GPS10G

General

The GPS receiver GPS10G can directly be connected to a signal converter and data logger SICOLOG, a 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 10 Hz.

Figure 1: GPS receiver GPS10G.

Scope of Delivery

The scope of delivery of a GPS receiver GPS10G includes:

- GPS receiver GPS10G
- GPS antenna for GPS10G

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 GPS10G 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 GPS10G 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-7N (from u-blox)
Presettings of the GPS receiver unit:	SBAS deactivated; ≤ 9 satellites; *Portable*-platform (speed ≤ 1116 km/h; altitude speed ≤ 180 km/h; altitude ≤ 12 km)

GPS receiver unit (according to u-blox):

Property	Description
Chip set:	u-blox NEO-7N
Sensitivity:	Tracking & navigation: -162 dBm Reacquisition: -160 dBm Cold/warm start: -148 dBm Hot start: -156 dBm
Initial sample:	After 1 s (in the worst case after 29 s)
Speed accuracy:	0.1 m/s (50 % @ 30 m/s)
Direction accuracy:	0.5° (50 % @ 30 m/s)
Position accuracy:	2.5 m / SBAS: 2.0 m (CEP, 50%, 24 hours static, -130 dBm, > 6 SVs)

See also
http://www.u-blox.com/en/gps-modules/pvt-modules/neo-7.html