	RSSI _RR	STAT _RR	Temp _RR	Pres_RR

Dimensions

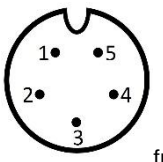


Connector layout

Connector type

CAN line, Binder 712 5PM

Pin	Name	Description	Color
1	CAN H	CAN High	white
2	CAN L	CAN Low	green
3	GND	Ground	black
4	n.c.	Not connected	
5	Vext	Power In (8-18V)	red



front view