

THE GATEKEEPERSM

MAN-MACHINE SAFEGARDING NEWS FROM **SCHMERSAL**
Turning Workplaces into Safeplaces®

MAY 2009

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GK-1 CATALOG

9th Edition (2008)

424 pages

Technical Data Sheets for all products.

New section on Pulse-Echo switches.

Safety tutorial handbook and reference section.

View the catalog online:
www.schmersalusa.com

A New Approach to Machine Safety

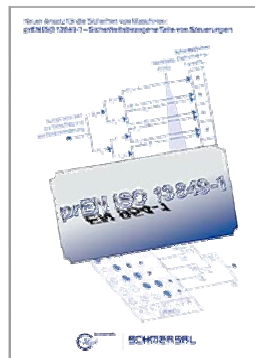
The European manufacturing community is currently in transition to a new standard, EN ISO 13849-1:2006 which will take full effect in December of this year.

EN ISO 13849-1:2006 represents a major change in the philosophy of safety-related parts of machine control systems. It is a movement from the sole reliance on the proven-in-use deterministic approach of standards such as EN 954-1, to include probabilistic considerations.

The new standard uses risk assessment to determine a required Performance Level (PL). Achievement of the Performance Level is based on four aspects:

- Control Reliability of circuit architecture - Almost identical to the structures established by EN 954-1, this deals with circuit redundancy, fault detection, and use of tried and tested components. It uses the same Control Categories.
- Mean Time to Dangerous Failure (MTTF_d) – Fundamentally this is a statement about the quality and reliability of the safety-related components utilized in the system. It is a statistical mean representing the expected working time without a safety-critical down time, per year.
- Diagnostic Coverage – the quantification of the effectiveness of measures to discover failures. It is primarily concerned with the ratio of detected dangerous failures to the failure mode of all dangerous failures.
- Common Cause Failure Abatement - The standard also requires measures to combat failures that can simultaneously affect both channels of Control Category 2 structures and higher. The eight measures identified include electromagnetic compatibility, surge protection, and diversity of components.

The drafters of EN ISO 13 849-1:2006 strived to achieve a delicate balance between deterministic and probabilistic thinking - breaking down the new aspects into a requisite and practicable size for the “average user.”



If you are interested in more information regarding EN ISO 13849-1:2006, please request or download a copy of our 52 page brochure: **A New Approach to Machine Safety: EN ISO 13849-1:2006** via our website.

The brochure is a summary of a presentation by Mr. Thomas Bömer (engineer) and Mr. Karl-Heinz Büllsbach (engineer), both employees of the BGIA - Berufsgenossenschaftliches Institut für Arbeitsschutz (the employer's liability insurance association institute for health and safety), one of the organizations that contributed to the composition of the standard. The brochure contains illustrated examples and helpful charts.

PRODUCT HIGHLIGHT



AZM200

Solenoid Latching Interlock

2300N (506 lb) holding force.
Power-to-lock and Power-to-unlock versions.

Pulse Echo Sensors

Non-contact operation.
Meets Safety Cat 4 (EN954-1)

Door Handle Actuator

Modern, ergonomic design.
Actuator key retracts flush within housing.
Optional red emergency exit inside handle.

Daisy Chaining

Continuous function tests.
Multiple switches can be wired in series while maintaining Safety Control Category 4

See GK-1 Catalog, 9th edition page 184

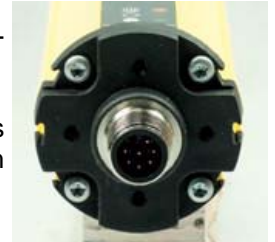
Innovations: Safety Light Curtains

The Schmersal Group has a the new center of competence for Schmersal optoelectronic safety switchgear located in Mühldorf, Germany. This new production facility is responsible for developing innovations in our lines of Safety Light Curtains and grids:

Integrated features in a new body design

Our new SLC220 and SLC420 Series feature blanking, re-start, and EDM Feedback as standard, integrated functions.

What makes these new Safety Light curtains truly unique is their distinctive round housing profile which gives them added strength in heavy duty applications.



IP 69K rating

The new round body design also allows us to offer IP 69K rated versions of the SLC220 and SLC420. These curtains are sealed in a heavy duty clear plastic sleeve, allowing them to withstand high temperature and high pressure wash downs. This makes them suitable for use in hygiene-sensitive and hygiene-critical applications in the food processing, pharmaceutical, beverage, meat packaging, and medical industries.

Compact design

The biggest innovation this year is our smallest light curtain yet. The SLC430 Series features a 1/2" wide face and 1" deep housing. It still maintains control category 4 through its separate NSR-0605 evaluation unit which comes as a standard component.

The SLC430 is available in 30mm resolution with protection field heights from 236mm to 1804mm (9" to 5'9")



More Information

For more information please see our catalog:

Optoelectronic safety systems for the protection of man and machine

Contact us to receive a printed edition.

CONTACT INFO

SCHMERSAL

660 WHITE PLAINS ROAD
SUITE 160
TARRYTOWN, NY 10591

TEL: 888-496-5143

FAX: 914-347-1567

E-MAIL:

Info@schmersalusa.com

Website Update

Our website now features information on European, US, and Canadian Safety Standards. The new section includes free PDF downloads and links to purchase Safety Standards from OSHA, ANSI, and more.

Visit: www.schmersalusa.com/safety_standards_info.asp

