

# The GATEKEEPER

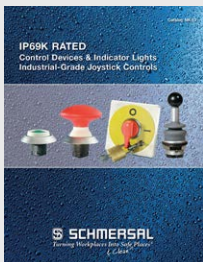
**SCHMERSAL**  
TURNING WORKPLACES INTO SAFEPLACES

JUNE 2013

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## REFERENCE



### IP69K Rated Control Devices and Joysticks

Our comprehensive guide to our IP69K Rated Control Devices and Joysticks featuring the N Series pushbutton and K Series joysticks. 94 pages.



### MRL News

This book provides background information on the subject of machine safety. Available in print only: Hardcover. 200 Pages

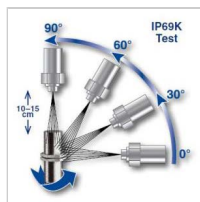
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## Ingress Protection Ratings: IP69K

Environmental conditions such as dust and moisture dramatically affect switch performance and longevity. When switch manufacturers started to make claims that their electrical products were “waterproof”, the International Electrotechnical Commission, or IEC, took notice. This not-for-profit, non-governmental, international standards organization which prepares and publishes international standards for electrical, electronic and related technologies, set about to quantify a rating system for ingress protection and provide testing standards for electrical enclosures against the intrusion of elements from the outside environment.

The result is IEC 60529, which establishes IP Ratings. The rating is coded with the letters IP followed by two digits and occasionally a letter: The first digit represents the level of protection against solid objects, rated 1 (hands or fingers) through 6 (fine dust); the second digit represents the level of protection against liquids, rated 1 (falling water) through 8 (submersion).

It was found that the highest rating of IP68 was still not sufficient in applications that were regularly exposed to high-pressure or high-temperature wash downs which are common with the cleaning of food processing equipment and road vehicles. Therefore a special IP rating, IP69K, was created by the German standard DIN 40050-9 to test equipment that required this regular and intensive cleaning.



The IP69K test is designed to insure that the device is able to withstand high-pressure and steam cleaning: The test device sits on a turntable that rotates once every 12 seconds (5 rpm) while a nozzle mounted 10–15 cm away sprays the device with water heated to 80°C (176°F) and pressurized to 80–100 bar with a flow rate of 14–16 Liters per min. The test is run with the nozzle at angles of 0° (horizontal), 30°, 60° and 90° (vertical) for 30 seconds each. Only if the device passes this test can it bear the IP69K rating and be used with confidence in harsh environments and cleaning procedures.

## IP69K Rated Products

Schmersal offers an ever increasing range of products designed to be dust tight and withstand the harsh conditions of high-pressure and high temperature wash downs: :

**RSS36-ST** The RSS36 is an electronic

of this book [here](#).

## SCHEDULE



June 18-20, 2013  
Pennsylvania Convention Center  
Philadelphia, PA

### ATX East

Schmersal will be exhibiting at ATX East, held on June 18-20, 2013 in Philadelphia, PA. Visit us in Booth 1526.

## CONTACT



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safety sensor that uses Radio-frequency identification (RFID) technology, which allows for individual actuator coding options. The quick connect (ST) version is IP69K rated. Housing materials are also ECOLAB approved, making it ideal for the food processing industry and other applications where high-temperature high-pressure wash downs are experienced. Integrated dual monitoring microprocessor and LED status indicators are standard, with serial diagnostic options. [more](#)



**AZM300** The AZM300 is a solenoid locking interlock switch with integrated electronic safety sensor. The AZM300 uses RFID to provide non-contact sensing, allowing for individual actuator coding options. The housing materials also meet ECOLAB test requirements for wash down with acid and alkaline-based cleaning agents. Integrated dual monitoring microprocessor and LED status indicators are standard, with serial diagnostic options. [more](#)



**CSS30S** This electronic safety sensor uses the patented Pulse-Echo technology to provide non-contact sensing of closed guards. It features a 30mm diameter stainless steel housing, integrated dual monitoring microprocessor, LED status indicators, and optional serial diagnostics. [more](#)



**BNS40S** A non-contact, coded magnet safety sensor designed with food & beverage applications in mind: Compact, rectangular stainless steel housing is IP69K rated and ECOLAB tested; front or rear (concealed) mounting; optional LED. [more](#)



**Safety Light Curtains** Our IP69K line of Safety Light Curtains and Grids feature round housing profiles and have the emitters and receiver units sealed into 60mm diameter clear plastic tubes which offer the protection without diminishing the range or function of the curtain or grid. The SLC220 (Type 2) and SLC420 (Type 4) Light Curtains are available in a variety of protection heights and resolutions while the Light Grids have 2-, 3- or 4-beams. [more](#)



**N Series Pushbuttons** The N Series includes opaque and illuminated pushbuttons, mushroom buttons, selector knobs, indicator lights, and other control

devices that were specifically designed for extreme wash down applications: They have smooth surfaces and transitions that limit residue accumulation and are made from materials that are resistant to chemical cleansing agents, UV radiation and Ozone. [more](#)



**K Series Joysticks** Schmersal offers a series of joysticks with IP69K rated 2mm thick silicone sealing bellows. The panel mounted joysticks are 1-, 2- or 4-direction with spring-returned or maintained actuation. [more](#)



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### Ask The Expert...

*Devin Murray,  
TÜV Functional Safety Engineer  
ID-No. 4274/11*



**Q: What does it mean to be ECOLAB approved?**

**A:** ECOLAB is an agency focused on cleaning, sanitizing, food safety and infection control products and services. ECOLAB services industries such as those dealing with foodservice, food and beverage processing, hospitality, textile care, pharmaceuticals, cosmetics, and vehicle wash industries. Among the programs and services offered are the testing and approval of cleaning agents. Products which have been tested in accordance with the ECOLAB Directives are resistant to aggressive cleaning agents and can be used in hygiene sensitive applications.