



SICK Hiperface® Linear Motor Feedback Encoders Get Safety Certified

SICK has released safety-certified versions of its TTK70 and TTK50 magnetic absolute linear encoders with Hiperface® interface, widening the opportunities for accurate, absolute motor feedback systems to be integrated into safe linear drives.

The SICK TTK70S and TTK50S absolute linear encoders with Hiperface® interface are now certified to SIL2 (IEC 61508) and PLd (EN ISO 13849) for safety-related motion supporting SLS (safely-limited speed) safety functions in safe drive controls.

The SICK TTK70 absolute linear encoder, together with the more compact SICK TTK50, are used for non-contact feedback of absolute position and speeds in linear axes. Offering long measurement lengths, the encoders are ideal for dynamic applications in linear direct drives or slide systems, wherever micron accuracy and high repeatability are demanded, for example in robotic pick and place, x-y printers, or electronics and photovoltaics manufacture.

With the SLS (safely limited speed) safety function supported by the TTK50S and TTK70S linear motor feedback systems, a drive control can ensure that specified values are not exceeded. If someone intervenes in the travel path of the linear drive, its speed can be safely reduced, so that the machine can continue to operate safely and unnecessary stopping time is avoided.

With the SICK TTK50S and TTK70S, machine builders and system integrators have the flexibility to fully-integrate safe motion control into the servo drive system, or to design a separate safety system using a drive monitor such as SICK's MOC module for its FlexiSoft safety controller.

"The SICK TTK70S and TTK50S offer all the advantages of integration and connectivity of the Hiperface® motor feedback interface," adds Darren Pratt, SICK's UK product manager for motion sensors. "Commissioning is also straightforward. As an absolute measurement system, the TTK70S and TTK50S communicate their position on power-up, as there is no need to perform a reference run. Both the TTK50S and the TTK70S feature an electronic type label for automatic parameterisation, so on-site set-up is extremely straightforward."

The encoders' measurement principle consists of a magnetic tape and a compact read head. Their wear-free, non-contact design is immune to contamination or condensation, assuring robust availability even in extreme environmental conditions.

The SICK TTK70S has a 70mm long housing with a measurement length up to four metres, while the SICK TTK50S has a 50mm long housing and a smaller read head, for measurement lengths up to one metre. Both are high performance devices with a system accuracy of $\pm 10 \mu\text{m}$ and repeatability of $< 5 \mu\text{m}$ at traverse speeds up to 10 m/s.

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