QG40N configurator manual
V3.1

Abstract

Preliminary specification for QG40N series sensors
measuring range, output filter, warning & alarm configurable
USB driver problems fixed, compatible for more OS.

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About the QG40N Configurator V3.0



The QG40N configurator is a tool to reconfigure calibrated QG40N series sensors with a standard PC. The tool reads the current sensor settings, shows all relevant parameters and offers a possibility to reconfigure the sensor while keeping the calibration data.

The configurator consists of an interface box (the “Dongle”) and a PC application. The installer for the application can be found on the website.

DIS_QG40N_CONFIGURATOR_V3
https://dis-sensors.com/en/downloads/software
https://dis-sensors.com/en/downloads/configurator-tools

Be sure to download the software corresponding to your configurator, **the V2.0 software is not compatible with the latest hardware**.

Application

Suitable for QG40N series**: inclination, acceleration & tilt switches** with analog voltage, current, NPN or PNP outputs.

- Read configuration from sensor
- Adapt relevant settings in sensor
- Save configuration to sensor and PC-file (including new type code)
- Centering the sensor
- Auto detect sensor presence, voltage, type code and output stage
- Batch sensor configuring possible (sequential)
- Real time visual feedback of sensor output (‘live monitoring’)
- No external supply-voltage required

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System requirements

PC interface: USB1.0 or higher (USB A)
OS supported: Windows 7, Windows 8 and Windows 10. Windows XP is not supported.
Work with 32-bits and 64-bits windows.

Configuration options

Configure parameters for inclination / acceleration:

- Measuring range (*) for 1, 2 or 3-axis individual(resolution 1° / 0.1g)
- Static low pass filter (**) enable/disable (9 different values)
- Output filter (***) (Hz)
- Inverse output enable/disable for 1, 2 or 3-axis individual

Configure parameters for tilt switches:

- Warning & Alarm set point (****) for 1, 2-axis or internal buzzer (resolution 0.1°)
- Warning & Alarm hysteresis for 1, 2-axis or internal buzzer (resolution 0.1°)
- Warning & Alarm on delay for 1, 2-axis or internal buzzer (resolution 15ms)
- Warning & Alarm off delay for 1, 2-axis or internal buzzer (resolution 15ms)
- Static low pass filter (**) enable/disable (9 different values)
- Output filter (***) (Hz)

(*) Only smaller measuring ranges than the original factory configuration can be configured because of calibration data.
(**) For reducing noise is (almost) static situations. Switches off automatically when the sensor detects a non-static situation.
(***) Low pass for inclination and high pass for acceleration. The -3dB frequency of the 1st order filter van be set in Hz.
(****) Warning gives intermittent output switching. Alarm gives continuous output switching

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Set up the configurator

- Download the configurator application from DIS website and install it.
- Connect the QG40N Configurator dongle to your PC.
- Connect the QG40N sensor to the dongle.
- Launch the configurator application.
- The program should start. You will see a window showing the properties of your sensor.

While in the configuration window you can disconnect your sensor and connect another sensor. The window will show “Sensor Disconnected”(see figure 1) if there is no sensor connected, and it will automatically reload when a new sensor is connected. If you disconnect the configurator, the window will show “Dongle Disconnected”(see figure 2).

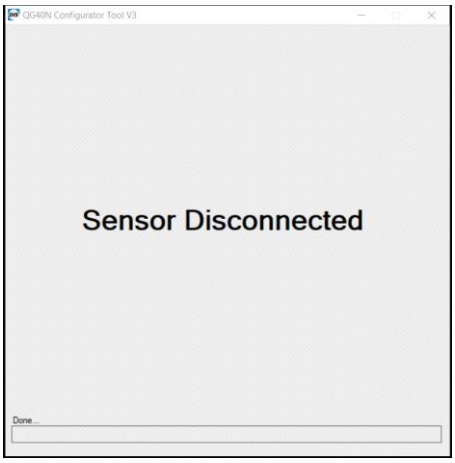

Figure 1. Sensor disconnected

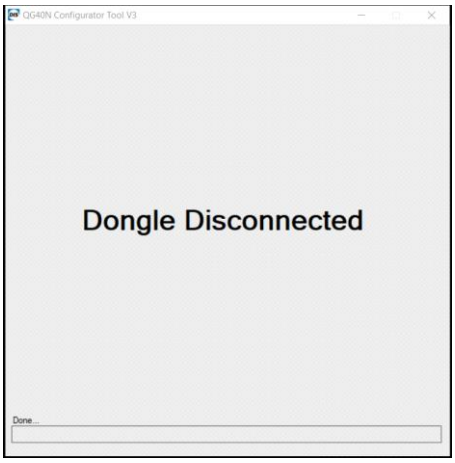

Figure 2. Configurator disconnected

If you are using a tilt switch sensor the configurator tool will also display the output of the sensor switches in the live monitoring window. The LEDs on the configurator dongle will also change color to match the state of the tilt switch outputs.

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Exploring the start page

The start page (see figure 3) provides a summary view of the sensor settings.

A live output monitoring is shown on the right side of the window.

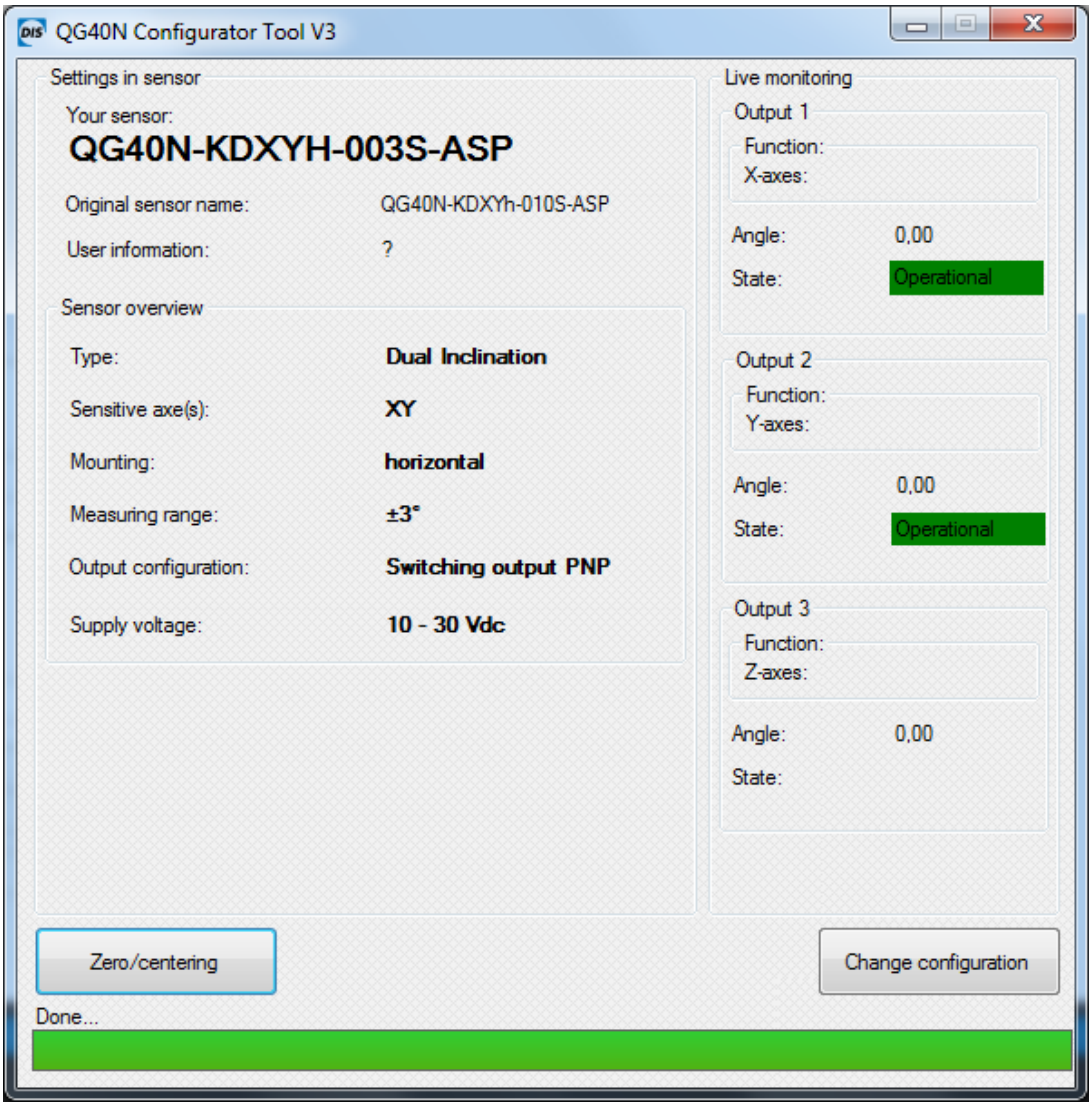

Figure 3. Summary view of the sensor settings

Original sensor name is defined with the default factory setting. After configuration, your sensor name will be automatically updated with the new settings.

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Configure sensor settings

- Click the button “Change Configuration”.
- You are now brought to the configuration window (see figure 4) for your sensor.
- Change the parameters on the screen to your desired specification.
- When done, click the “Save to Sensor” button and wait for the data to be uploaded.

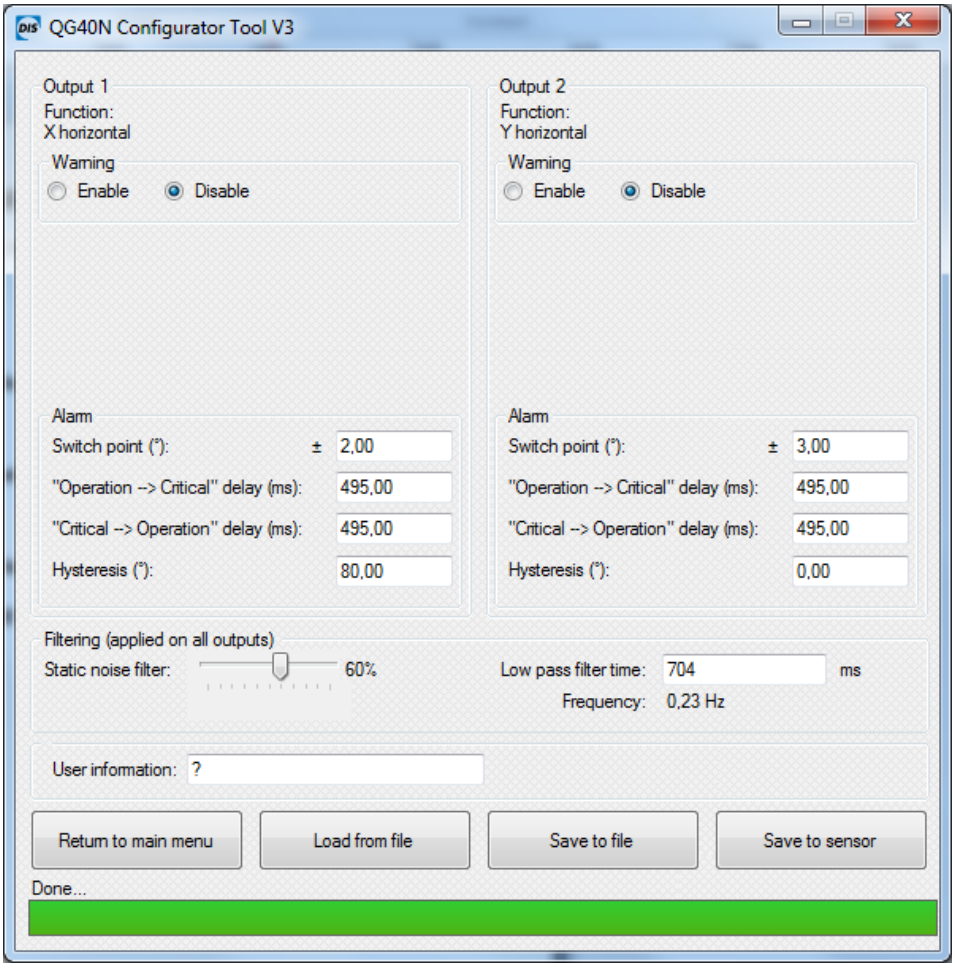
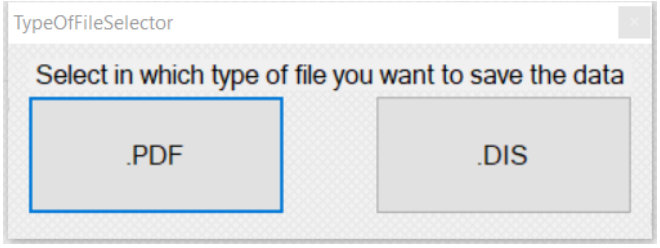


Figure 4. Configuration window

- Settings can be saved to a .PDF file, or a .DIS file. A .DIS file can be loaded by the software to your sensor.



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Set a new zero position

- Place the sensor to the zero position you want.
  - A sensor with measuring range of 360° has no limit of centering position. You can place it in any angle you want.
  - Other sensors have a default 5° offset limit. That means you can't set the zero position, when the offset of the current position and the absolute zero position is more than 5°. You will see no error message, but the live output will not be changed to 0,00.
- Click button "Zero/centering".
- The progress bar shows the status (see figure 5). When the zero position is set, you'll see the output is changed to 0.00 on the live monitoring (see figure 6).

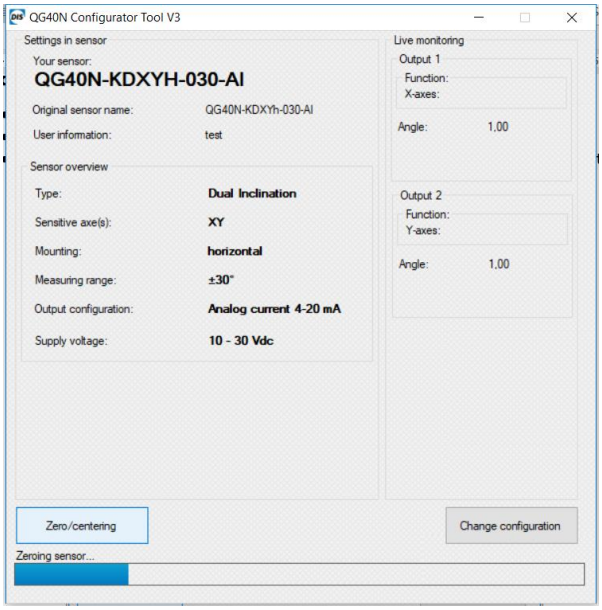

Figure 5. Sensor zeroing

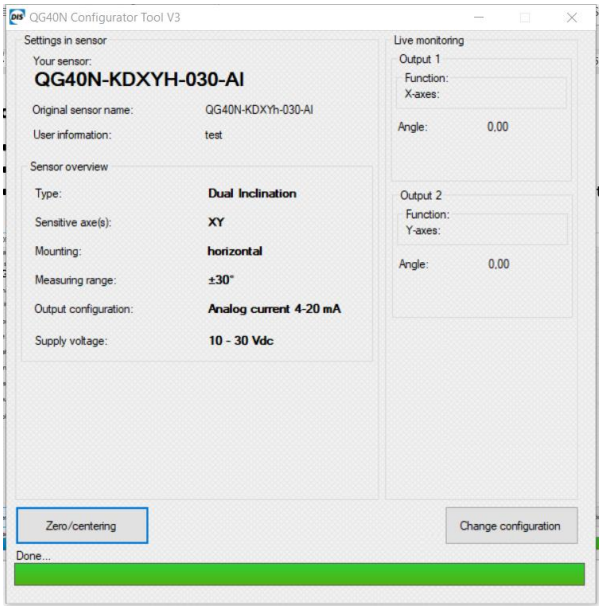

Figure 6. Zero position is set

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