

GPS16G

General

The GPS receiver GPS16G can directly be connected to a signal converter and data logger SICOLOG, signal converter SICO2, a data logger DL16CAN, or a data logger CFDL1. It forwards the NMEA messages GGA and VTG of the integrated GPS receiver unit with a refresh rate of 16 $\frac{2}{3}$ Hz.

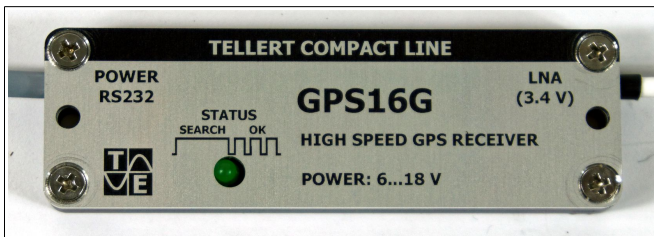


Figure 1: GPS receiver GPS16G.

Scope of Delivery

The scope of delivery of a GPS receiver GPS16G includes:

- GPS receiver GPS16G
- GPS antenna for GPS16G

Pin Assignment

The socket cable is of type [Binder Series 719](#). The socket pins are (in frontal view) numbered clockwise, starting with the first pin after the notch.

POWER/RS232: This socket cable connects the GPS16G with the voltage supply and the serial interface for NMEA output. This cable is compatible to SICOLOG/SICO2/DL16CAN/CFDL1, and can directly be connected to the corresponding RS232 connection.

Pin	Assignment
1	n/a
2	Ground
3	Serial receiving wire to program and configure the GPS receiver unit.
4	Voltage supply (5 V DC to 18 V DC; inverse-polarity protected)
5	Serial transmitting wire to transmit the NMEA messages with 38400 baud.

LNA: The LNA-connector is of type SMA and connects the GPS16G with an active GPS antenna.

The LNA connector is temporarily short circuit protected. The active GPS antenna is supplied with 3.5 V DC.

Technical Data

Property	Description
Box dimensions:	72 mm × 23 mm × 8 mm
Voltage supply:	5 V DC to 18 V DC
Typical current consumption:	80 mA
Typical power consumption:	1.0 W at 12 V DC
Refresh rate:	10 Hz
NMEA output:	VTG- und GGA messages with 38400 baud
Status LED:	Green permanent light: no GPS data. Green blinking: valid GPS data.
GPS receiver unit:	NEO-M8N (from u-blox)
Presettings of the GPS receiver unit:	SBAS deactivated; ≤ 9 satellites; <i>Portable</i> -platform (speed ≤ 1116 km/h; altitude speed ≤ 180 km/h; altitude ≤ 12 km)

GPS receiver unit (according to u-blox):

Eigenschaft	Beschreibung
Chip set:	u-blox NEO-M8N
Sensitivity:	Tracking & navigation: -164 dBm Reacquisition: -159 dBm Cold start: -147 dBm Hot start: -156 dBm
Initial sample:	After 1 s (In the worst case after 30 s)
Speed accuracy:	0.05 m/s (50 % @ 30 m/s)
Direction accuracy:	0.3° (50 % @ 30 m/s)
Position accuracy:	2.5 m (CEP, 50 %, 24 hours static, -130 dBm, > 6 SVs)

See also

<https://www.u-blox.com/de/product/neo-m8-series>