



Active sensor technology for laser safety

The developments in laser beam sources offer continuously improving beam quality and ever higher power. A decisive factor for the safe enclosure of laser systems in the event of a malfunction is the duration of exposure. The requirements of the IEC / EN 60825-4 standard usually cannot be fulfilled by conventional passive safety systems and rarely allow for cost-effective implementation. The solution is a laser protection wall actively monitored by electronic means. This is why KUKA has developed the TÜV-certified, active laser safety sensor. The LaserSpy® detects a beam malfunction within milliseconds and trips the safety circuit of the laser system. Laser safety is thus ensured for the system and the operator at all times.

The LaserSpy® is an optical sensor which monitors the light-proof space inside a protective double-panel wall. If the first panel is penetrated by a laser beam, the highly sensitive LaserSpy® sensor measures the entering beam, opens the safety circuit and switches off the beam source via the Emergency Off circuit before the outer panel is damaged.

Preconditions

- Double-walled booth design without filler materials or struts
- Minimum distance of 35 mm between both outer panels of the double-panel wall
- Light-proof structure of the wall elements to prevent spurious signals
- Simple preparation for installation using a drilling template; fastening by means of self-tapping screws without having to open the electronics housing

Your advantages at a glance

- Active intervention into the safety circuit of the laser source – Emergency Off function
- Self-monitoring
- Certified in accordance with EN ISO 13849, IEC 61508:2001
- For all top-quality laser beams in the near-infrared wavelength range (820 ~ 1,100 nm) regardless of the installed laser power
- Protection class IP 65
- Monitoring radius 3,500 mm
- Simple installation
- Quick retrofit possible in existing systems



Easy integration

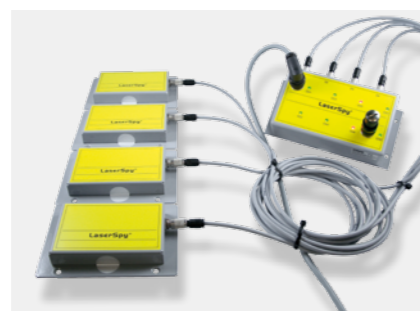
Installation of the LaserSpy® sensors in a double-walled booth allows for full protection using only a few elements. Standard booth concepts can be implemented quickly and simply.

The complete solution from a single source includes the assembly accessories – with the appropriate tools if desired – for fast and optimum installation. We are pleased to offer you the following accessories:

- Pre-assembled cable with various connections
- Terminating connector
- LaserSpy® tester

Safety assessment by TÜV Süd Rail: report ME82231 V1.1 dated 9 July 2013

EN ISO 13849-2:2008	Category 4/PL e PFH=1.912e-9/h with a service life of 15 years
IEC 61508:2001	SIL 2 with a service life of 15 years
EN 60947-S-3:1999	PDF-M



Activate your laser protection wall and quickly and easily upgrade your system for improved laser performance with the LaserSpy®.

KUKA offers you many different variants – adapted to your requirements.



Together with our affiliated companies, KUKA Robotics and KUKA Systems, we can be found locally all over the world:

Argentina	Malaysia
Australia	Mexico
Austria	New Zealand
Belgium	Norway
Brazil	Poland
Canada	Portugal
Chile	Russia
China	Sweden
Czech Republic	Switzerland
Germany	Singapore
Hungary	Slovakia
France	Spain
Great Britain	South Africa
India	Taiwan
Italy	Thailand
Japan	Turkey
Korea	USA

For further information please contact us at laser.industries.de@kuka.com

KUKA Industries GmbH – Headquarters Bluecherstrasse 144, 86165 Augsburg / Germany T +49 821 797-0 F +49 821 797-1991 info.industries.de@kuka.com
KUKA Industries GmbH & Co. KG Sankt-Jobser-Strasse 53, 52146 Wuersele / Germany T +49 2405 45 468-10 F +49 2405 45 468-28 info.industries.de@kuka.com

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LaserSpy® is a registered trademark in the European Community.

WM-Nr. 996121 / 1708 / LaserSpy® / 2e

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