

GK-C
CONDENSED
CATALOG

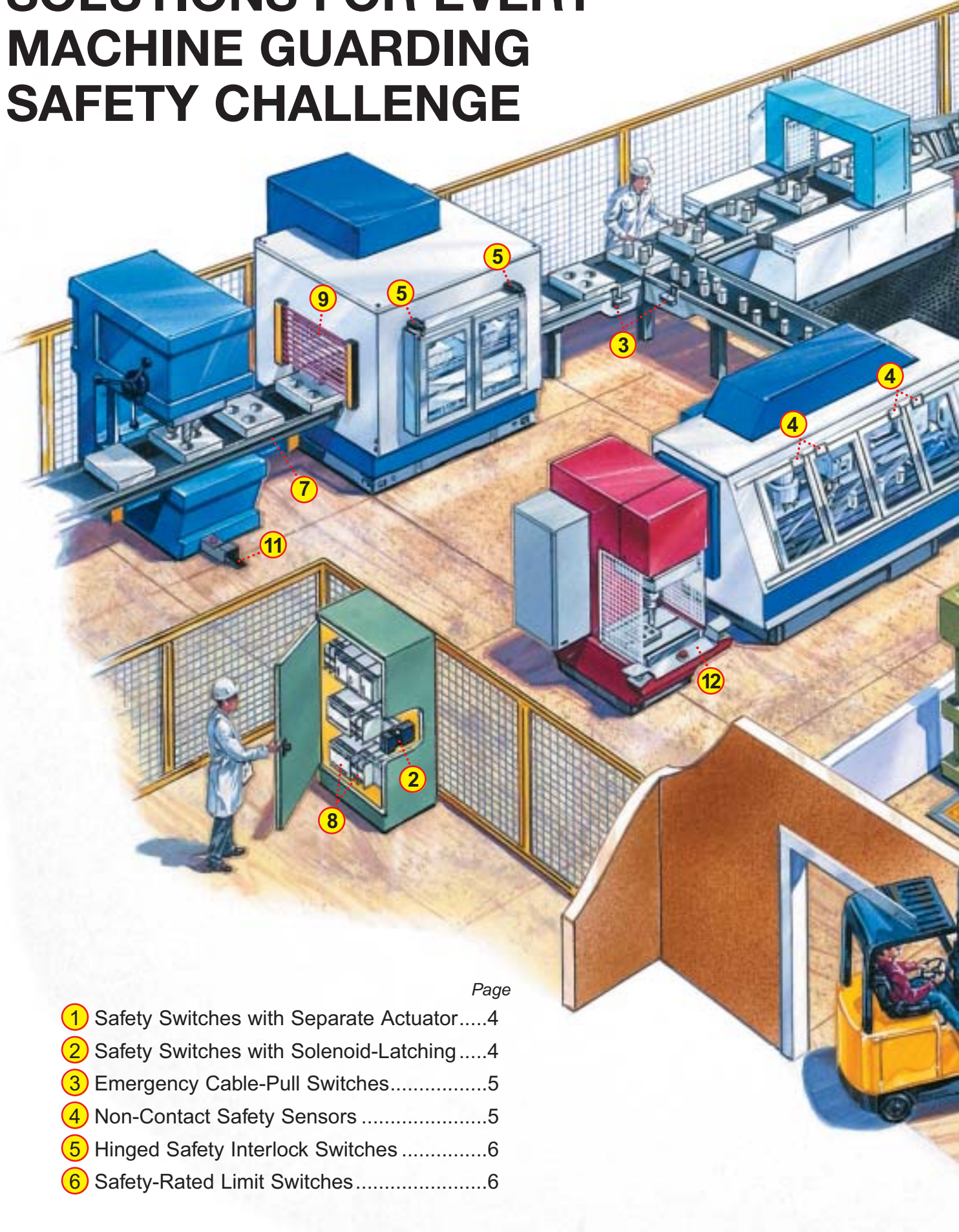


MACHINE GUARDING SAFETY PRODUCTS

- ▶ Safety Interlock Switches
- ▶ Non-Contact Safety Sensors
- ▶ Emergency Cable-Pull Switches
- ▶ Safety Controllers
- ▶ Safety Light Curtains
- ▶ Hinged Safety Interlocks
- ▶ Safety Edges/Bumpers
- ▶ Safety-Rated Limit Switches
- ▶ Safety Foot Switches
- ▶ Safety Pressure Mats

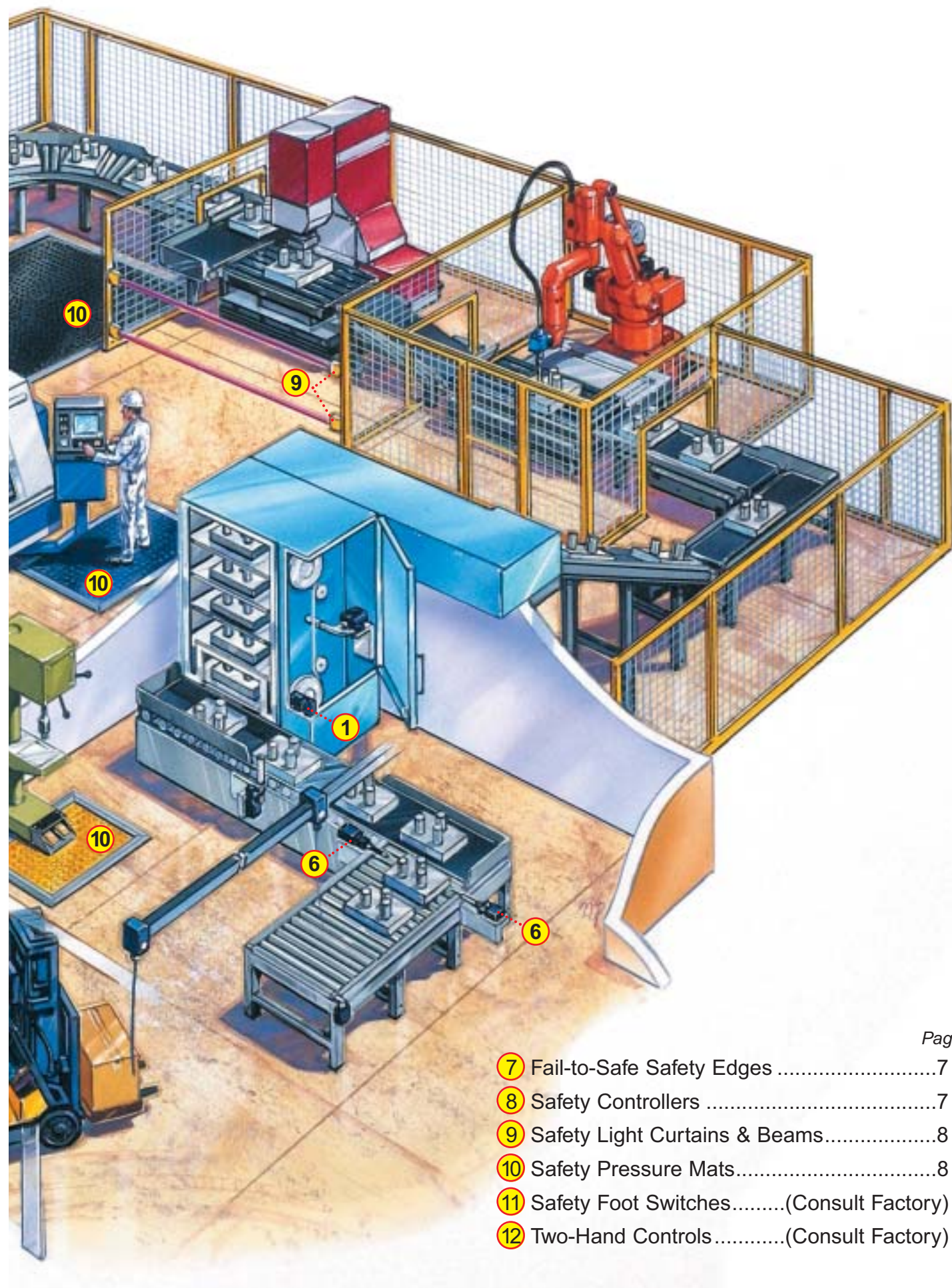
SCHMERSAL
Turning Workplaces Into Safeplaces®

SOLUTIONS FOR EVERY MACHINE GUARDING SAFETY CHALLENGE



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1 KEYED INTERLOCK SWITCHES

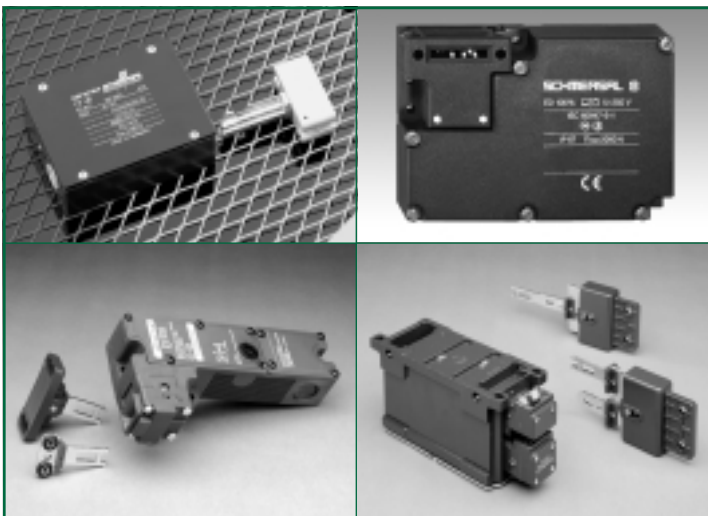


SELECTION GUIDE

| Switch Series | Housing Material | Envelope Dimensions | Contact Configurations |
|-------------------------------|---------------------------------------|--------------------------|--|
| ST14 | Glass-fiber, reinforced thermoplastic | 3/4" x 1 1/4" x 2" | 1 NO & 1 NC 2 NC |
| AZ17 AZ17zi | Glass-fiber, reinforced thermoplastic | 1 1/4" x 1 1/4" x 2 1/2" | 1 NO & 1 NC 2 NC |
| AZ15/16 AZ16zi | Glass-fiber, reinforced thermoplastic | 1 1/4" x 2" x 3" | 1 NC 1 NO & 1 NC 2 NC 1 NO & 2 NC 3 NC |
| TZG | Glass-fiber, reinforced thermoplastic | 1 3/4" x 2" x 3 3/4" | 1 NO & 1 NC 2 NC |
| SDG | Die-cast aluminum | 1 3/4" x 2" x 6" | 1 NO & 2 NC 2 NO & 1 NC 3 NC |
| AZ335 | Die-cast aluminum | 1 1/2" x 1 3/4" x 4 1/2" | 1 NO & 1 NC 2 NC 1 NO & 2 NC 3 NC |
| SHGV (Key Transfer System) | Die-cast aluminum | 1 3/4" x 1 3/4" x 4" | 1 NO & 1 NC |
| AZ415 | Die-cast aluminum | 1 3/4" x 3 1/2" x 4" | 2 NO & 2 NC |

New!

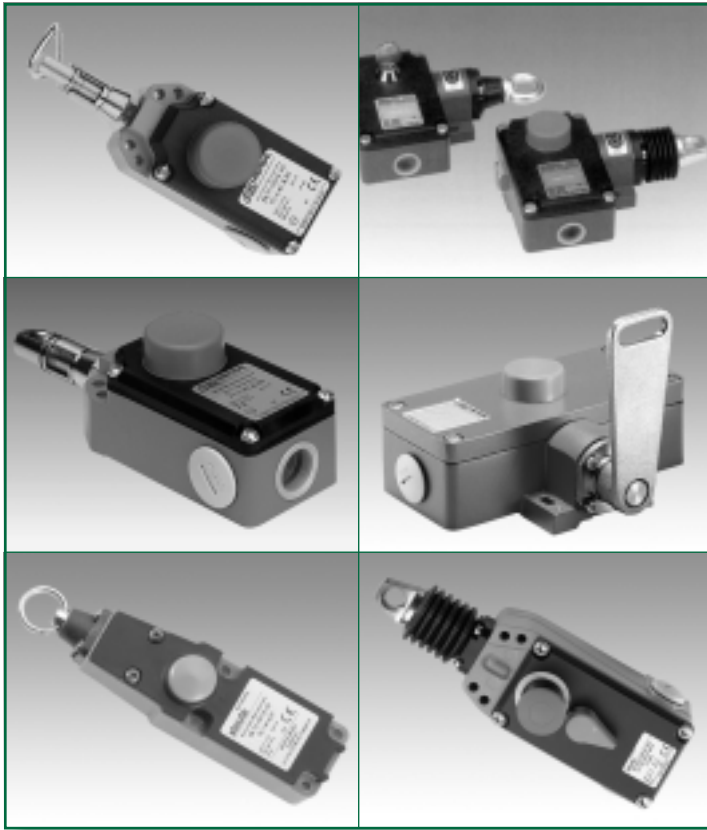
2 KEYED INTERLOCK SWITCHES WITH SOLENOID LATCHING



SELECTION GUIDE

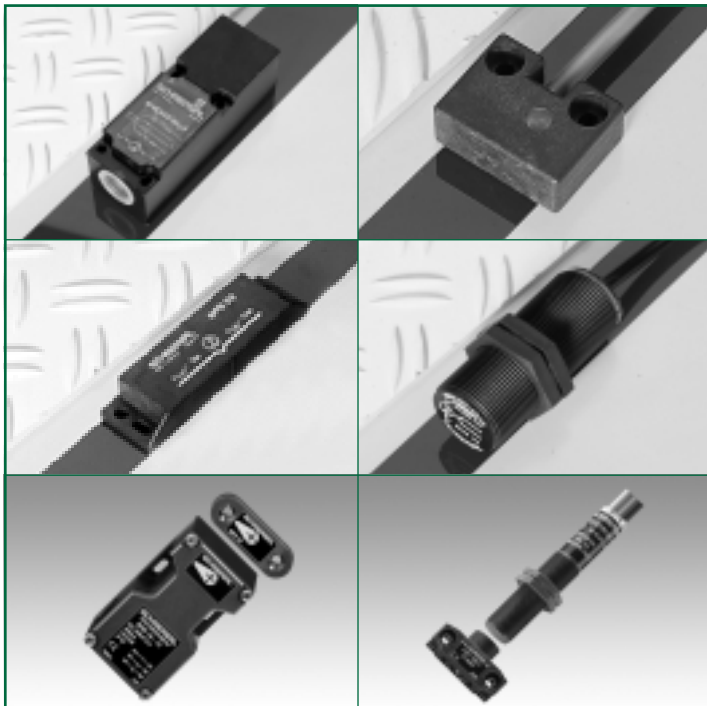
| Switch Series | Housing Material | Envelope Dimensions | Contact Configurations |
|--------------------|---------------------------------------|--------------------------|----------------------------|
| AZM170 AZM170zi | Glass-fiber, reinforced thermoplastic | 1 1/4" x 2 1/2" x 5" | 1 NO & 1 NC 2 NC |
| AZM161 | Glass-fiber, reinforced thermoplastic | 1 1/4" x 3 1/2" x 5 1/8" | 2 NO & 4 NC 3 NO & 3 NC |
| TZF/TZM | Glass-fiber, reinforced thermoplastic | 1 1/2" x 4" x 5" | 2 NO & 1 NC |
| TKF/TKM | Die-cast aluminum | 2 1/2" x 3 1/2" x 8" | 2 NO & 2 NC |
| TZK | Glass-fiber, reinforced thermoplastic | 1 3/4" x 2" x 7" | 1 NO & 2 NC |
| AZM415 | Die-cast aluminum | 2" x 5" x 5 1/2" | 2 NO & 2 NC 3 NO & 3 NC |

3 EMERGENCY CABLE-PULL SWITCHES



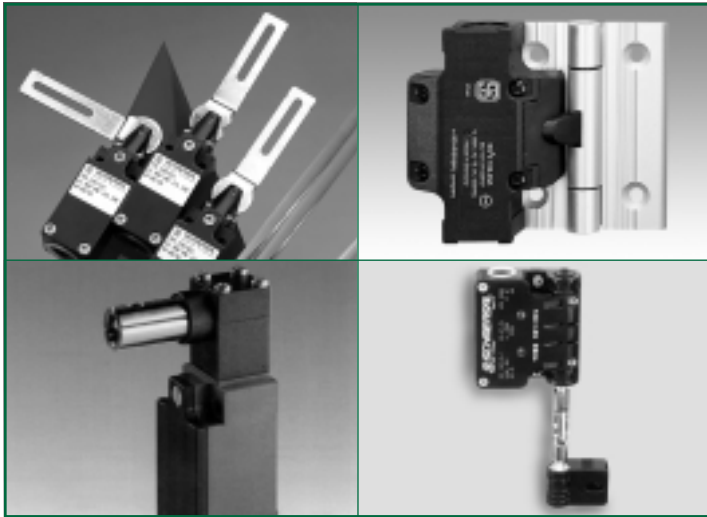
| SELECTION GUIDE | | | | |
|----------------------|---------------------------------------|---------------------------|--|------------|
| Switch Series | Housing Material | Max. Span | Contact Configurations | Ex Rated |
| New! ZS70 | Glass-fiber reinforced thermo-plastic | 26 feet | 1 NO & 1 NC 2 NC | No |
| ZS71 | Die-cast aluminum | 65 feet | 1 NO & 1 NC 2 NC | (Optional) |
| ZS73 | Die-cast aluminum | 165 feet | 1 NO & 1 NC 2 NC | (Optional) |
| ZS75 | Die-cast aluminum | 165 feet | 1 NO & 1 NC 2 NC 2 NO & 2 NC 4 NC | (Optional) |
| ZS441 | Die-cast aluminum | 80 feet | 1 NO & 1 NC 2 NC | No |
| Bi-directional ZS75S | Die-cast aluminum | 165 feet (Each Direction) | 2 NO & 2 NC 4 NC | (Optional) |
| New! ZS80 | Die-cast aluminum | 165 feet | 2 NO & 2 NC 1 NO & 3 NC 4 NC | No |

4 NON-CONTACT SAFETY SENSORS



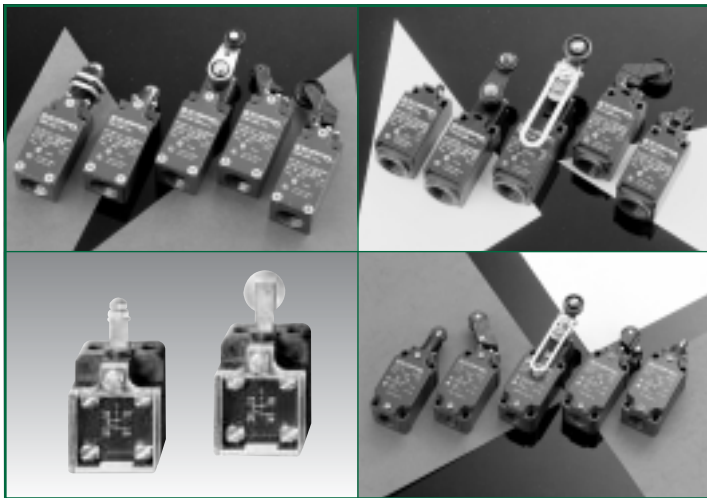
| SELECTION GUIDE | | | |
|-----------------|---------------------------------|-------------------------|--|
| Switch Series | Approximate Envelope Dimensions | Operating Voltage | Contact Configuration(s) |
| BNS250 | 1.0" x 1.4" x 0.5" | 24 VDC | 1 NO & 1 NC 1 NO & 2 NC |
| BNS33 | 3.5" x 1.0" x 0.5" | 24 VAC/DC 120 VAC/DC | 1 NO & 1 NC 1 NO & 2 NC 1 NO 1 NC 2 NC |
| BNS303 | 1.25" | 100 VAC/DC | 1 NO & 1 NC 1 NO & 2 NC |
| BNS30 & BNS300 | 1.25" | 24VDC | 1 NC |
| BNS333 | 4.5" x 1.7" x 1.7" | 24VDC | 1 NC |
| BNS16 | 1.25" x 2" x 3" | 100 VAC/DC | 1 NO & 2 NC |
| BZ16 | 1.25" x 2" x 3" | 24 VDC | 1 NO & 1 NC |
| CSS180 | 3.6" x .75"Ø | 24 VDC | (2) PNP@500mA |

5 HINGED SAFETY INTERLOCK SWITCHES



| SELECTION GUIDE | | | |
|----------------------|---------------------------------------|--|-----------------------------|
| Switch Series | Housing Material | Angular Displacement for Contact Opening | Contact Configurations |
| ES95 SB | Glass-fiber, reinforced thermoplastic | 7° | 1 NO & 1 NC 2 NC |
| TVS335 | Die-cast aluminum, enamel finish | 2° | 1 NO & 1 NC 2 NC |
| TV8S-521 | Die-cast zinc, enamel finish | 6° | 2 NO & 2 NC |
| T.C 235 | Die-cast zinc, enamel finish | 4.5° | 1 NO & 1 NC 2 NC 1 NC |
| T.C 236 | Glass-fiber, reinforced thermoplastic | 4.5° | 1 NO & 1 NC 2 NC 1 NC |
| TESZ1102 TESZ1110 | Glass-fiber, reinforced thermoplastic | 4.5° | 1 NO & 2 NC 3 NC |

6 SAFETY-RATED LIMIT SWITCHES



| SELECTION GUIDE | | | | |
|-----------------|--------------------------------------|--------------------------|----------------------|-----------------------------------|
| Switch Series | Housing Material | Housing Dimensions | Degree of Protection | Contact Configurations |
| Z/T235 | Die-cast zinc | 1 1/4" x 1 1/4" x 2 1/2" | IP67 | 1 NO & 1 NC 2 NO 2 NC |
| Z/T236 | Glass-fibre reinforced thermoplastic | 1 1/4" x 1 1/4" x 2 1/2" | IP67 | 1 NO & 1 NC 2 NO 2 NC |
| Z/T335 | Die-cast aluminum | 1 1/2" x 1 1/4" x 3" | IP67 | 1 NO & 1 NC 2 NO 2 NC |
| Z/T336 | Glass-fibre reinforced thermoplastic | 1 1/2" x 1 1/2" x 3" | IP67 | 1 NO & 1 NC 2 NO 2 NC |
| Z332 | Die-cast aluminum | 1 1/2" x 1 1/2" x 3" | IP65 | 1 NO & 1 NC (snap-action only) |
| C50 | Glass-fibre reinforced thermoplastic | 1" x 1 1/8" x 3/4" | IP30 | 1 NO & 1 NC |

7 FAIL-TO-SAFE SAFETY EDGES



SCHMERSAL's rugged high-tear resistant rubber safety edges are available as sub-components or produced to user specifications. Each features a self-adjusting emitter-receiver pair to assure the same sensitivity regardless of length. When deformed the optical beam is interrupted disabling the safety controller outputs. These IP68-rated edges are available for Safety Category 1 or 4 (depending upon the safety controller selected.) With a choice of aluminum mounting rails, they offer easy installation wherever crushing or shearing points must be safeguarded.

8 SAFETY CONTROLLERS **Protect** SERIES

For monitoring & control of machine guarding safety systems using:

- Safety Interlock Switches
- Safety Limit Switches
- Safety Light Curtains
- E-Stop Pushbuttons
- Cable-Pull Switches
- Two-Hand Controls

SELECTION GUIDE

| Model | Operating Voltage (U _B) | Types of Inputs Monitored | No. of Input Devices Monitored | No. of Safety Outputs | No. of Auxiliary Outputs | Feedback Monitoring | Type of Reset | Cross-short Monitoring |
|--------------------------|-------------------------------------|----------------------------------|--------------------------------|--|--------------------------|---------------------|-------------------------------|------------------------|
| SRB 201 ZH | 24VDC | Two-hand control (dry contacts) | 2 | 2 | 1 N.C. | Yes | Automatic | Yes |
| SRB 206 ST* | 24VAC/DC or 48-230VAC | Dry contacts | 6 | 2 | 6 (Semi-conductor) | Yes | Monitored-manual or Automatic | No |
| SRB 206 SQ* | 24VAC/DC or 48-230VAC | Dry contacts | 6 | 2 | 6 (Semi-conductor) | Yes | Monitored-manual or Automatic | Yes |
| SRB 211 ST | 24VAC/DC | Dry contacts or PNP-type outputs | 1 | 2 (stop category 0) 1 (stop category 1) | 1 N.C. | Yes | Monitored-manual or Automatic | Yes (selectable) |
| SRB 301 LC & SRB 301 LCI | 24VAC/DC | Dry contacts or PNP-type outputs | 1 | 3 | 1 N.C. | Yes | Manual or Automatic | Yes (selectable) |
| SRB 301 ST | 24VAC/DC | Dry contacts or PNP-type outputs | 1 | 3 | 1 N.C. | Yes | Monitored-manual or Automatic | Yes (selectable) |
| SRB 301 ST-230V | 48V-230VAC | Dry contacts | 1 | 3 | 1 N.C. | Yes | Monitored-manual or Automatic | No |
| SRB 301 SQ-230V | 48V-230VAC | Dry contacts | 1 | 3 | 1 N.C. | Yes | Monitored-manual or Automatic | Yes |

*Suitable for use in systems designed for up to Safety Control Category 3 per EN954-1. All others are suitable for use in systems up to Safety Control Category 4 per EN954-1. Other models available. Please consult factory.



9 SAFETY LIGHT CURTAINS & BEAMS



SCHMERSAL offers a family of fully CE-compliant "Category 4" Safety Light Curtains. Units are available with 14mm and 30mm resolution for protection fields of 160mm to 1810mm. Each features an integral safety controller with dual 500mA PNP safety outputs and built-in digital diagnostics for easy installation and maintenance. Units are UL & CSA certified, and IP65 rated.

In addition SCHMERSAL offers their Series SLB Category 2 and Category 4 single light beams for perimeter guarding. Category 2 units feature a 4m sensing range. Category 4 units feature a 15m sensing range. Each is available with a compatible safety controller and plug-in cables for easy installation.

10 SAFETY PRESSURE MATS



SCHMERSAL offers a broad family of standard and custom-made industrial-grade safety pressure mats. Available in 13 standard sizes ranging from 250mm x 250mm to 1200mm x 1500mm and an infinite choice of other shapes and/or sizes. Their unique rugged construction features ...

- A 100% bond between vinyl surface and electrodes ... eliminating migration of moisture and shorting.
- Dry internal atmosphere ... eliminating possible condensation and shorting.
- Rugged mechanical cable terminations coupled with a unibody molded stress relief.

Tolerant to fork lift traffic, each is fully CE-compliant and, when coupled with our compatible safety controllers, meets Safety Category 3 requirements.

SCHMERSAL

Turning Workplaces Into Safeplaces®

660 White Plains Road, Suite 160, Tarrytown, NY 10591 • Telephone 914-347-4775 • Fax 914-347-1567

web: www.schmersalusa.com • e-mail: info@schmersalusa.com

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