2 Technical data

2.1 FM4

The FM4 is a real-time telemetry system used to get always actual data from the car out on the track. It fits most of the Bosch Motorsport management systems and is designed to transmit many various car and engine data due to its high speed data rate.

In typical applications data are sent from the car to the receiving station. With the optional software for bidirectional transmission, data can be sent in both directions.

Mechanical design	
Size (mm)	163 x 70 x 28
Weight	380 g
Dust and waterproof housing	
Car antenna compatible to existing Bosch telemetry systems	

Conditions for use	
Vibration	6 g/20 Hz … 2 kHz
Temperature range	0 … 60°C
Max. power consumption	6 W at 14 V
International standard	I-ETS 300 220 ETS 300 113 FCC

Connector	
RF	BNC female
Power / data	CGK SOT 8N35 PN

Pinning		
Pin	Function	Comment
1	Supply voltage V+	10 - 15 V, up to 0,8 A
2	Power GND	must be the same as signal- and RF-ground
3	RxData	by radio received data
4	TxData	data to be transmitted
5	Progmode	progmode (refer to chapter 4: "Configuration") open: normal operation GND: Progmode
6	CTS	RF carrier detect output

Electronic design	
Half duplex radio modem (bi-directional)	
Internal data buffer and protocol management	
Transmission power	0,1 … 1 W
Frequency range	430 … 470 MHz (hardware adjustable)
Receiver sensitivity	-116 dbm error detection and forward error correction (FEC)
Data rate	max. 19.200 bps
Required power supply	10 … 18 V
Max. current	< 0,8 A