S2GO_CUR-SENSE_TLI4971

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XENSIV(TM) – TLI4971 Shield2Go for industrial current sensor

Infineon has extended its portfolio of coreless current sensors with the new TLI4971. Our sensor relies on a Hall-based magnetic sensing principle with an integrated current rail offering smallest footprint resulting in an overall system size reduction. In addition a differential measurement principle makes the current sensor stray-field robust;-furthermore an ultra- fast analog output path offers a bandwidth of up to 120kHz. Paired with 2 programmable overcurrent channels the current sensor is a perfect fit for industrial applications such as drives and inverters.

For evaluation purposes of the latest XENSIV™ current sensor TLI4971 we rely on our proven evaluation concept of Shield2Go and 2GO Kits – therefore the TLI4971 evaluation environment is also offered in those two configurations:

- **TLI4971 MS2GO: 2GO Kit version**
- **TLI4971 S2GO**: Shield2Go version

TLI4971 S2GO (Shield2Go) version consists of 3 main building blocks:

- Sensor board (top): Incorporating the TLI4971 industrial current sensor (equipped with M4 screw connectors for high current capabilities < 20A)
- Adapter board (Shield2Go format): The adapter board comes in the Shield2Go pinout and can be connected to the sensor board via the PCB edge connectors. It implements sensor application circuit & peripherals as well as pinout to the Infineon XMC 2Go (**link to XMC 2Go**) MCU platform.
- Ziplock bag with: 2xM4 screws, 1 PCB edge connector (for connecting the sensor board to the adapter board in the Shield2Go formfactor), pin headers (male & female)

Two typical configurations for the TLI4971 Shield2Go version - offering full flexibility:

- Shield2Go configuration: Connecting the sensor board to the adapter board with PCB edge connectors. The pinout corresponds to the Infineon XMC 2Go (**link XMC 2Go**) MCU platform. Please note that the XMC 2Go is **not** provided in the package. The programming can be done in the Arduino IDE by selecting the XMC 2Go platform.
- Standalone sensor board: The sensor board (top) can also be used as a standalone in any customer application (e.g. interfaced with customer MCU platforms, interfaced with lab equipment etc).

The TLI4971 S2GO does not offer programmability features, but all programming features can be explored by RAM settings.

Potential Applications

- Industrial
- Consumer
- Drives
- Pumps
- Inverter
- 3-phase inverter
- BLDC
- Motor control

Parametrics

Parametrics	S2GO_CUR-SENSE_TLI4971
Applications	Industrial, Consumer
Family	Current Sensor
Product Description	XENSIV™ magnetic current sensor TLI4971-A120T; ; Sensor board for high current capability (≤20A); ; To be used with Arduino or XMC 2GO evaluation board

Documents

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- Getting Started
- User Manual
- Product Selection Guide
- Product Catalogue
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Order

Sales Product Name	S2GO_CUR-SENSE_TLI4971
OPN	S2GOCURSENSETLI4971TOBO1
Product Status	active and preferred
Package name	--
Order online	
Completely lead free	
Halogen free	
RoHS compliant	yes
Packing Size	1
Packing Type	CONTAINER
Moisture Level	
Moisture Packing	NON DRY

Tools & Software

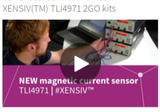
Software and documentation - free download @ GitHub

› TLI4971 - Current sensor

- Software

Videos

Discover the full potential of this new current sensor with Infineon XENSIV(TM) TLI4971 2GO kits



The TLI4971 is Infineon's new industrial current sensor offering an unique feature set for highly accurate, coreless current sensing. The sensor offers a current measurement range of 25A to a 125A full scale range, an analog output with a bandwidth of 120kHz as well as 2 overcurrent channels for ultra-fast overcurrent detection of 1.8us. Discover the full potential of this new current sensor with Infineon's TLI4971 2GO kits offering ready-to-use hardware combined with a dedicated GUI for fast start-up and evaluation.

XENSIV™ Magnetic Angle Sensor 2GO kit – Infineon's 2GO kit for the TLE5012B GMR angle sensor

4:37

Let's welcome a new member of the famous XENSIV™ sensor 2GO kit family – the Magnetic Angle sensor 2GO kit is equipped with a TLE5012B digital GMR angle sensor for measuring rotational movements such as rotor position for motor commutation. As part of the 2GO kit family Infineon is offering a ready-to-use and plug-and-play evaluation kit by providing a dedicated GUI for fast prototyping. Download the GUI, connect the 2GO kit and start your evaluation!

How to replace an optical encoder with Infineon XENSIV™ magnetic angle sensors

4:20

Check out how to easily replace a bulky optical encoder for motor commutation with Infineon XENSIV™ magnetic angle sensor TLE5012B E1000. This GMR angle sensor provides an incremental interface imitating the pulses and behavior of an optical encoder, offering smaller size and faster start-up due to absolute angle information right from the start.

Support

Search the FAQs! Enter your search terms...

Top 6 FAQs. Use the search bar above to show more!

What are the available current measurement ranges of the XENSIV…

The TLI4971 provides a pre-calibrated current measurement range up to 120A full scale range. In addition customers can re-program the sensor to 75A/50A/37.5A/25A.

Is the current sensor TLI4971 affected by overcurrent?

Not at all. The sensor is limited only by the thermal capacitance of the package.

Why is shielding not required for the current sensor TLI4971?

The differential sensing principle provides intrinsic stray field cancellation.

Technical Support

In order to enable us to process your inquiry as efficiently as possible and ensure your case is duly reported, we kindly ask you to submit your request via the following support form:…

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