

XENSIV™ – TLI5590-A6W

Stray field robust linear TMR sensor

TLI5590-A6W is a two-channel radiometric gradiometer for high precise length measurement. This device is qualified for industrial and consumer applications according to JEDEC JESD47K standard. The very small, green package supports design miniaturizing and fine-scale measurements. It has super high accuracy better than 10 μm achievable by use of proper linear or rotary magnet encoder. The excellent channel matching of less than 5% over full magnetic input range of ±5 mT.

Additionally, its enlarged operating temperature range up to +125°C allows flexible use in different applications in industrial and consumer environments.

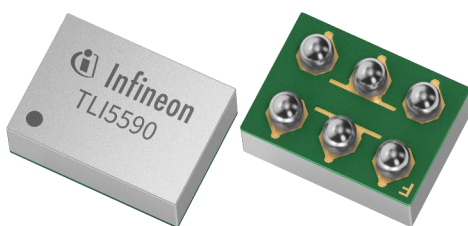
The TMR technology brings higher accuracy in position sensing that the high signal-to-noise ratio allow small and cost-effective magnet designs e.g., Ferrite- based magnets. The low power consumption is beneficial for battery supplied applications. The hysteresis-free transfer characteristic allows accurate sensing where fast changing direction changes occur. In addition, the higher integration density reduces the sensor size to support miniaturization and position sensing in microsystems.

Potential applications

- Linear and angular incremental position sensing in industrial and consumer applications with highest accuracy requirements
- Lens positioning for zoom and focus adjusting in cameras

Key benefits

- The high signal-to-noise ratio allow small and cost-effective magnet designs
 - Low power consumption is beneficial for battery supplied applications
 - High temperature-stable measurements make it perfect choice for use in harsh environments
 - Hysteresis-free transfer characteristic allows accurate sensing where fast changing direction changes occur
- Higher integration density reduces the sensor size to support miniaturization and position sensing in microsystems



Linear TMR



Robotics

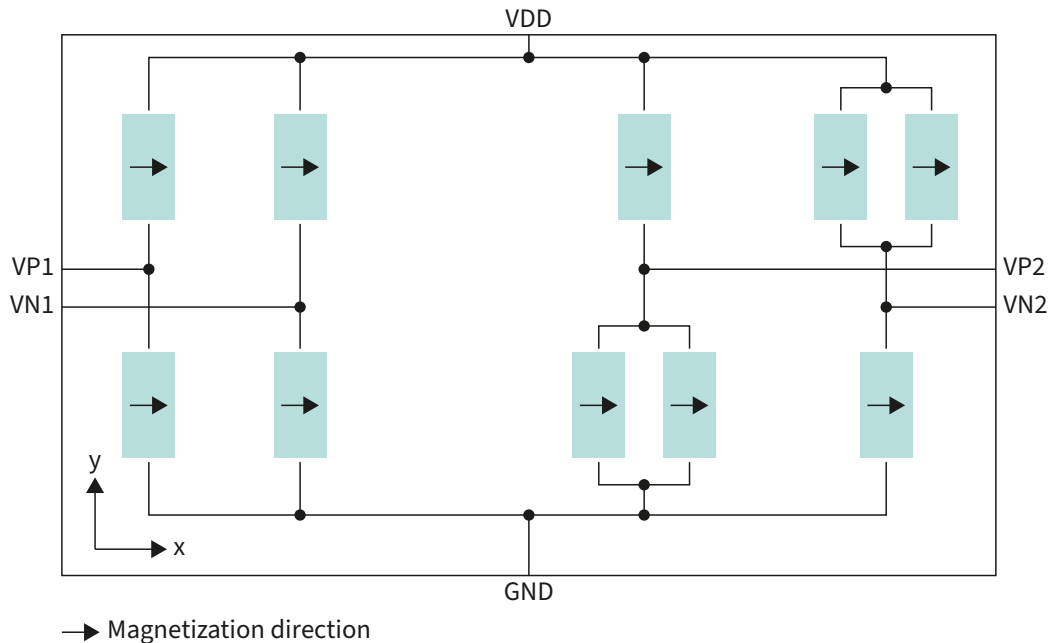


Camera



HMI

Block diagram



Product table

Parametrics	TLI5590-A6W
Sensitivity	9/18 mV/V/mT
Magnetic range	±5 mT
Package	SG-WFWLB-6-3
Interface	Analog
Current consumption	1 mA @ 3.3 V
Supply voltage	1–5.5 V
Temperature range	-40°C to 125°C
Package dimensions	1.27 x 0.93 x 0.4 mm
SP-Nr.	SP005631773

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