

RPM8000-OBD2 v4

RPM and SPEED measurement in cars
via CAN "On-Board Diagnostics" interface
with analog and pulse outputs

NEW: Now with galvanic isolated powering from board net!



- No sensor installation required
- Direct reading of RPM and SPEED
- 16-8-4-2 or 1 pulse / engine revolutions
- 16 Hz / km/h
- Analogue and pulse output
- Display of RPM and SPEED
- Max. 10000 RPM and 250 km/h
- Galvanic ISO from vehicle ground!

RPM8000-OBD2 offers a discerning solution for automotive RPM measurement without an additional sensor. The information will read direct from the CAN-OB2- interface (**ISO 15765 CAN, 11/29Bit ID, 250/500 kBaud**) . The instrument is simply connected to the standard OBD2 connector and the RPM or SPEED is shown directly on the LCD display. You even have the choice to output the data as an analog voltage (0-5V) or as a digital pulse sequence (TTL).

Technical details:

Input source	CAN-OB2 Interface (ISO 15765 CAN BUS) CAN 11 ident 250 KB, CAN 11 ident 500 KB CAN 29 ident 250 KB, CAN 29 ident 500 KB Update rate 10-20Hz (typical) or better RPM8000OB2 unit scan up to 400Hz update rate, if supported from the car Engine control unit (ECU)
Supply voltage	via CAN-OB2 connector or 8-30 VDC
Current consumption	200 mA at 12V
RPM resolution:	0.25 RPM
RPM Analog output:	0-5V, 0.5 V per 1000 RPM, max. 10000 RPM max. delay 50 ms (car timeout), min. delay 4ms, typ. delay 10 ms accuracy 0.5 % (tested with calibrator) load > 1k ohm
RPM Digital output:	16 (1:1) per engine revolutions max. 10000 RPM RPM frequency divider 1:1, 1:2, 1:4, 1:8 or 1:16 DIV 1:1 = 2666,66 Hz at 10000 RPM = 16pulse/rev. DIV 1:2 = 1333,33 Hz at 10000 RPM = 8 pulse/rev. DIV 1:4 = 666,66 Hz at 10000 RPM = 4 pulse/rev. DIV 1:8 = 333,33 Hz at 10000 RPM = 2 pulse/rev. DIV 1:16 = 166,66 Hz at 10000 RPM = 1 pulse/rev. TTL level output impedance 130 ohm accuracy 0.5 % (tested with calibrator) max. delay 50 ms (car timeout), min. delay 4ms, typ. delay 10 ms jitter 0.1 – 1 %
SPEED resolution:	1 km/h
SPEED Analog output:	0-5V, 0.02 V per km/h, max. 250Hz max. delay 50 ms (car timeout), min. delay 4ms, typ. delay 10 ms accuracy 0.5 % (tested with calibrator) load > 1k ohm
SPEED Digital output:	16Hz/km/h max. 250km/h = 4000Hz TTL level output impedance 130 ohm accuracy 0.5 % (tested with calibrator) max. delay 50 ms (car timeout), min. delay 3ms, typ. delay 10 ms jitter 0.1 – 1 %
Synchronization time	~ 2 seconds
Displays:	graphic display: Divider, numeric and graphic RPM and SPEED LED green Power ON LED green/red RPM supported over CAN YES / NO (green/red) LED green/red SPEED supported over CAN YES / NO (green/red)
Rotary switch:	frequency divider for RPM 1:1, 1:2, 1:4, 1:8 or 1:16 Rotary switch can switch-OFF the SPEED function (only RPM measurement possible)

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The RPM measuring range of the analog output is 0.5 Volt per 1000 RPM. The standard TTL frequency output of 16 pulse per engine revolution can scaled with a frequency divider of 1:1, 1:2, 1:4, 1:8 or 1:16.

The SPEED measuring range of the analog output is 0.020V per km/h (0-5V = 0-250km/h) The TTL frequency output is 16Hz/km/h max. 250km/h.

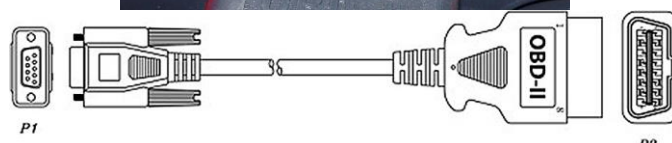
Connectors:

BNC OUT for analog RPM and SPEED

BNC OUT for TTL frequency RPM and SPEED

OB2 Plug for INPUT with 1.8m cable

Pin connection: 5 Signal Ground
OB2 PLUG 6 CAN-High (J-2284)
14 CAN-Low (J-2284)
16 Battery power (+)



PIN OUT	
P1	P2
3	6 CAN High (J-2284)
5	14 CAN Low (J-2284)
6	10 Not connected
7	2 Not connected
1	5 Signal Ground
2	4 Not connected
4	7 Not connected
8	15 Not connected
9	16 Battery Power

Pin connection from 1.8m cable OB2/9p-SUB-D

Dimensions:	150 x 100 x 30mm
Weight:	0.5kg without connection cable
Material:	anodized aluminum
Operating temperature:	-20°C to +70°C
Storage temperature:	-30 to +80°C
Humidity:	20 – 80%
Vibrations:	5g
Shock:	in all directions 100 g



RPM8000OB2 – in transport case

Technical Data are subject to change without notice!

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