



SICK's 'Tiny TiMs' Are First to Plug the Low-Risk Safety Gap

SICK has launched the first 2D LiDAR sensors safety-certified to PL b, specifically designed to plug a gap for lower-risk applications where safety-rated integration is needed in small, low-speed Automated Guided Vehicles and Carts, service robots or collaborative robots.

The SICK TiM361S and TiM781S 2D LiDAR sensors are economical, lightweight and compact with a safety certification to EN ISO 13849-1:2015 PL b and can be integrated inconspicuously into low-speed, small or lightweight mobile or stationary applications, following completion of an appropriate risk assessment. They can also be used where secondary safety detection is required to complement higher-rated systems already in place.

Using SICK's patented Safe HDDM+ time-of-flight infra-red scanning technology, with a 270° scanned field of view, the sensors offer exceptional object detection and measurement accuracy with immunity to ambient light conditions. A total of 48 flexible fields can be set up and evaluated safely and simultaneously for responsive detection up to 5m at speeds of up to 1.6 m/s.

The SICK TiM361S reliably detects both static and moving objects in a factory or warehouse, offering a robust solution for collision prevention in small, electrical autonomous vehicles, carts and platforms. It can also be used to control personnel access around light, industrial-duty pick and place robot arms. Sixteen preconfigured field sets, each with three protective fields, make commissioning quick and easy.

The SICK TiM781S has been introduced to meet demand for a device that enables applications to be customised by integrators and machine builders using raw data output from the device. By combining intelligent field evaluation with safety-related measurement

data output via Ethernet, localisation and navigation duties can be achieved using the same device. With the SICK TiM781S, both the presence of an object and precise measurement data of the scanned surface, including size and shape, can be output to a safety PLC.

"Many applications in modern automation require complex interactions with people and processes; AGVs and collaborative robotics are a prime example," explains Neil Sandhu, SICK's UK Product Manager for Imaging, Measurement & Ranging. "Risk evaluation in these applications can require a layered approach to safety and automation.

"The Tim TiM361S and TiM781S can provide measures against risks that are not considered to be negligible and, on the other hand, do not require the adoption of more costly protection measures. For example, detection of overhanging loads on a small guided vehicle.

"The SICK TiM361S and 781S offer versatile new options, including where a secondary LiDAR sensor with a lower safety rating can be deployed to operate alongside a higher-rated device."

Both weighing just 250g, the SICK TiM361S and TiM781S have a compact 60 mm x 60 mm x 86 mm IP67 aluminium housing, with the option of a protective hooded mounting kit. Advanced energy management and a low, 4W power consumption minimises drain of the vehicle's batteries.

Up to 48 flexible fields can be evaluated at the safety-rated distance of up to 5 metres and a relative speed up to 1.6 m/s. The SICK Tim361S has a non-safe monitoring field of 10m and the SICK TiM781S up to 25 metres. Set up is straightforward using SICK's intuitive SOPAS configuration tool, via USB port and laptop.

The SICK TiM361S / 781S have been certified by TÜV standards laboratories to conform to PL b according to EN ISO 13849-1:2015 and the Machinery Directive 2006/42/EC, EN ISO 13482-2014, EN ISO 13855:2010 and DIN CLC/TS 65046:2009.

For more information about the SICK 361 781 Safe, please contact Andrea Hornby on 01727 831121 or email andrea.hornby@sick.co.uk.

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