

A supplier of stature!

TachoPulse

Secondary signal source for tachographs





Basic description:

TachoPULSE is an ideal equipment for vehicles requiring a second source of motion to stay in line with the new legislation introduced on 1st October 2012, no. 1266/2009. TachoPULSE uses a GPS signal to determine the vehicle speed and fits easily into any vehicle, connecting through a cable to the back of the tachograph's vehicle speed. This equipment will generate a frequency and CAN messages proportional with the speed until the speed is higher than 5 km/h. The equipment's integration is easy as 6 wires shall be used only, either connecting trough CAN or simple frequency impulse output. This unit has an internal antenna as well the high sensitivity receiver. It's receiver it uses double constellation receiver GPS and GLONASS, capable of producing quality signals even in heavily populated urban areas. The equipment's integration is easy as 6 wires shall be used only. This unit has an internal antenna as much mean and internal antenna as well the high sensitivity receiver.

Deliverables

In the package:

- TachoPULSE equipment
- 6 pole connector

Dimensions:

- Sizes: 92mm x 58mm x 23mm
- Weight: 75g
- 6 pin connector: Eurocontact or compatible detachable with 3.5mm pitch



Basic characteristics

- GPS characteristics:
 - Quectel L70 (SBAS WAAS, EGNOS, MSAS, GAGAN) 66 channel receiver dual constellation receiver for GLONASS and GPS
 - \circ Sensibility of -163 dBm
- Power supply: 10 ÷ 29V;
- Frequency output, Open-Drain 0 ÷ Vbatt
- CAN-interface with messages SAEJ1939 SPN904 "Front axle speed"
- LED for indicating equipment's state

Electrical characteristics:

Values	Min.	Тур.	Max.	MU				
Power supply								
Supply voltage (recommended working condition) V_{batt}	9	-	29	V				
Current consumption								
V _{BATT} =12V (GPS fixed, IGNITION OFF)	-	55	55	mA				
V _{BATT} =12V (GPS fixed, IGNITION ON, v <= 5km/h)	-	58	60	mA				
V _{BATT} =12V (GPS fixed, IGNITION ON, v >= 5km/h)	-	53	65	mA				
Frequency output								
Output resistance; R _{pull-up}	-	1,5	-	kOhm				
Limiting current to ground, OC OVP and thermal overload								
protected	-	1	-	А				
Logic level L	0	300	550	mV				
Logic level H	Vbatt- 1*	-	Vbatt	v				
<i>Freq. OUT</i> pin state in deactivated state (v <= 5km/h)	-	Н	-	Logic				
Threshold speed for activating the <i>Freq. OUT</i> pin	-	5	-	km/h				
Number of impulses related to 1 km (<i>K factor</i>)	-	8000	-					
Frequency value related to the vehicle speed**	2.221	2.222	2.223	Hz				
Period while the frequency is maintained and the GPS signal has been lost***	-	120	-	Sec.				
CAN output								
CAN load resistance (externally must be in the tachograph)	-	120	-	Ohm				
Message compliance:	SAEJ1939 SPN904 Front axle speed							

Notes:

- * Must be computed by calculating the loading resistance
- ** F[Hz] = v[km/h] x 2.222



Environmental conditions:

- Storage temperature: -40°C ... +70°C
- Storage moisture: 5 ... 95 % (no condensable)
- Working temperature: -25°C ... +50°C

LED status:



Yellow	Green	Blue	Red	Meaning
Permanent				GPS signal lost (GPS signal lost for shorter period than 30 seconds) and speed is > than 5km/h. (Output maintained actively)
		Permanent		GPS fixed, real time valid and speed is higher than 5km/h. (Output active)
	Permaner	nt		GPS fixed, real time valid, ignition ON (Output deactivated)
	0.5s			GPS fixed, real time valid, ignition OFF (Output deactivated)
		Р	ermanen	t No GPS signal reception, ignition ON (Output deactivated)
			0.5s	No GPS signal reception, ignition OFF (Output deactivated)

Notes:

- Green LED is related to the GPS receiver
- Blue LED is related to the frequency output
- Red LED is related to any error or missing GPS signal



Connector layout:



Connection examples:

• Typical connection to a digital tachograph

