

R&D 50Hz GPS CAN Sensor

Overview

This standalone CAN based GPS/GNSS High Position Update Rate sensor outputs date and time, latitude, longitude, altitude, Course Over Ground and speed at up to 50Hz although 40Hz gives better positional performance.

The configurable CAN interface allows the unit to attach to almost any CAN bus. It features either a 6 pin IP67 connector or a 300mm pig tail connector and a SMA for an external active or passive GPS/GNSS antenna.

The choice of 6 pin IP67 connector or 300mm pig tail, wide ranging input voltage and the small size and mass of the unit allows easy interface into most vehicles.

Position accuracy	CEP (50%)	2.5	m
Acquisition	Cold starts	29	s
	Aided starts	28	s
	Reacquisition	1	s
Number of concurrent GNSS	GPS/QZSS L1 C/A + SBAS		
Position/COG/Speed Update Rate	1 / 2 / 4 / 5 / 10 / 20 / 25 / 40(default) / 50 Hz		
Environment	Operating temperature	-20 to +80	°C
	Dust and Water Ingress	IP6X	
Mechanical Shock (Max Values)	Duration < 200µs	10000	g
	Duration < 1ms	2000	g
	Free Fall Distance	1.8	m

Mass		30	grams
Dimensions	Height x Width x Length	22x40x45	mm

CAN [1]	Baud Rates	1000, 500, 250	kbps
	Address Range[2]	1 (0x01) to 2042 (0x7FA). Default = 0x31E	decimal (Hex)

Power	Voltage Range	9-16	V
	Current (Sleep)	110 (10mA)	mA @ 12V
Input Pins	Voltage Range	2-28	V

Cable Variant (standard is 300mm in length)		
AWG	26	
Wire Spec	Raychem 55	
Cable Jacket	TE Flame Retardant -75 to +150°C	
OD	3.1mm +0.1mm	
Connector Variant		
On Unit	B06B-JWPF-SK-R	
Mating [7]	06R-JWPF-VSLE-D	
Crimp	SWPR-001T-P025	
Pin Outs		
Wire Colour	Pin No.	Function
Brown	1	Not Used
Red	2	Supply Voltage
Black	3	Ground
Green	4	CAN High
White	5	CAN Low
Yellow	6	Factory Reset [8]

[1] The default settings are 1000kbps and start address 0x31E, the unit has no CAN termination.

[2] The unit uses 4 CAN address which are in consecutive order from address that the unit is set to.

[3] This connector is not supplied with the unit.

[4] By default this mode is switched off, if it is enabled connect this pin to 2.5v to supply voltage to wake unit.

[5] To reset the unit to factory settings pull this from 2.5v to supply voltage on unit power up.