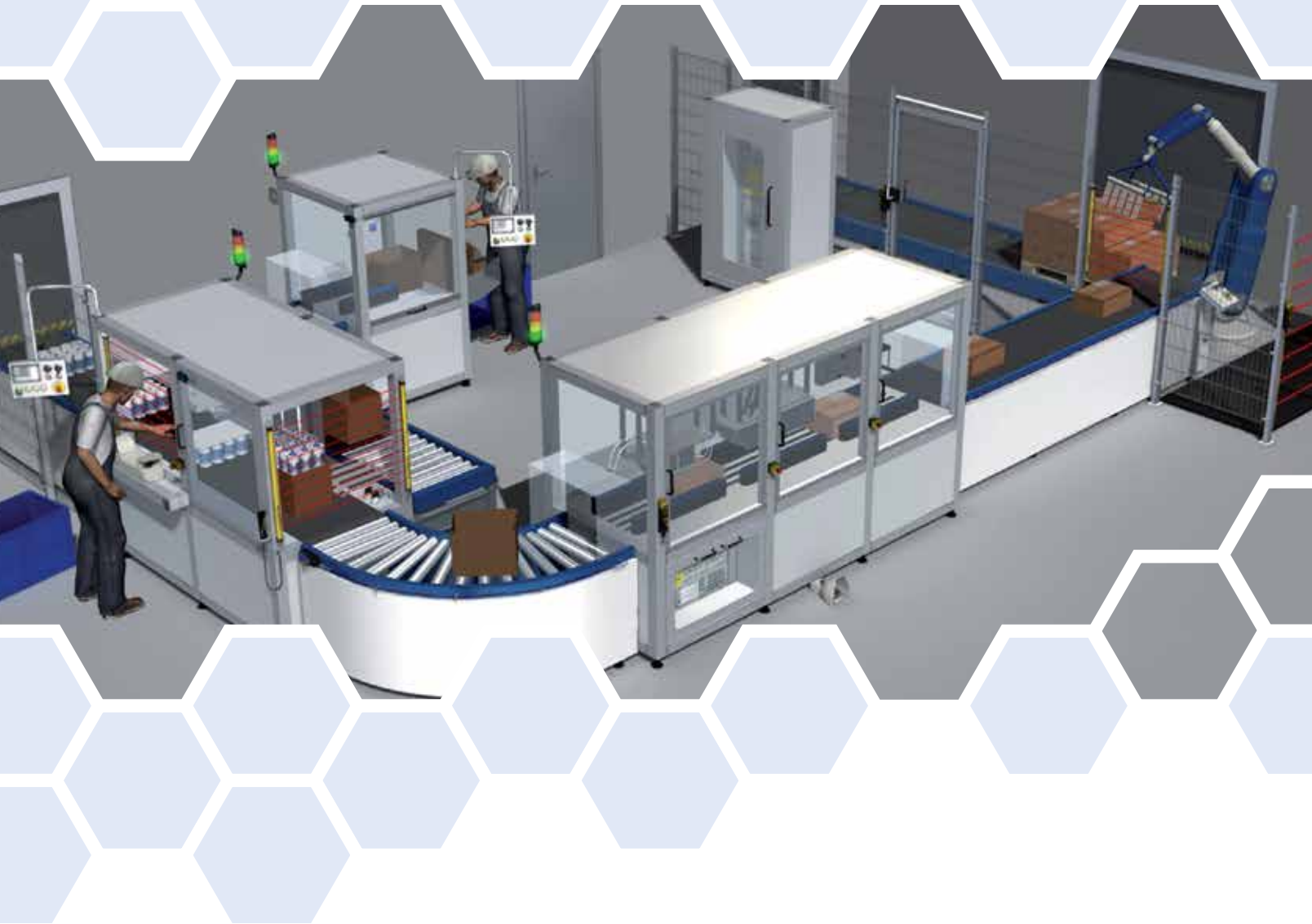


Machine Guarding Safety Products

GK-C 2018: Product line overview



SCHMERSAL
Safe solutions for your industry



Guard Door Monitoring

Keyed Interlocks
Solenoid Locks
Coded Magnet Sensors
Electronic Locks
Electronic Safety Sensors
Serial Diagnostic Gateway
Hinged Safety Switches

Page 4-7



Safety Rated Limit Switches

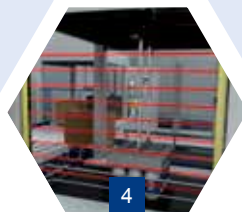
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Tactile Safety Devices

Safety Edges
Safety Mats

Page 9



Optoelectronic Safety Devices

Safety Light Curtains
Safety Light Grids
Safety Light Barriers

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for iPad or Android tablets



Control Devices with Safety Function

Emergency Cable Pulls
Emergency Stop Buttons
Control Panels
Enabling Device
Foot Switches
Two Hand Control

Page 10



Safety Controllers

Protect SRB , SRB-E
Differentiated Input
Double Reset
Input Expanders
Output Expanders
Programmable Safety Controllers
Safe Speed Monitoring

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Key Transfer System

Page 5







Safe Solutions For Your Industry

Food
Wood Processing
Packaging
Machine Tools
Heavy Industry
Elevators

Page 16






Keyed Interlocks



Series	AZ15	AZ16	AZ17	TZG	AZ3350	AZ415	NEW AZ201
Housing	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Die-Cast Aluminum	Die-Cast Aluminum	Thermoplastic
IP Rating	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Dimensions	2" 3" 1.25"	2" 3.5" 1.25"	1.25" 2.5" 1.25"	2" 3.75" 1.75"	1.75" 4.5" 1.5"	3.5" 4" 1.75"	1.57" 8.66" 1.96"
Connections	Screw terminals Quick Connect	Screw terminals Quick Connect	IDC connection Quick Connect	Screw terminals	Screw terminals	Screw terminals	Screw terminals Cage clamps Quick Connect
Contact Options	1 NC	1 NO & 1 NC 2 NC 1 NO & 2 NC 3 NC	1 NO & 1 NC 2 NC	1 NO & 1 NC 2 NC	1 NO & 2 NC 3 NC	2 NC / 1NO,1NC 2 NC / 2 NC 2 NC / 2 NO 1NO,1NC/1NO,1NC	1P2P SD2P
Features	4 key entries	Individual coding STS Door handle 4 key entries	Individual coding B25 Door handle 2 key entries	Rotatable head	Rotatable head STS Door handle	STS Door handle Adjustable Ball latch (up to 400N)	RFID Sensor individual coding Door handle
Special Version		 					





Solenoid Interlocks



Series	AZM161	AZM170	TZF/TZM	AZM190	AZM415
Housing	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Die-Cast Aluminum
IP Rating	IP67	IP67	IP67	IP67	IP67
Dimensions	3.5" 5.125" 1.25"	2.5" 5" 1.25"	4" 5" 1.5"	2" 7" 1.75"	5" 5.5" 2"
Connections	Screw terminals Cage clamps Quick Connect	IDC Connection Screw terminals Quick Connect	Screw terminals	Screw terminals	Screw terminals Quick Connect
Contact Options	1NO & 1NC / 3 NC 1NO & 1NC / 1NO & 2NC 1NO & 2NC / 3 NC 1NO & 2NC / 1NO & 1NC 1NO & 2NC / 1NO & 2NC	1NO & 1NC 2NC 1NO & 1NC / 1NO & 1NC 1NO & 1NC / 2NC 2NC / 1NC 2NC / 1NO 1NO & 2NC / 0NO & 0NC 1NO & 2NC / 1NO & 1NC 1NO & 2NC / 2NC	2 NC / 1 NO 2 NC / 2 NO	1NO & 1NC / 1NC 1NO & 1NC / 1NO 2NC / 1NC 2NC / 1NO	1NO & 1NC / 1NO & 1NC 1NO & 1NC / 2NC 1NO & 1NC / 2NO 2NC / 1NO & 1NC 2NC / 2NC 2NC / 2NO
Features	STS Door handle Emergency Exit	Individual coding B25 Door handle	Rotatable head	Rotatable head	STS Door handle Emergency Exit
Special Version	 	 			





Coded Magnet Sensors



Series	BNS260	BNS36	BNS40S	BNS16	BNS333	BNS30/300/303	BNS-B20
Housing	Thermoplastic	Thermoplastic	Stainless Steel	Thermoplastic	Thermoplastic	Thermoplastic Metal (BNS30)	Thermoplastic
IP Rating	IP67	IP67	IP69K	IP69K	IP65	IP65	IP67
Dimensions	1" 1.4" 0.5"	1" 3.5" 0.5"	1" 3.5" 0.5"	2" 3.5" 1.25"	1.7" 4.5" 1.7"	1.18" dia 3.07"	
Connections	Quick Connect Prewired cable	Quick Connect Prewired cable	Prewired cable	Screw Terminals Quick Connect	Screw Terminals	Quick Connect Prewired cable	Quick Connect Prewired cable
Contact Options	1 NO & 1 NC 2 NC 1 NO & 2 NC 3 NC	1 NO & 1 NC 2 NC 1 NO & 2 NC 3 NC	1 NO & 2 NC	1 NO & 2 NC	1 NC	30/300: 1 NC 303: 1 NO & 1 NC 2 NC 1 NO & 2 NC 3 NC	1 NO & 1 NC 2 NC 1 NO & 2 NC
Features	Optional LED	Optional LED	Rear side mounting Optional LED	Double actuation version	5 actuation planes	Optional LED	Door handle Optional LED
Special Version						 (303)	




Key Transfer System



Series	SHGV	SHGV/ESS21S2	SVE	SVM
Type	Guard Locking Device	Key Selector Switch	Multikey Interlock	Key Distribution Station
Housing	Metal	Metal/Thermoplastic	Thermoplastic	Aluminum (box) Stainless Steel (plate)
IP Rating	IP65	IP65	IP65	IP65 / IP40
Connection	N/A	Screw Terminals	Screw Terminals	N/A
Contact Options	N/A	1NO & 1NC	Maget: 1NO & 1NC Selector: 1NO & 1NC 1NO & 2NC	N/A
Features	1 or 2 locking barrels	Additional contacts Colored key grips	1, 2 or 3 selector switches	6 or 10 keys
Special Version				



Electronic Safety Sensors



Series	CSS180	CSS30S	CSS34	RSS260	RSS36	RSS16
Technology	Pulse Echo	Pulse Echo	Pulse Echo	RFID	RFID	RFID
Housing	Thermoplastic	Stainless Steel	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
IP Rating	IP67	IP69K	IP67	IP67	IP69K	IP67
Dimensions	0.7" dia 3.6"	1.18" dia 3.5"	1" 4" 1"	1.5" 1.25" 0.7"	1" 4.2" 1"	2" 3.5" 1.25"
Connections	Quick Connect Prewired cable	Quick Connect	Quick Connect Prewired cable	Quick Connect	Quick Connect	Screw terminals Cage clamps Quick Connect
Contact Options	1P2P	1P2P SD2P	1P2P SD2P	1P2P SD2P	1P2P SD2P	1P2P SD2P
Features	Flush mounting Integrated LED	Concealed mounting Integrated LED	Actuation from end or side EDM Version Integrated LED	Individual coding Integrated LED	Individual coding Magnetic latching version (18N) with door stop Integrated LED	Individual coding Magnetic latching version (40/60N) with door stop Integrated LED
Special Version						

Electronic Locking Devices



Series	MZM100	AZM201	AZM300	AZM400
Technology	Pulse Echo	RFID	RFID	RFID
Locking	Electromagnet	Solenoid	Solenoid	Motorized Bolt
Housing	Thermoplastic	Thermoplastic	Thermoplastic	Die cast aluminum
IP Rating	IP67	IP67	IP69K	IP67
Dimensions	1.75" 7.25" 1.75"	1.57" 8.66" 1.96"	3.4" 4" 1.33"	6.2" 3" 1.85"
Connections	Quick Connect	Screw terminals Cage clamps Quick Connect	Quick Connect	Quick Connect
Contact Options	1P2P SD2P	1P2P SD2P	1P2P SD2P	1P2P 2P2P (ST2)
Features	Door stop Magnetic latching	Individual coding Door handle Lockout device Emergency Exit	Individual Coding Door Stop Adjustable latching Emergency Exit	Individual Coding Emergency Exit Electric by-pass
Special Version				

Serial Diagnostic Gateways



SD-I-DP-V0-2

Convert Serial Diagnostic signals to the PROFIBUS DP protocol



SD-I-U-

Convert Serial Diagnostic signals to the following field bus interfaces:

CANopen EitherNet IP Mobius/TCP
DeviceNet ProfiNetIO CC-Link
EtherCAT



PFB

Passive Field Box
connect up to 4 electronic safety
devices



CSS-Y-8P | CSS-Y-A-8P

Adapters for
series connections

Accessories



Mounting plates

Available for most models,
ordered separately



Lock out devices

Available for most models,
ordered separately



TFA / TFI

Guard alignment aid



Tamperproof screws

one-way screws



CSA-M-1

Magnetic latch



PL-M20

Pilot light kits, M16 or M20

Connector Cables



Ordering codes:

①-②-③-④-⑤-⑥-⑦-⑧-⑨-⑩-⑪-⑫-⑬

① Cable type

A Pre-wired cable (connector one end)
V Interconnector (connector both ends)
S Connector without cable

② Connector type

K female connector
S male connector
SS male connector - male connector
SK male connector - female connector

③ Number of poles

3P	3-pole	8P	8-pole
4P	4-pole	8+1P	9-pole
5P	5-pole	12P	12-pole
6P	6-pole		

④ Termination diameter

M8	M8 / round 8 mm
M12	M12
M23	M23

⑤ Attachment

R Latching interlocking
S Screw locking

⑥ Design

G straight
W angled

⑦ Cable length

X	(No cable)	2.5M	2.5 meters
0,5M	0,5 meter	5M	5 meters
1M	1 meter	10M	10 meters
1.5M	1.5 meters	15M	15 meters
2M	2 meters	20M	20 meters

⑧ Cable color

X (No cable)
BK Black
GY Grey

⑨ Material of the cable

X (No cable)
1 PVC
2 PUR

⑩ LED indicator

X without

⑪ Coding

X without
A A-Coding
B B-Coding

⑫ Approval

1 without
2 UL(USA)
3 CSA (CAN)
4 cULus (USA/CAN)

⑬ Protection class

69 IP69K Rated

Not all combinations are possible.

Safety Rated Limit Switches



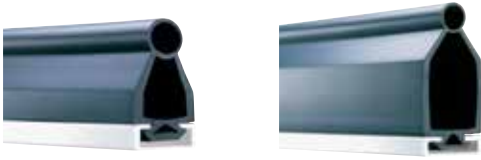
Series	PS116	T/Z235	T/Z236	T/Z335	T/Z336
Housing	Metal head Thermoplastic body	Metal	Thermoplastic	Metal	Thermoplastic
IP Rating	IP66, IP67	IP67	IP67	IP67	IP67
Dimensions	1.22" 2.24" 0.62"	1.25" 1.25" 2.5"	1.25" 1.25" 2.5"	1.5" 1.25" 3"	1.5" 1.25" 3"
Connections	Quick Connect Prewired cable	Screw terminals Quick Connect	Screw terminals Quick Connect	Screw terminals Quick Connect	Screw terminals Quick Connect
Contact Options	1 NO & 1 NC 2 NO & 1 NC 1 NO & 2 NC 2 NC	1 NO & 1 NC 2 NO 2 NC	1 NO & 1 NC 2 NO 2 NC	1 NO & 1 NC 2 NO 2 NC 1 NO & 2 NC 3 NC	1 NO & 1 NC 2 NO 2 NC
Features	10 Actuation heads Rotatable heads 45° steps	15 Actuation heads Rotatable heads 90° steps	15 Actuation heads Rotatable heads 90° steps	8 Actuation heads Rotatable heads 90° steps	8 Actuation heads Rotatable heads 90° steps
Special Version					

Hinged Safety Switches



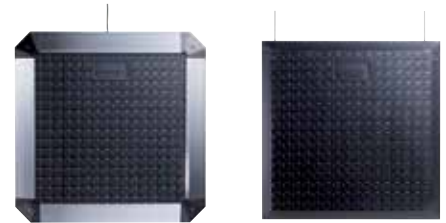
Series	T.C235	T.C236	TV.S335	TESZ	TESF	TESK
Type	Limit Switch	Limit Switch	Axle Limit Switch	Hinge replacement	Hinge replacement	Hinge replacement
Housing	Metal	Thermoplastic	Metal	Thermoplastic	Metal	Metal
Max rotation	180°	180°	360°	135°	180°	270°
Opening Angle	4.5° (preset for left, right or swing doors)	4.5° (preset for left, right or swing doors)	2°	4°	3° (Adjustable or preset @ 0° or 180°)	3° (Adjustable or preset @ 0° or 180°)
IP Rating	IP67	IP67	IP67	IP65	IP65	IP65
Dimensions	1.25" 1.25" 2.5"	1.25" 1.25" 2.5"	1.5" 1.25" 3"	3" 2.4" 1.4"	3.5" 4.5" 0.9"	3" or 3.8" 4.5" 0.8"
Connections	Screw Terminals	Screw Terminals	Screw Terminals Quick connector	Screw Terminals	Screw Terminals Quick connector	Quick Connect Prewired Cable
Contact Options	1 NO & 1 NC 2 NC 1 NC	1 NO & 1 NC 2 NC 1 NC	1 NO & 1 NC 2 NC 1 NO & 2 NC 3 NC	1 NO & 2 NC 3 NC	1 NO & 2 NC 2 NO & 2 NC	2 NC 1 NO & 1 NC 1 NO & 2 NC 1 NO & 3 NC 2 NO & 2 NC
Features	Rotatable head 90° steps	Rotatable head 90° steps	Universal joint Rotatable head 90° steps	Additional matching hinge	Additional matching hinge. Inside or surface mounting	Additional matching hinge. Inside or surface mounting.
Special Version						

Safety Edges



Series	SE 40	SE 70
Dimensions	1" wide, 1.5" high	1.18" wide, 2.3" high
Length	SE-P40-1250 = 1,250 mm SE-P40-2500 = 2,500 mm SE-P40-5000 = 5,000 mm SE-P40-10000 = 10,000 mm	SE-P70-1250 = 1,250 mm SE-P70-2500 = 2,500 mm SE-P70-5000 = 5,000 mm SE-P70-10000 = 10,000 mm
Mounting rails	SE-AL10-1250 SE-AL12-1250	SE-AL20-1250 SE-AL22-1250
Additional Components	SE-T.40 end cap SE-SET sensor set SE-100C Safety Controller SE-304C Safety Controller SE-400C Safety Controller	SE-T.70 end cap

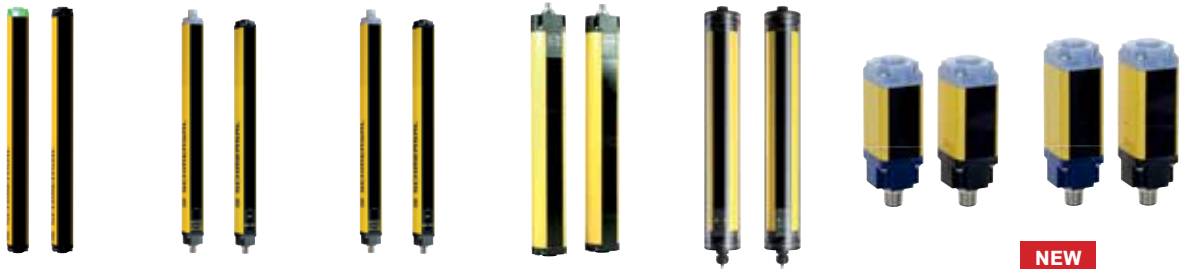
Safety Mats




Series	SMS4	SMS5
Dimensions	250 mm x 500 mm 500 mm x 500 mm 500 mm x 1000 mm 750 mm x 1000 mm 1000 mm x 1000 mm 1000 mm x 1500 mm	250 mm x 500 mm 500 mm x 500 mm 500 mm x 1000 mm 750 mm x 1000 mm 1000 mm x 1000 mm 1000 mm x 1500 mm
Mounting ramp edge	Separate	Integrated
Accessories	Precut trim kits: SMS4-RS-250-500 SMS4-RS-500-500 SMS4-RS-500-1000 SMS4-RS-750-1000 SMS4-RS-1000-1000 SMS4-RS-1000-1500 SRB301HC Safety Controller	----

Custom sizes, colors, and tread pattern are available.

Optoelectronic Safety Devices



Series	SLC440COM	SLC440	SLC445	SLC420	SLC420 69K	SLB440	NEW SLB440...-H-EH
Profile	1" 1.30"	1" 1.30"	1" 1.30"	2" Dia	2.3" Dia	1.1" 1.25" 3.6"	1.1" 1.25" 5.15"
Resolution	14 mm, 30 mm, 35 mm	14 mm, 30 mm	14 mm, 30 mm	14 mm, 30 mm, 50 mm	14 mm, 30 mm	----	----
Protection heights	330 mm ... 1930 mm	170 mm ... 1930 mm	170 mm ... 1770 mm	170 mm ... 1770 mm	170 mm ... 1450 mm	----	----
Range	0.3 m ... 10 m	0.3 m ... 10 m	0.3 m ... 10 m	0.3 m ... 18 m	0.3 m ... 10 m	0.3 m ... 15 m	0.3 m ... 18 m
Functions	Start interlock LED end cap	LED end cap 7 segment display Blanking Contactor control Beam Coding Start interlock Double reset	LED end cap 7 segment display Muting Cyclic function Multiscan + all SLC440 functions	Blanking Contactor control Beam Coding Start interlock	Blanking Contactor control Beam Coding Start interlock IP69K Rated	Single beam LED end cap Start Interlock Beam Coding	Single beam LED end cap Start Interlock Beam Coding High range to 75 m Optional heater for -30°C
Type 2 Version	----	----	----	SLC220	SLC220 69K	SLB240	----
Light Grid Version	SLG440COM 2, 3, or 4 beam	SLG440 2, 3, or 4 beam	SLG445 2, 3, or 4 beam	SLG420 2, 3, or 4 beam	SLG420 69K 2, 3, or 4 beam	----	----
Special Version							

Emergency Cable Pull Switches



Series	ZQ700	ZQ900	T3Z068
Housing	Thermoplastic	Metal	Metal
IP Rating	IP67	IP65, IP67	IP65
Dimensions	1.6" 1.6" 6.3"	2.8" 8.6" 3.8"	7.1" 7" 4.5"
Connections	Screw Terminals	Screw Terminals	Screw Terminals
Contact Options	1 NO & 1 NC 2 NC	1 NO & 1 NC 2 NO & 2 NC 1 NO & 3 NC 2 NC, 4 NC	1 NO & 1 NC 2 NO & 2 NC 3 NO & 3 NC
Max cable length	10 meters	75 meters	50 meters (both directions)
Features	Reset button	Reset button Optional E-stop button	Bi-Directional Pull ring or key reset
Special Version			

Accessories (complete custom kits or order installation components separately)



E-Stop Buttons



EDRRZ40RT	EDRRS40RT
Metal button	Metal button, key reset



KDRRKZ40RT	ADRR40RT
Thermoplastic button	Thermoplastic button



NDRZ50RT	RDRZ45RT
IP69K, Thermoplastic	Rugged metal button



E-STOP 201	NAS311ST1-AS
ADRR40RT in housing	AS-I E-Stop in housing

Control Devices with Safety Function



Series	ZSD	TFH	SEPK	SEPG	BDF200	BDF100
Type	Enabling Device	Safety Foot Switch	Two Hand Control	Two Hand Control	Control Panel	Control Panel
Features	Off-On-Off switch Optional top button	Off-On-Off switch Hooded housing 2 pedal version Reset button	Plastic housing Custom versions Stands available	Metal housing Custom versions Stands available	Up to 4 controls Plastic housing Wide variety of control elements	Single operator Plastic housing Wide variety of control elements
Special Version						

SRB-E Multifunction Electronic Safety Controllers



Model	Type of inputs monitored	No of devices monitored	No of safety outputs	No of auxiliary outputs
SRB-E-201LC	Dry & PNP	1	2 PNP	1
SRB-E-201ST	Dry & PNP two-hand control	1	2 PNP	1
SRB-E-204ST	Dry & PNP	4	2 PNP	4
SRB-E-301ST	Dry & PNP	1	3 Relay	1
NEW SRB-E-301MC	Dry & PNP	1	3 Relay	1
SRB-E-212ST	Dry & PNP	1	2 stop 0, 1 stop 1	2
NEW SRB-E-232ST	Dry & PNP	1	2 stop 0, 3 stop 1	2
SRB-E-322ST	Dry & PNP	1	3 stop 0, 2 stop 1	2

Input Expansion

SRB-E-204PE	Dry & PNP	4	2 **	4
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Unit for 2 Guards

SRB-E-402ST	Dry & PNP	2	4 Relay	2
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** SRB-E-204PE outputs must be monitored by safety controller

Programmable Safety Controller PSC1

- Safe logic control according to the Machinery Directive 2006/42/EC
- Safe axis monitoring according to EN 61800-5-2 for up to 12 axes
- Universal communication module:
 - Supports standard field bus systems including the safety protocols with only one hardware
 - Setting and resetting the field bus protocols by software
 - Safety protocols are enabled by a Safety Protocol Card
 - integrated, local, safe communication (Ethernet SDDC) for connecting safe remote IOs and for a safe cross-communication
- Integrated Schmersal SD Bus connection including gateway functionality to standard field bus systems
- Acceptance of safety functionality SIL 3 according to IEC 61508 / IEC 62061, or PL e and Cat 4 according to EN ISO 13849-1, EN 50178.



Safe Speed Monitoring



Series	AZS 2305	NEW SRB-E-302FWS-TS	NEW SRB-E-402FWS-TS	DN3PS2
Type	Timer	Standstill, timer	Standstill, timer	Senorless Standstill
Operating Voltage	24V DC, 110V AC, 230V AC	24V DC	24V DC	24V DC
Input types	Dry Contacts	1 or 2 impulse sensors	1 or 2 impulse sensors	Back EMF
Enabling circuits	3	2 Relay 1 PNP	2 Relay 2 PNP	2
Auxillary outputs	2 PNP	2 PNP	1 NC, 1 PNP	None

General Purpose Safety Controllers



Model	Operating Voltage (UB)	Types of Inputs Monitored	No. of Devices Monitored	No. of Safety Outputs	No. of Aux. Outputs	Feedback Monitoring	Type of Reset	Cross-short Monitoring
SRB 201 ZH	24V DC	Two-hand control (dry contacts)	2	2	1 NC	Yes	Automatic	Yes
SRB 301 HC/R	24V AC/DC or 48-230V AC	Two-hand control Safety Mats	2	3	1 NC	Yes	Monitored-manual	Yes
SRB 301 HC/T	24V AC/DC or 48-230V AC	Safety Mats	1	3	1 NC	Yes	Monitored-manual or Automatic	Yes
SRB 202 MSL	24V DC	Muting module	2	2	2	Yes	Automatic	Yes
SRB 206 SQ	24V AC/DC	Dry contacts	6	2	6 PNP	Yes	Monitored-manual or Automatic	Yes
SRB 211 AN	24V AC/DC	Dry contacts	1	2 (stop 0) 1 (stop 1)	1 PNP	Yes	Monitored-manual or Automatic	Yes (selectable)
SRB 211 ST	24V AC/DC	Dry contacts or PNP-type outputs	1	2 (stop 0) 1 (stop 1)	1 PNP	Yes	Monitored-manual or Automatic	Yes (selectable)
SRB 301 LC or SRB 301 LCI	24V AC/DC	Dry contacts	1	3	1 NC	Yes	Manual or Automatic	Yes (selectable)
SRB 301 LCB	24V AC/DC	Dry contacts or PNP-type outputs	1	3	1 NC	Yes	Manual or Automatic	No
SRB 301 MC	24V AC/DC	Dry contacts or PNP-type outputs	1	3	1 NC	Yes	Manual or Automatic	Yes
SRB 301 MA	24V AC/DC	Dry contacts or PNP-type outputs	1	3	1 NC	Yes	Monitored-manual	Yes (selectable)
SRB 301 ST	24V AC/DC	Dry contacts or PNP-type outputs	1	3	1 NC	Yes	Monitored-manual or Automatic	Yes (selectable)
SRB 301 ST- 230V	48V-230V AC	Dry contacts	1	3	1 NC	Yes	Monitored-manual or Automatic	No
SRB 324ST	24V AC/DC	Dry contacts or PNP-type outputs	1	3 (stop 0) 2 (stop 1)	1 N.C. plus 3 PNP		Monitored-manual or Automatic	Yes
SRB 504 ST	24V AC/DC	Dry contacts or PNP-type outputs	1	5	1 N.C. plus 3 PNP	Yes	Monitored-manual or Automatic	Yes
SRB 100 DR	24V AC/DC	Dry contacts	2	1	None	N/A	Monitored-manual DOUBLE RESET	N/A

Differentiated-Output Safety Controllers

SRB 202 C	24V DC	Dry Contacts	2	2	2 NC	Yes	Depends upon model	Depends upon model
SRB 400 C	24V DC	Dry Contacts	2	4	None	Yes	Depends upon model	Depends upon model

Safety Output Expansion Module

SRB 402 EM	24V AC/DC	N/A	N/A	4	2 NC	Yes	Automatic	N/A
SRB 401 EM	115V AC	N/A	N/A	4	1 NC	Yes	Automatic	N/A

Input Expansion Module

Protect-IE	24V DC	Dry contacts	4	N/A	4 PNP	N/A	N/A	Yes
Protect-PE	24V DC	Dry/PNP contacts	4	N/A	5 PNP	N/A	N/A	Yes



SATECH Guarding Systems

Schmersal is proud to partner with SATECH to provide guarding solutions.

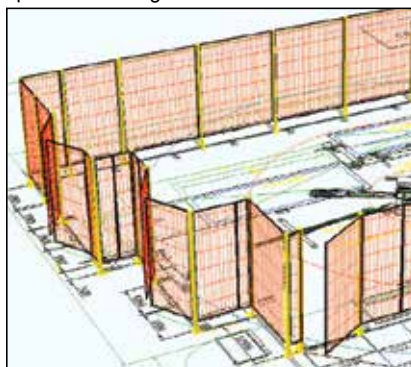
These guarding systems are of high density steel construction. Upright posts and panel frame members are a solid extrusion for extra durability. Fence mesh is constructed by 2mm diameter steel wire, arc welded at each junction. Fencing mesh is spaced 19 mm apart with cross members every 100 mm. This predominantly vertical slot opening reduces interference when trying to view processes on the far side of the fence. The design also deters workers from climbing the fence by providing no toe holds, when panels are installed with the cross pieces inside the hazardous area.

Components are finished using hard-wearing epoxy polyester powder paints. Typical constructions consist of yellow (RAL1021) upright posts with black (RAL9005) panels and accessories. Components can be produced in custom colors to meet individual customer requirements.

These systems are custom designed for each client. We collaborate on the design to meet the specific requirements of each customer, using patented software for the selection of the optimal modular components. Each design generates 3D models and a full parts list.

The custom designed solutions will include all of the necessary installation hardware. Panels and posts can be directly bolted together, or use patented adjustable clip systems. The system utilizes patented captive fastening systems, in accordance with Machinery Directive 2006/42/CE; If a panel needs to be temporarily removed, the fastening hardware will remain in place so pieces will not be lost.

The modular panels of each series are available in a wide range of sizes and option materials. Additional accessories to finish off the system include access doors, kick plates, and cable duct supports. We offer a wide range of safety locks, door handle assemblies, and safety sensors, with special mounting brackets which can be integrated into the guards for a complete safety solution.



Watch an introduction
video on YouTube



For more information consult our
SATECH catalog



tec.nicum

excellence in safety

Safety services from tec.nicum

Machine safety is a challenging and multi-layered topic, which presents real challenges not only to machine builders but also safety engineers. During the selection of safety equipment, consideration has to be given to technical aspects as well as applicable regulations and substantiated standards. This complexity often requires extensive specialist knowledge.

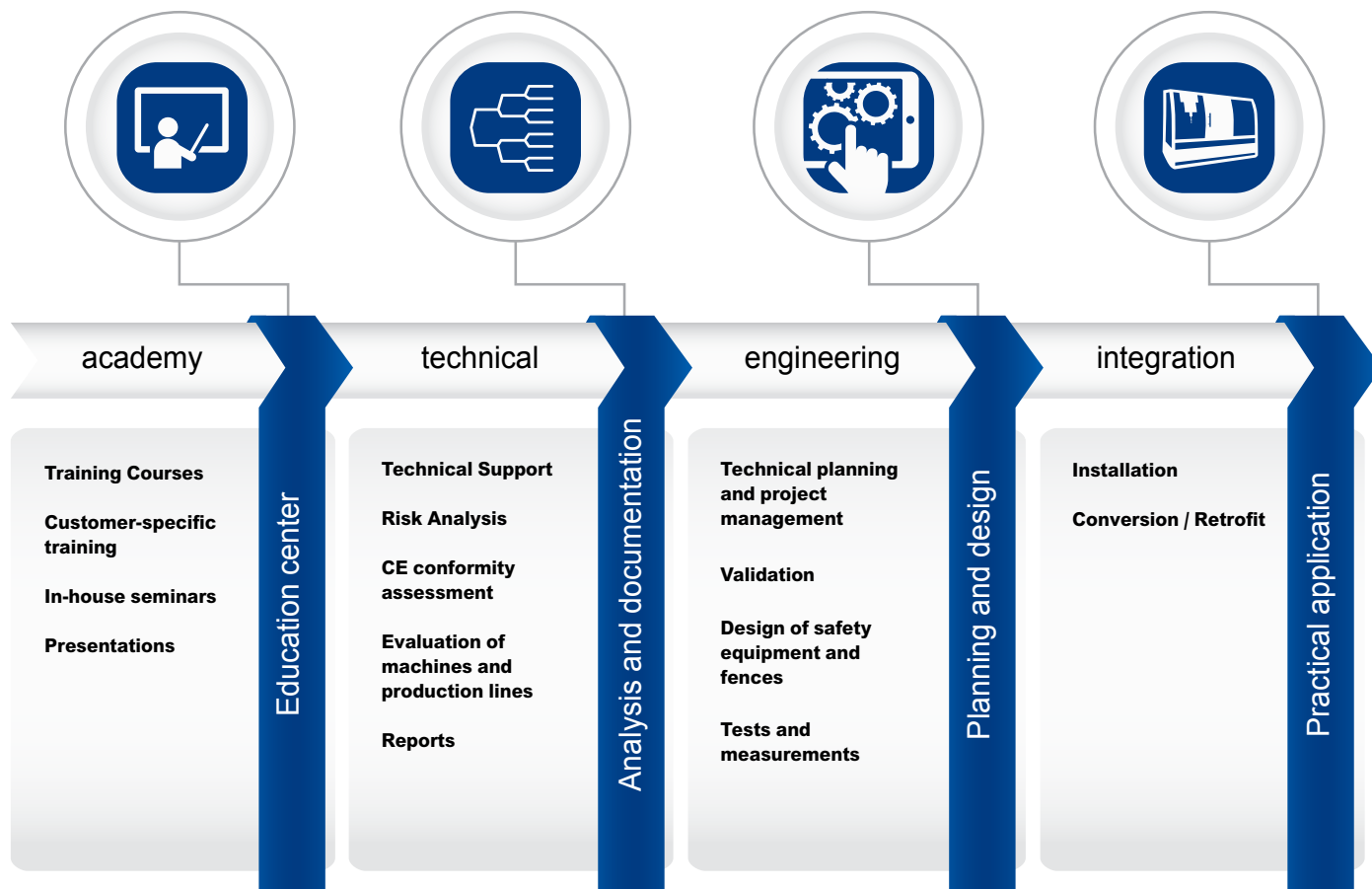
tec.nicum offers machine builders, operators, system integrators and distributors competent, product and manufacturer-neutral consultation on important matters relating to machine safety and work protection. Furthermore, our TÜV Certified Functional Safety Engineers for Machinery can plan and realize complex solutions for safety around the world in close collaboration with clients.

The four pillars of tec.nicum

The range of services offered by tec.nicum cover four segments:

- Learning ■ tec.nicum academy
- Technical services ■ tec.nicum technical
- Technical planning ■ tec.nicum engineering
- Implementation ■ tec.nicum integration

Our Functional Safety Engineers assist in a variety of safety-related projects - from analysis of the status quo through planning and documentation to the final handover of the finished, norm-compliant machine. The customer can request one or more of the four service modules or a complete package.



tec.nicum academy

In the complex area of machine safety, it is important to stay ahead of the game. To do this, we offer a variety of opportunities through our tec.nicum academy: With a comprehensive range of training courses on numerous topics, including General Machine Safety, ISO13849, Safety Circuits and Wiring, and Understanding and Conducting Risk Assessments; with customer specific in-house training seminars; and webinars.

tec.nicum technical

With regard to technical support, our experts provide safety appraisals and check conformity with applicable legislation and standards of machine safety and work protection. From the results of these investigations, they derive manufacturer-neutral recommendations for action and corrective measures with the aim of configuring the systems in accordance with the relevant directives. All the results of the investigations are fed into a comprehensive final report.

tec.nicum engineering

tec.nicum engineering supports the client in the development of new machines and systems or the modification of existing machines and systems so that, even from the projection phase, machine safety is implemented as efficiently as possible. Specialists in this area accompany the whole process, from initial planning talks to the definition of requisite safety elements to safety testing and inspection of the overall installation as well as handover of the complete project documentation. The aim is to create a safe working environment for employees and, at the same time, to achieve optimum productivity of the systems.

tec.nicum integration

The experts at tec.nicum have built up extensive experience from projects in industries such as the packaging, food processing, automotive, construction, paper manufacture, metal processing, chemicals and pharmaceuticals. They install safety switchgear and sensors and also take account of special features, such as explosive areas. Furthermore, they can assist in the parametrization, programming and installation of complex components such as optoelectronic safety products and safety controllers.

Safe solutions for your industry

<http://www.schmersal.com/en/industry/>

Schmersal presents a series of guides featuring a selection of Schmersal safety products which are suitable to meet the unique challenges presented in various industries. Check our website or contact your local Schmersal representative for more information on Industry Solutions.

Food



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