

$\begin{array}{ll} PSG & 6M - X - W - CS \\ PSW & 6M - X - W - CS \end{array}$



| Specifications | |
|--------------------|---|
| Power source | 4.5 – 36 VDC |
| Wireless interface | Wireless communication requires both wireless cable and CTi USB |
| | dongle. Neither of them can |
| | connect to another wireless |
| | device. |
| Protection | IP 67 (connector and cable) [‡] |
| Material | Connector: brass / nickel |
| | Cable molded head: TPU |
| | Cable carrier: TPU or nylon |
| | Conductor insulation: PVC |
| Operational | -40°C to +85°C (-40°F to +185°F) |
| Temperature Range | |

Χ

meter (non-stock)

meter (non-stock)

meter (non-stock) <u>meter (Only PSG)</u>

meter (non-stock)

meter (non-stock)

Interface

G

U USB <u>W Wireless</u>**

<u>meter</u> <u>meter</u>

meter

_

CS

UART / RS232 / RS422 / RS485

Communication Cable Part Number §

Х

Length

<u>1</u> 2

<u>3</u>

4

5

6

10

15

30

<u>Straight</u>

Right Angle

XXX

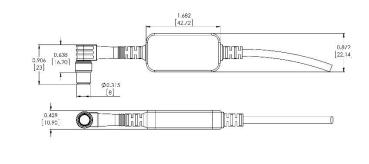
Type <u>PSG 6M</u>

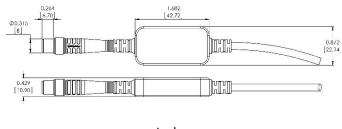
PSW 6M

XX

| Connector Pins | RS232/UART / USB ⁺⁺ | RS422 | RS485 | Wireless | Wire Color |
|---|--|-------|---------------------------------|----------|---------------|
| Pin 1 | +Vin | +Vin | +Vin | +Vin | Brown |
| Pin 2 | GND | GND | GND | GND | White |
| Pin 3 | ТΧ | TX+ | D+ | — | Blue |
| Pin 4 | — | TX- | D- – | | Black |
| Pin 5 | RX | RX+ | D+ – | | Gray |
| Pin 6 | — | RX- | D- | - | Pink |
| $1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 3 \\ 4 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3 \\ 4 \\ 3 \\ 3$ | Device: M 8 – 6-contact (female) | | Cable: M 8 – 6-pin (male) | | |

Dimensional Drawing





Inch [millimeter]

[‡] Excluding CTi sensors receiver dongle.

Terminal Assignment

[§] Available options for this model are <u>underlined</u>.

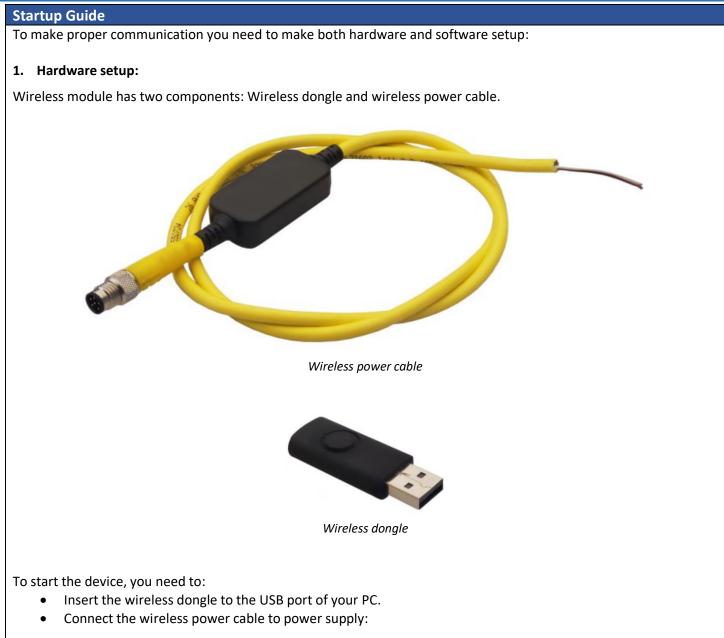
**Wireless Module on device side must be powered.

 $^{\rm ++}$ USB interface uses UART interface and a UART to USB driver.

Wireless Module Datasheet - 221110



$\begin{array}{ll} PSG & 6M - X - W - CS \\ PSW & 6M - X - W - CS \end{array}$



Please note Vin is Brown and GND is white.



2. Software setup

To setup the software please follow up the following steps:

- Download and install the appropriate GUI software, <u>CTi SENSOR CONNECT (CSC)</u> software for IMU, VRU and AHRS devices, <u>WinCTi-Tilt for Tilt-57</u>, and <u>WinCTi-Tilt</u> for all other tilt sensor devices. You can download the software from CTi website.
- Once the installation is successful, open the main panel (the screenshots on this document are captured with CTi SENSOR CONNECT):

| CTi Sensor Connect | | | | - | | × |
|---|--------|---|--|----------|---------|----|
| Home Config View Tool | | | | | | |
| Connection COM Port Baud Rate Data Rate V 115200 V 2 V Co | onnect | Message Format Con ASCII Sensor ASCII Euler ASCII Quaternion ASCII System | trol Binary Sensor Binary Euler Binary Quaternion | REC 0 | Samples | |
| Log | | | | | | ^ |
| Record | Pause | Stop | Clear | | | ~ |
| Enter a command and click on 'Send' | | | | | Se | nd |
| Disconnect | | | | | | |

CTi SENSOR CONNECT (CSC) software main panel

- Select the following connection parameters and click on Connect once dongle established wireless connection with wireless module. User should select the following Connection parameters for serial communication:
 - o COM Port: Select the available COM port
 - Baud Rate: There is only one Baud Rate available. Wireless version only supports 115200bps.
- Once serial communication is established, data stream will be shown on the Log box.



$\begin{array}{ll} PSG & 6M - X - W - CS \\ PSW & 6M - X - W - CS \end{array}$

Wireless Module Accessories

| CTi Sensor Connect | | – 🗆 X |
|--|---|-------------|
| <u>H</u> ome <u>C</u> onfig <u>V</u> iew <u>T</u> ool | | |
| Connection | Message Format Control | REC Samples |
| COM PortBaud RateData RateCOM261152002V | ASCII Sensor Binary Sensor ASCII Euler Binary Euler ASCII Quaternion ASCII System | 0 |
| Log | | |
| \$CSGPS,+0225.06,+0449.17,-0854.04,+0000.48,+0000.05,+ \$CSGPS,+0225.05,+0449.21,-0854.03,+0000.48,+0000.05,+ \$CSGPS,+0225.03,+0449.20,-0854.12,+0000.47,+0000.05,+ \$CSGPS,+0225.11,+0449.14,-0854.03,+0000.48,+0000.03,+ \$CSGPS,+0225.02,+0449.12,-0854.06,+0000.49,+0000.04,+ \$CSGPS,+0225.03,+0449.11,-0854.04,+0000.46,+0000.03,+ \$CSGPS,+0225.01,+0449.18,-0854.00,+0000.47,+0000.02,+ \$CSGPS,+0225.04,+0449.09,-0854.02,+0000.47,+0000.02,+ \$CSGPS,+0225.06,+0449.22,-0854.01,+0000.47,+0000.05,+ \$CSGPS,+0225.06,+0449.14,-0854.06,+0000.47,+0000.03,+ \$CSGPS,+0225.10,+0449.15,-0854.05,+0000.46,+0000.03,+ \$CSGPS,+0225.00,+0449.18,-0854.09,+0000.48,+0000.02,+ \$CSGPS,+0225.00,+0449.17,-0854.03,+0000.46,+0000.04,+ | 0000.27,-0009.14,-0023.52,+0085.67,+036 0000.25,-0009.14,-0023.51,+0085.72,+036 0000.26,-0009.12,-0023.51,+0085.65,+036 0000.26,-0009.12,-0023.51,+0085.63,+036 0000.24,-0009.10,-0023.51,+0085.66,+036 0000.26,-0009.12,-0023.53,+0085.64,+036 0000.25,-0009.13,-0023.51,+0085.67,+036 0000.26,-0009.13,-0023.51,+0085.67,+036 0000.26,-0009.13,-0023.52,+0085.60,+036 0000.26,-0009.15,-0023.51,+0085.67,+036 0000.26,-0009.12,-0023.52,+0085.63,+036 | ^ |
| | | ~ |
| Record Pause | Stop Clear | |

CTi SENSOR CONNECT (CSC) software once data stream is established

Notes:

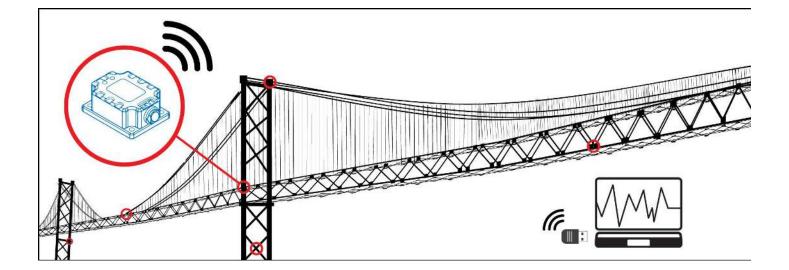
- The selections in message format control are based on the CTi Sensors product type. Different type of product supports different selection sets.
- Wireless version cannot change baud rate. Do not use the command "\$nBxxx*<cr>" to change baud rate.



Applications:

- Why: Wireless module is specially designed for inaccessible environments, which need remote monitoring.
- **How:** Using wireless module, sensor data are sent remotely from each measurement unit (sensor) to the host (computer) within the 50 m range around the measurement unit.
- Where: Structural failures are sudden and catastrophic. Structural Health Monitoring (SHM) is the process of adding damage or distortion detection strategy to the structure, which plays a major rule in public safety. SHM systems consist of an array of sensors connected to a host, which monitors data periodically.

Wireless module provides an easy to use and accessible framework to send and receive sensor data without the need to physically connect sensor modules to host.



Warranty: This product has 18 months limited warranty. For more information, please visit: www.CTiSensors.com/warranty

This product is entirely designed and manufactured in the U.S.A.

CTI SENSOR, INC. 30301 Emerald Valley Parkway, Unit B Solon, OH 44139 Phone: (440) 264 - 2370 Email: sales@CTiSensors.com

All contents of this document are subject to change without any notice.