



Delivering Certainty
hamer.co.nz

Version - 201701

From humble beginnings to being stronger than ever before, our philosophy at Hamer is simple: deliver the best quality electrical tools from around the world to the New Zealand market.

We are a 100% New Zealand family-owned business that has proudly supported other New Zealand businesses for over 75 years.

We import quality tools, power engineering and electrical products from around the world. Our products are found behind the scenes in power distribution networks, factories, commercial properties and anywhere humans control their environments – from water management in agriculture to air quality in the work space.

Hamer promises to 'Deliver Certainty' to the electrical industry, and we believe our quality products add an element of safety to every aspect of electrical activity in New Zealand. Whether it be the tools used in installation and maintenance or electrical components that energise and protect equipment, Hamer only distributes and supports quality products.

At Hamer we value:

- *Safety* – we care about the safety of our staff, customers and the public. Our products' quality and design are important to helping our customers avoid risk
- *Being Straight Up and Reliable* – we do what we say and we make it happen
- *Real People* – we are a professional team of individuals and we like to have fun
- *High Quality* – our service, people, solutions and products are aligned to only deliver quality results
- *Customer Centric* – our philosophy is to exceed customer expectations
- *Proud of Our Brands* – Hamer represents quality and performance

With expertise in a huge range of markets including Power Engineering, Electrical Wholesaling, HVAC and Refrigeration, Industrial, Commercial, Lighting and Telecommunications, our team really covers it all. Our customers love us because we get out in the field face to face, delivering what they need through a stable, reliable distribution platform. We have an intimate knowledge of our customers' needs, allowing us to find niche products from around the world specifically matched to local market requirements.

You will see our world leading brands in protected switching solutions, cable management systems and switchboards. Our people are never far away, advising our channel partners on the latest product releases, with knowledge and expertise from their years of industry experience. And when it comes to tools, we source the ones that last, allowing electricians and linemen to get the job done right.

Why Hamer?

We believe we can provide our clients three key promises which give them confidence that we can deliver certainty to their business.






- *Solutions* - Hamer will find the solution to your requirements, whether it be importing a new brand or providing a manufactured solution. We will leave no stone unturned.
- *Peace of mind* - our product selection criteria and policies ensure that our products meet strict criteria for safety, performance and value. Combined with our determined focus on service and delivery, you can rely on Hamer.
- *Long term reliability* - we only import the best brands, sourced from reliable and reputable suppliers around the world. While backing all products with industry leading warranties, support and after sales service.

Talk to our team to ensure you are getting the best value and reliability for your business and customers.

Delivering Certainty






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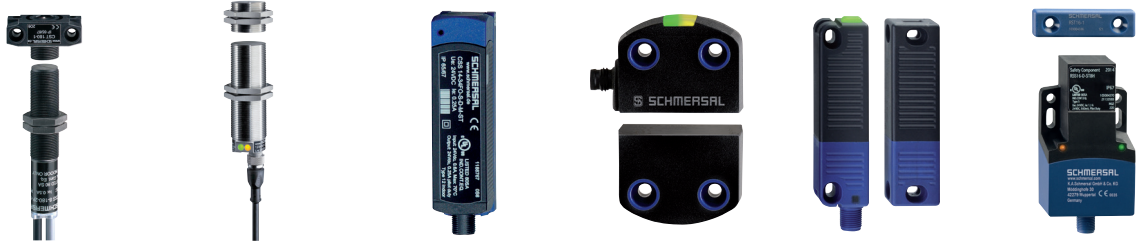


Series	AZ15	AZ16	AZ17	TZG	AZ3350	AZ415	AZ200
Housing	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Die-Cast Aluminum	Die-Cast Aluminum	Thermoplastic
IP Rating	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Dimensions	2" 3" 1.25"	2" 3.5" 1.25"	1.25" 2.5" 1.25"	2" 3.75" 1.75"	1.75" 4.5" 1.5"	3.5" 4" 1.75"	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)	Pulse Echo Sensor 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	 	 			



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

SD Gateway



Series	AZM200	MZM100	AZM300	AZM400
Technology	Pulse Echo	Pulse Echo	RFID	RFID
Locking	Solenoid	Electromagnet	Solenoid	Motorized Bolt
Housing	Thermoplastic	Thermoplastic	Thermoplastic	Die cast aluminum
IP Rating	IP67	IP67	IP69K	IP67
Dimensions	1.57" 8.66" 1.96"	1.75" 7.25" 1.75"	3.4" 4" 1.33"	6.2" 3" 1.85"
Connections	Screw terminals Cage clamps Quick Connect	Quick Connect	Quick Connect	Quick Connect
Contact Options	1P2P SD2P	1P2P SD2P	1P2P SD2P	1P2P 2P2P (ST2)
Features	Door handle Lockout device Emergency Exit	Door stop Magnetic latching	Individual Coding Door Stop Adjustable latching Emergency Exit	Individual Coding Emergency Exit Electric by-pass
Special Version				

NEW

SD-I-U-
Convert Serial Diagnostic signals to the following field bus interfaces:
PROFIBUS CANopen
EtherNet IP Mobius/TCP
DeviceNet ProfiNetIO
CC-Link EtherCAT



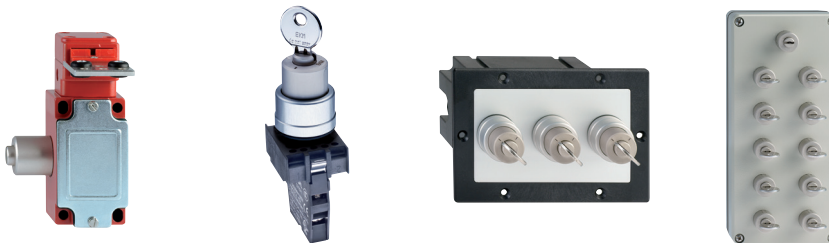
CSS-Y-8P | CSS-A-8P

Adapters for series connections



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				

Accessories



Connector Cables

Available for all quick connect models, various lengths and options



Mounting plates

Available for most models, ordered separately



TFA / TFI

Guard alignment aid



CSA-M-1

Magnetic latch



NEW

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					

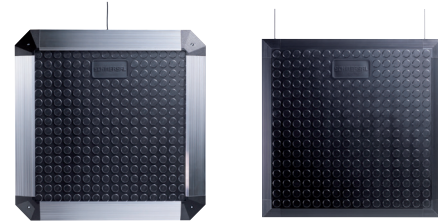
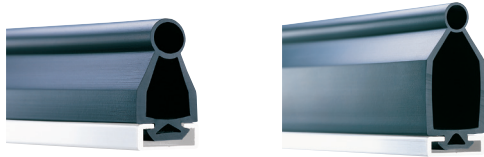
Hinged Safety Switches



NEW

Series	T.C235	T.C236	TV.S335	TESZ	TESF	TESTK
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						

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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

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	NEW SLB440	NEW SLB450
Profile	1" 1.30"	1" 1.30"	1" 1.30"	2" Dia	2.3" Dia	1.1" 1.25" 3.6"	2" dia 4.9"
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							

E-Stop Buttons Emergency Cable Pull Switches

SCHMERSAL

HAMER



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			

EDRRZ40RT	EDRRS40RT
Metal button	Metal button, key reset



KDRRKZ40RT	ADRR40RT
Thermoplastic button	Thermoplastic button



NDRZ50RT	RDRZ45RT
IP69K, Thermoplastic	Rugged metal button



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

Accessories (complete custom kits or order installation components separately)

STQ441-SC

STQ441-EB

RZ-Spring

STQ441-CC



STQ441-TB

STQ441-TH

S900

S900-SH

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						

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For more detailed technical information, check our Online Product Catalog: <http://www.usa.schmersal.net/>

SRB-E Multifunction Electronic Safety Controllers



NEW	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
	SRB-E-212ST	Dry & PNP	1	2 stop 0, 1 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

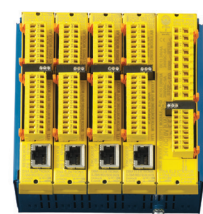
Programmable Safety Controller



The Protect PSC is a modular, programmable safety control system designed to accept emergency stop command devices, safety switches, and optoelectronic protective devices. The modular design gives the user the ability to select individual input and output modules to configure a system to meet their individual requirements, with future expansion possible.

The smallest system includes 8 inputs and 6 outputs, with over 250 inputs / outputs available when the system is fully extended. The Protect PSC is suitable for Control Category 4 to EN 954-1, PLe to EN ISO 13849-1 or SIL 3 to IEC 61 508.

Safe Speed Monitoring



Series	AZS 2305	FWS1205	FWS2505	DN3PS2	DNDS
Type	Timer	Standstill	Standstill	Senorless Standstill	Standstill/Safe motion
Operating Voltage	24V DC, 110V AC, 230V AC	24V DC	24-230V AC/DC	24V DC	24V DC
Input types	Dry Contacts	2 impulse sensors	2 impulse sensors	Back EMF	Encoders, Resolvers, Proximity Sensors
Enabling circuits	3	2	4	2	Varies, dependent on selected components
Auxiliary outputs	2 PNP	2 PNP	1 NC, 2 PNP	None	Varies, dependent on selected components

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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



Installation accessories

Passive distribution module PDM:

The passive distribution module PDM is small and compact, can be mounted easily in existing terminal boxes and is especially suitable for higher demands in hygiene with food and packaging machines.

- ☐ Can be configured easily via DIP switches
- ☐ Spring-type terminals for simple and low-cost installation
- ☐ Compact design with a width of only 45 mm on the profile rail

Passive field box PFB:

The passive field box PFB is a plug & play solution for multiple areas of applications.

- ☐ Mixed series connection possible of up to 4 electronic safety sensors or solenoid interlocks with M12, 8-pin connectors, per box
- ☐ Robust IP67 version for installation in the field
- ☐ Compact field box with dimensions 63 mm x 156 mm



Joysticks

The new intermediate switches of the NK / RK series have a diverse range of applications: The NK version is suitable for the food processing industry thanks to its hygiene-orientated design. The RK intermediate switches, on the other hand, are ideal for use in outdoor areas and under inclement weather conditions, e. g. for systems in processing technology, aeroplane tractors or elevating work platforms.

A special feature of the NK / RK series is the new sealing system: Should there be a defect in the boot, fluid is passed through the device without the device being damaged. This contributes towards greater system availability.

- ☐ High levels of protection with IP69K and IP67
- ☐ Easily to clean thanks to hygienic design
- ☐ Quick to install with central nut and M12 plug connection



Programmable Safety Controller

- ☐ 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, PL e and Cat 4 according to EN ISO 13849-1, EN 50178.



Series	NDRZ50RT	NDRR50RT	NML/NMLH	NME/NMEF	NDT	NDL
Type	Emergency Stop	Emergency Stop	Indicator light	Indicator light	Pushbutton	Illuminated Pushbutton
Operator Material	Thermoplastic	Thermoplastic	PA (12)	PA (12)	ABS / PA (12)	ABS / PA (12)
Base Material	Chrome plated ABS	Chrome plated ABS	Chrome plated ABS	Chrome plated ABS	Chrome plated ABS	Chrome plated ABS
IP Rating	IP69K	IP69K	IP69K	IP69K	IP69K	IP69K
Colors	Red	Red	Yellow, Red, Green, Blue, White	Yellow, Red, Green, Blue, White	Yellow, Red, Green, Blue, White, Black, Grey	Yellow, Red, Green, Blue, White
Bellows Color	White, Black, Blue	White, Black, Blue	-	-	White, Black, Blue	White, Black, Blue
Notes	Latching, Pull reset integrated spring element Yellow label required, ordered separately	Latching, Pull reset Separate spring element EFR Yellow label required, ordered separately	L = Flat lens LH = Domed lens Separate illuminant L24/9 bulb or LE24/9WS LED Use EL or ELE voltage block	EF= Flat lens E = Domed lens Integrated LED Use ELE voltage block		Use EL or ELE voltage block with L24/9 bulb or LE24/9WS LED



Series	NW	NHS	NWSE	NDAN6
Type	Selector Switch	Main Switch	Step Selector Switch	Potentiometer Knob
Operator Material	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
Base Material	Chrome plated ABS	Stainless steel plate	Chrome plated ABS	Chrome plated ABS
IP Rating	IP69K	IP69K	IP69K	IP69K
Colors	White, Black	Red, Black	White, Black	White, Black
Bellows Color	White, Black	-	-	-
Notes	2 or 3 position Momentary or maintained Extended knob (.1)	Integrated LO/TO device NH version for E-Stop	3-12 steps Extended knob (.1)	Potentiometer not included



Series	NDTP	NDLP	NDP50	NDRZ50	NDRR50
Type	Mushroom button	Illum. Mushroom button	Mushroom button	Mushroom button	Mushroom button
Operator Material	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
Base Material	Chrome plated ABS	Chrome plated ABS	Chrome plated ABS	Chrome plated ABS	Chrome plated ABS
IP Rating	IP69K	IP69K	IP69K	IP69K	IP69K
Colors					
Bellows Color					
Notes		Use EL or ELE voltage block with L24/9 bulb or LE24/9WS LED	Momentary	Latching, Pull reset integrated spring element	Latching, Pull reset Separate spring element EFR

Terminal Blocks



Series	EF	EFK	EL	ELE	ELDE.N	EFR
Type	Contact Element	Contact Element	Light terminal	Light terminal	Light terminal LED	Spring element
Connection	Screw Terminals	Flat Pin	Screw Terminals	Screw Terminals	Screw Terminals	none
Position	1, 2, or 3	1, 2, or 3	3 (center)	3 (center)	3 (center)	3 (center)
Options	220 = 2 NC 303 = 1 NO & 1 NC 10 = 1 NC 03 = 1 NO 033 = 2 NO 103 = 1 NO & 1 NC 301 = 1 NO & 1 NC	220 = 2 NC 303 = 1 NO & 1 NC 10 = 1 NC 03 = 1 NO 033 = 2 NO 103 = 1 NO & 1 NC 301 = 1 NO & 1 NC			ELDE.N RT (red) ELDE.N GB (yellow) ELDE.N GN (green) ELDE.N BL (blue) ELDE.N WS (white)	



Series	RDRZ45RT	RM	RDT/RDM	RDL/RDLM	RDP40/RDR45	RW
Type	Emergency Stop	Indicator light	Pushbutton	Illuminated button	Mushroom button	Selector Switch
Operator Material	Aluminum	Glass (Flat) / PA (Domed)	Aluminum	Glass Lens	Aluminum	Thermoplastic
Base Material	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
IP Rating	IP65	IP65	IP65	IP65	IP65	IP65
Colors						
Notes	Latching, Pull reset integrated spring element Yellow label required, ordered separately	LF & EF= Flat lens LH & EH = Domed lens L = Use RL-DEWS24 or RL voltage block with LE24/9WS LED E = Use RL voltage block	M = with membrane	M = with membrane L = Use RL-DEWS24 or RL voltage block with LE24/9WS LED	40 - Momentary 45 - Latching, pull reset	2 or 3 position momentary or maintained extended knob (.1)

Terminal Blocks



Series	RS	RWSE	RDAN6	Series	RF	RL
Type	Keyed Selector Switch	Step Selector Switch	Potentiometer Knob	Type	Contact Element	Light terminal
Operator Material	Aluminum Key barrel	Thermoplastic	Thermoplastic	Position	1, 2, or 3	3 (center)
Base Material	Aluminum	Aluminum	Aluminum	Options	RF10 = 1 NC RF03 = 1 NO	RL (for bulb) RLDEWS24 (white LED)
IP Rating	IP65	IP65	IP65			
Colors	Metal (silver)					
Notes	2 or 3 position momentary or maintained	2-12 steps Extended knob (.1)	Potentiometer not included			



Series	EX-RDRZ45RT	EX-RMLH	EX-RDT/EX-RDM	EX-RDL/EX-RDLM	EX-RDP40/EX-RDR45
Type	Emergency Stop	Domed Indicator light	Pushbutton	Illuminated button	Mushroom button
Operator Material	Coated brass	Thermoplastic lens	Coated brass	Thermoplastic lens	Coated brass
Base Material	Chrome plated brass	Chrome plated brass	Chrome plated brass	Chrome plated brass	Chrome plated brass
IP Rating	IP65	IP65	IP65	IP65	IP65
Colors					
ATEX zones	1, 2, 21, 22	1, 2, 21, 22	1, 2, 21, 22	1, 2, 21, 22	1, 2, 21, 22
Notes	Latching, Pull reset integrated spring element Yellow label required, ordered separately	Use EX-RLDEWS24	M = with membrane	M = with membrane Use EX-RLDEWS24	40 - Momentary 45 - Latching, pull reset

Terminal Blocks



Series	EX-RW	EX-RS
Type	Selector Switch	Keyed Selector Switch
Operator Material	Thermoplastic	Aluminum Key barrel
Base Material	Chrome plated brass	Chrome plated brass
IP Rating	IP65	IP65
Colors		Metal (silver)
ATEX zones	1, 2, 21, 22	1, 2, 21, 22
Notes	2 or 3 position momentary or maintained extended knob (.1)	2 or 3 position momentary or maintained



Series	EX-RF	EX-RLDE
Type	Contact Element	LED Light terminal
Position	1, 2, or 3	3 (center)
Options	EX-RF10 = 1 NC EX-RF10.1 = 1 NC EX-RF03 = 1 NO EX-RF03.1 = 1 NO	EX-RLDEWS24 (white)



Joysticks

Schmersal offers a series of industrial grade joysticks suitable for 22.5 mm or 30.5 mm diameter mounting.

Joysticks are available with two actuation types:

■ Maintained switch, locks into place with return to center (rest/neutral) position by touch.

■ Momentary switch, returns to center (rest/neutral) position by spring force

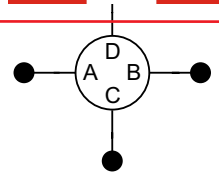
Models are available with either one, or can mix the two styles.

Models are available with up to four switch positions/actuating directions with up to eight contacts (two contacts actuated in each direction).

A variety of sealing bellows options make them suitable for especially harsh industrial applications, including outdoor usage with UV resistance and operable temperatures of -25 °C to +80 °C, or hygienic applications requiring IP69K Rating for high temp/high pressure wash downs.

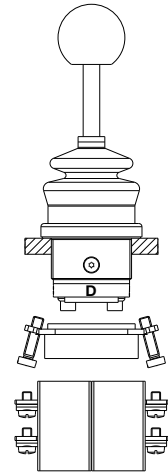
Directions and contact variants

A ◀	B ▶	C ▼	D ▲	PN Suffix
1 NO	1 NO			A32
1 NC	1 NC			A32/401
2 NO	2 NO			B32
1 NC & 1 NO	1 NC & 1 NO			B32/1x401
2 NO	2 NO			C32
1 NO	1 NO	1 NO		C42
1 NO	1 NO	1 NO	1 NO	C52
1 NC	1 NC	1 NC	1 NC	C52/2x401
4 NO	4 NO			E32
4 NC	4 NO			E32/404
4 NC	4 NC			E32/800
2 NO	2 NO	2 NO	2 NO	E52
1 NC & 1 NO	1 NC & 1 NO	2 NO	2 NO	E52/206
2 NC	2 NO	2 NO	2 NO	E52/206.1
1 NC & 1 NO	1 NC & 1 NO	1 NC & 1 NO	1 NC & 1 NO	E52/2x401

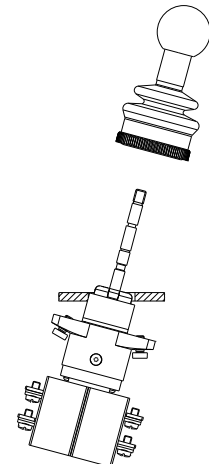


Series	MKT	MKS	WKT	WKS
Type	Spring Returned	Maintained	Spring returned	Maintained
Mounting Diameter	22.3 mm	22.3 mm	30.5 mm	30.5 mm
Mounting Type	Lock nut	Lock nut	Mounting flange	Mounting flange
Material	Stainless steel shaft duroplast knob	Stainless steel shaft duroplast knob	Stainless steel shaft duroplast knob	Stainless steel shaft duroplast knob
Shaft Length	77 mm	77 mm	90 mm	90 mm
Bellows Options	Rubber WKT-19.4 Rubber WKT-19.3 Silicone WKT-26 Silicone (IP69K)	Rubber WKT-19.4 Rubber WKT-19.3 Silicone WKT-26 Silicone (IP69K)	Rubber WKT-19.4 Rubber WKT-19.3 Silicone WKT-26 Silicone (IP69K)	Rubber WKT-19.4 Rubber WKT-19.3 Silicone WKT-26 Silicone (IP69K)

WKT Assembly



MKT Assembly



Foot switches are used to start and stop operations and production processes on machinery and equipment where operation by hand is not possible. Safety foot switches can also be used as enabling switches when carrying out set-up, retrofit or service processes where the machine will run with safety guards open.

Typical applications include metal forming machines, woodworking machines, and machinery for packaging and textile industries.

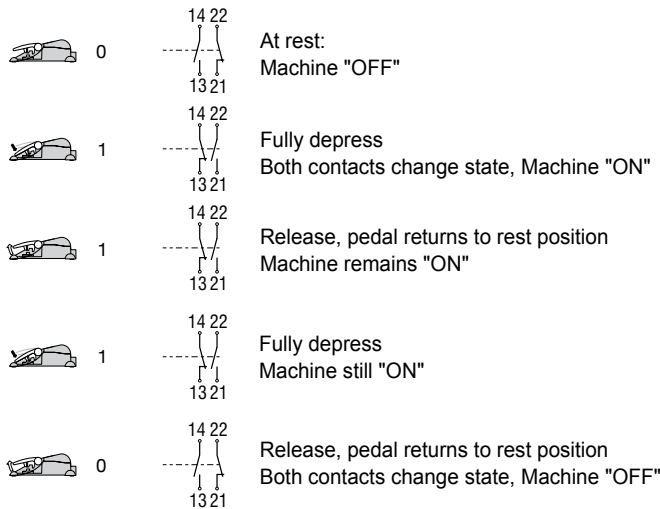
NKF Series

The NKF foot switch is a compact, low profile design, offering one, two or three pedals. The rugged ABS plastic foot switch is available with snap-action change-over contacts, or NO contacts – up to two contacts per pedal. Standard with two meter pre-wired cable, other custom colors and pedal configurations are available.

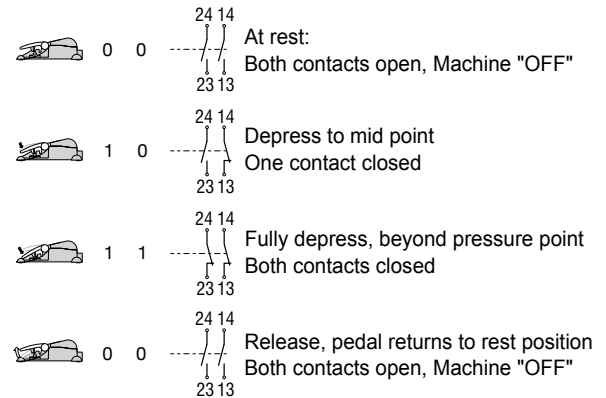
F 232 Series

Foot switches of the F-232 series are available as single or dual pedal versions. The FH-232 series are available with an optional, ergonomic protective shield to protect against unintentional operation. The powder-coated, robust die-cast enclosures are resistant to high mechanical loads. The 232 series foot switches are available with slow action (T) or snap action (Z) contacts, with 2 or 4 NO/NC contact per pedal. Optional functions include a pressure point (staggered) operation or a bi-stable (start/stop) function. Custom housing colors are also available.

F-232 options: Start/stop function (F)



Staggered contacts with 3 position actuation (HD)



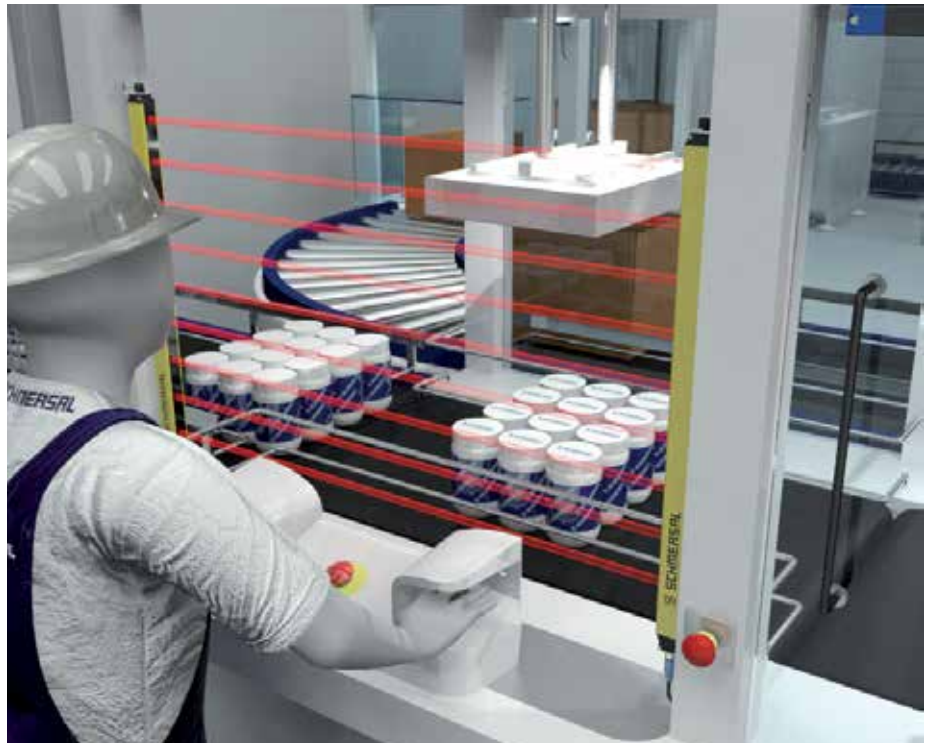
Series	NKF	NKF2	NKF3	F 232	2F 232
Type	Single pedal	Two pedal	Three Pedal	Single pedal	Two pedal
Housing Material	Thermoplastic	Thermoplastic	Thermoplastic	Aluminum die-cast	Aluminum die-cast
Pedal Material	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
Dimensions	77 x 49 x 123 mm	215 x 49 x 138 mm	351 x 49 x 150 mm	170 x 189 x 274 mm	295 x 189 x 274 mm
IP Rating	IP67	IP67	IP67	IP65	IP65
Contacts	1PW (1 Changeover) 2PW (2 Changeover) 10 = 1 NO 20 = 2 NO	1PW (1 Changeover) 2PW (2 Changeover) 10 = 1 NO 20 = 2 NO (all pedals same)	1PW (1 Changeover) 2PW (2 Changeover) 10 = 1 NO 20 = 2 NO (all pedals same)	11 = 1 NO & 1 NC 02 = 2 NC 20 = 2 NO 22 = 2 NO & 2 NC 04 = 4 NC 40 = 4 NO	11 = 1 NO & 1 NC 02 = 2 NC 20 = 2 NO 22 = 2 NO & 2 NC 04 = 4 NC 40 = 4 NO
Options	Cable from left, back, or right	Cable from left, back, or right	Cable from left, back, or right	Protective hood (H) HD = Staggered contacts with 3 position actuation F = start/stop function	Protective hood (H) HD = Staggered contacts with 3 position actuation F = start/stop function

Two Hand Controls

Two-hand control panels are designed as such so the operators need both hands at the same time to start a hazardous movement. This forces operators to keep their hands in the same place which means that they cannot reach into the danger zone while the system is carrying out the hazardous movement.

These two-hand control panels are fitted with an Emergency Stop button that complies with EN ISO 13850. It is also possible to mount up to eight additional command and signaling devices to the center console. Apart from this, there are guard hoods over the operating elements, which prevent people from circumventing the protection function using their hands, elbows, stomach, hips, thighs or knees. It is also not possible to operate from the back of the control panels.

The main areas of application for two-hand controls are presses and stamping units in the metal processing or powder metallurgy industries as well as similar machines and systems that involve manual insertion and removal operations. These include printing and paper processing machines, rubber and plastics processing machines, machines involved in the chemical industry and assembly plants.



Stands



Series	SEPK	SEPG
Type	Two hand control with hooded buttons	Two hand control with hooded buttons
Material	Thermoplastic	Die cast alloy
IP Rating	IP64	IP65
E-Stop	ADRR40RT	EDRR40RT
Palm Buttons	50 mm dia, black	50 mm dia, black
Buttons	1 NO & 1 NC	1 NO & 1 NC
Connection	Screw terminals	Screw terminals
Notes	8 knockouts for additional control or signal devices	8 knockouts for additional control or signal devices



STP02.1.1



STP02.4.1



STPLC-1









Ergonomic operation of the main machine functions at the human-machine interface is a key factor in safety. The control units should be mounted as close as possible to the safety doors so that operators have an overview of the process. BDF Series control units meet this requirement. This series has been designed for mounting onto the commercially available aluminum profile systems of machine enclosures and you can quickly attach them and integrate them in the ambient structure. Machine builders can use the BDF range to represent the most common operator functions like Emergency Stop, ON/OFF, Forwards/Backwards, Operating Mode Selection, display of operating status conditions or error messages, etc.



The BDF200 Universal (-2875 variant) is field customizable, with several positions that can be adapted to become pushbuttons, illuminated pushbuttons or indicator lights of various colors. Choices are made by wiring and the application of various colored lens caps. Base models include:

- All 4 positions customizable
- E-Stop and 3 customizable positions
- E-Stop, keyed selector and 2 customizable positions.

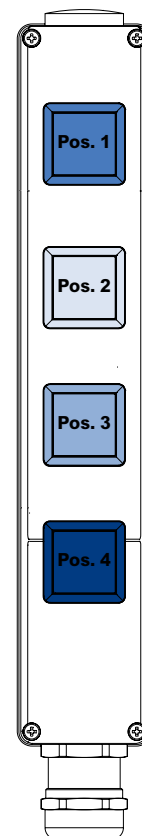
Operator Options:

	PN	Type	Options	POS
	NH	E-Stop	Red button with yellow	POS1 only
	NHK	E-Stop with collar	Red button with yellow	POS1 only
	DT..	Pushbutton		All
	LT..	Illuminated pushbutton		All
	PT..	Mushroom button		All
	LM..	Signal light		All
	WS..	Selector, maintained	2 or 3 position	POS2, POS3
	WT..	Selector, momentary	2 or 3 position	
	WTS..	Selector, mixed	3 position	
	SW...	Keyed selector switch	2 position, maintained or momentary	POS2, POS3

BDF200



Series	BDF100	BDF200	BDF200 Universal
Type	Control panel	Control panel	Control panel
# of Operators	Single operator	4 operators	4 operators
Housing Material	Thermoplastic	Thermoplastic	Thermoplastic
E-Stop Contacts	1 NO & 2 NC (E-stops)	1 NO & 2 NC (E-stops)	1 NO & 2 NC (E-stops)
Operator Contacts	2 NO 1 NO & 1 NC	2 NO 1 NO & 1 NC 1 NO	2 NO 1 NO & 1 NC 1 NO
Features		Selectable and factory assembled	Field customizable



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Heavy Duty Limit Switches











M330 series

This series is a heavy duty version of standard full size European Norm switches. They are IP65 and thus suitable for low-pressure water spray. In addition they have seawater-proof bodies with stainless steel or surface protected external metal parts. The body and actuator seals are resistant to most oils and gasoline.

Universal Series U 431,432,433 & 434

This series features slow action 1, 2, 3, and 4 contact models with field convertible NO and or NC contacts. In addition the switching point is field adjustable. Optionally, models are available with low temperature (-30°C) contacts, add -1252 to part number. These switches are IP65 rated and have three conduit entries.



					
	CE 	CE 	CE 	CE 	CE 
Series	M330	U431	U432	U433	U434
Material	Die cast alloy	Die cast alloy	Die cast alloy	Die cast alloy	Die cast alloy
Dimensions	40 x 76 x 40 mm	58 x 62 x 50 mm	80 x 62 x 50 mm	105 x 62 x 50 mm	127 x 62 x 50 mm
IP Rating	IP65	IP65	IP65	IP65	IP65
Connections	Screw Terminals	Screw Terminals	Screw Terminals	Screw Terminals	Screw Terminals
Actuation	Snap Action	Slow Action	Slow Action	Slow Action	Slow Action
Contacts	1 NO & 1 NC	1 NO 1 NC	2 NO 2 NC 1 NO & 1 NC	3 NO 3 NC 1 NO & 2 NC 2 NO & 1 NC	4 NO 4 NC 1 NO & 3 NC 3 NO & 1 NC 2 NO & 2 NC
Options	LED (G24)	Low temperature (-1252)	Low temperature (-1252)	Low temperature (-1252)	Low temperature (-1252)
Actuators	S plunger 2S telescopic plunger 3S side plunger R roller plunger 3R side roller plunger K offset roller lever 3K angle roller lever AF spring rod 4D forked roller lever H roller lever 2H resin leaf-spring 3H large roller on lever 4H spring rod on shaft 6H steel leaf-spring 7H adj lever with roller 8H roller on short lever 9H steel rod lever 10H adj plastic rod lever	S plunger K offset roller lever H roller lever 2H resin leaf-spring 3H large roller on lever 4H spring rod on shaft 6H steel leaf-spring 7H adj lever with roller 8H roller on short lever 9H steel rod lever 10H adj plastic rod lever	S plunger K offset roller lever H roller lever 2H resin leaf-spring 3H large roller on lever 4H spring rod on shaft 6H steel leaf-spring 7H adj lever with roller 8H roller on short lever 9H steel rod lever 10H adj plastic rod lever	S plunger K offset roller lever H roller lever 2H resin leaf-spring 3H large roller on lever 4H spring rod on shaft 6H steel leaf-spring 7H adj lever with roller 8H roller on short lever 9H steel rod lever 10H adj plastic rod lever	S plunger K offset roller lever H roller lever 2H resin leaf-spring 3H large roller on lever 4H spring rod on shaft 6H steel leaf-spring 7H adj lever with roller 8H roller on short lever 9H steel rod lever 10H adj plastic rod lever

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Heavy Duty Limit Switches

T/M 015, 016 & 017 Series

This series features snap action and/or slow action contacts in 2, 3 & 4 contact configurations. Slow action models are available with overlapping contacts. As an option, blow out magnets are available for switching up to 1A at 220v DC. These switches are IP65 rated and feature 3 conduit entries for flexibility in installation.

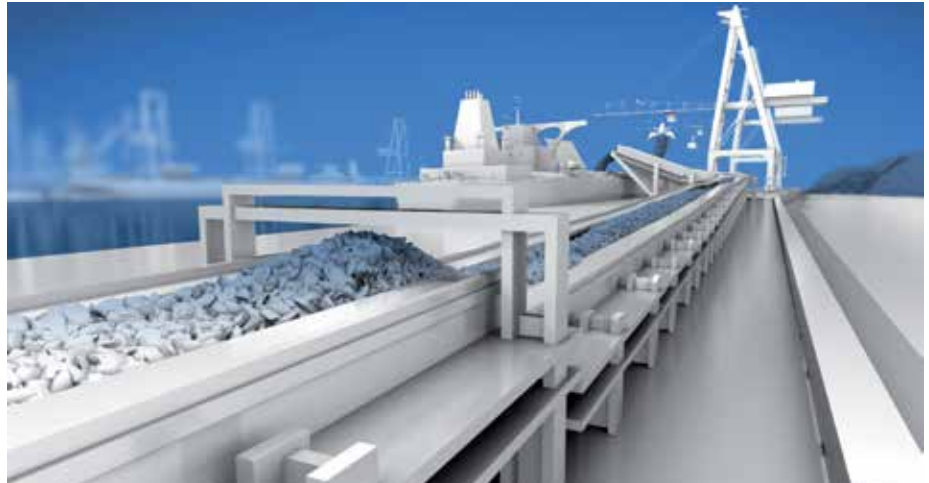


Series	T/M015	T016	T/M017	T422	T/M441
Material	Die cast alloy	Die cast alloy	Die cast alloy	Cast Iron	Cast Iron
Dimensions	75 x 67 x 43 mm	105 x 67 x 43 mm	130 x 67 x 43 mm	71 x 106 x 63 mm	99 x 106 x 63 mm
IP Rating	IP65	IP65	IP65	IP65	IP65
Connections	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
Actuation	Snap Action (M) Slow Action (T)	Slow Action	Snap Action (M) Slow Action (T)	Slow Action	Snap Action (M) Slow Action (T)
Contacts	1 NO & 1 NC 2 NO 2 NC	1 NO & 2 NC 2 NO & 1 NC 3 NO 3 NC	2 NO & 2 NC 1 NO & 3 NC 3 NO & 1 NC	1 NO 1 NC	1 NO & 1 NC
Options	Overlapping slow contacts (U) Staggered slow contacts (H) Magnetic blowout (C)	Overlapping slow contacts (U) Staggered slow contacts (H) Magnetic blowout (C)	Overlapping slow contacts (U) Staggered slow contacts (H) Magnetic blowout (C)	Extreme temp (T)	Extreme temp (T) Overlapping slow contacts (U)
Actuators	S plunger 2S telescopic plunger K offset roller lever 2K rocking offset roller 3K angle roller lever H roller lever 2H resin leaf-spring 3H large roller on lever 4H spring rod on shaft 6H steel leaf-spring 7H adj lever with roller 8H roller on short lever 9H steel rod lever 10H adj plastic rod lever	S plunger 2S telescopic plunger K offset roller lever 2K rocking offset roller 3K angle roller lever H roller lever 2H resin leaf-spring 3H large roller on lever 4H spring rod on shaft 6H steel leaf-spring 7H adj lever with roller 8H roller on short lever 9H steel rod lever 10H adj plastic rod lever	S plunger 2S telescopic plunger K offset roller lever 2K rocking offset roller 3K angle roller lever H roller lever 2H resin leaf-spring 3H large roller on lever 4H spring rod on shaft 6H steel leaf-spring 7H adj lever with roller 8H roller on short lever 9H steel rod lever 10H adj plastic rod lever	S plunger 2S telescopic plunger R roller plunger K offset roller lever J offset large roller lever 2C fork lever L roller lever D roller long lever	S plunger 2S telescopic plunger R roller plunger K offset roller lever J offset large roller lever 2C fork lever L roller lever D roller long lever

Heavy Duty Limit Switches

T/M 422, 441, 452, 461 & 470

This series features 1, 2, 3, 4, & 6 contact configurations. Models for high/low temperature and tropical environments are optional. In addition, overlapping and staggered contacts are available on selected models. These switches are IP65 rated and have 2 or 4 (470 only) conduit entries.



CE



CE



CE



CE UL



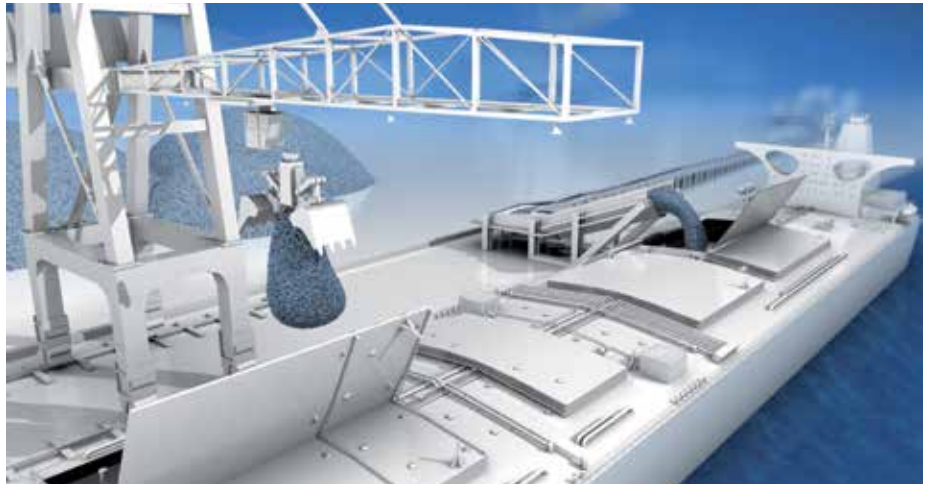
CE UL

Series	T452	T461	T470	T/M064	T067
Material	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Dimensions	127 x 118 x 64 mm	155 x 118 x 64 mm	194 x 118 x 64 mm	156 x 111 x 149 mm	155 x 111 x 142 mm
IP Rating	IP65	IP65	IP65	IP65	IP65
Connections	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
Actuation	Slow Action	Slow Action	Slow Action	Snap Action (M) Slow Action (T)	Slow Action
Contacts	1 NO & 2 NC 2 NO & 1 NC 2 NO 2 NC	2 NO & 2 NC 1 NO & 3 NC 3 NO & 1 NC 3 NO 3 NC	3 NO & 3 NC	3 NO, 3 NC 1 NO & 2 NC 2 NO & 1 NC 4 NO, 4 NC 1 NO & 3 NC 2 NO & 2 NC 3 NO & 1 NC	2 NC 1 NO & 1 NC 2 NO 1 NC left & 1 NC right 1 NO left & 1 NO right
Options	Extreme temp (T)	Extreme temp (T)	Extreme temp (T)	Extreme temp (T) Position latching (R)	Overlapping contacts (U) Staggered contacts (H)
Actuators	S plunger 2S telescopic plunger R roller plunger K offset roller lever J offset large roller lever 2C fork lever L roller lever D roller long lever	S plunger 2S telescopic plunger R roller plunger K offset roller lever J offset large roller lever 2C fork lever L roller lever D roller long lever	S plunger 2S telescopic plunger R roller plunger K offset roller lever J offset large roller lever 2C fork lever L roller lever D roller long lever	S plunger J offset roller lever X offset roller long lever	L roller lever V roller long lever C fork lever A roller lever 2A roller long lever Z long pull lever 2Z pull lever 4D forked offset roller

Heavy Duty Limit Switches

T/M 064, 067, 130, 136, 471, 035 & 250

These switches feature up to 10 contacts rated at 25 or 60 amps. A wide variety of options are available including high/low temperature models, overlapping and staggered contacts, latching contacts, and magnetic blow out magnets. Most are IP65 rated and have up to 4 conduit entries.



Series	T130	T136	T/M471	T/M035	T/M250
Material	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Dimensions	236 x 135 x 120 mm	236 x 154 x 120 mm	194 x 123 x 130 mm	58 x 142 x 61.5 mm	103 x 180 x 100 mm
IP Rating	IP65	IP65	IP65	IP67	IP67
Connections	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
Actuation	Slow Action	Slow Action	Snap Action (M) Slow Action (T)	Snap Action (M) Slow Action (T)	Snap Action (M) Slow Action (T)
Contacts	3 NO & 3 NC	3 NO 3 NC	2 NC left & 2 NC right 2 NO left & 2 NO right 3 NC left & 3 NC right 1NO/2NC left & 1NO/2NC right 2NO/1NC left & 2NO/1NC right 3 NO left & 3 NO right	1 NO & 1 NC 2 NO 2 NC	1 NO & 1 NC 2 NC 2 NC left & 2 NC right
Options	Overlapping slow contacts (U) Staggered slow contacts (H) Position latching (R)		Overlapping slow contacts (U) Staggered slow contacts (H) Position latching (R)	Overlapping slow contacts (U) Staggered slow contacts (H) Magnetic blowout (C)	Overlapping slow contacts (U) Magnetic blowout (C) Position latching (R) Extreme temp (T)
Actuators	L roller lever V roller long lever C fork lever A roller lever 2A roller long lever Z long pull lever 2Z pull lever 4D forked offset roller	L roller lever V roller long lever C fork lever A roller lever 2A roller long lever Z long pull lever 2Z pull lever 4D forked offset roller	L roller lever V roller long lever C fork lever A roller lever 2A roller long lever Z long pull lever 2Z pull lever 4D forked offset roller	2L roller lever	D roller lever

Special Limit Switches

Material handling applications often need special purpose switches for slack wire detection, belt alignment, or rotation applications such as gear or spindle switches. Many feature the heavy duty limit switch housings with uniquely designed actuators for these purposes.

Slack-wire switches monitor wire rope tension. With correct tension present, the switch is actuated. The actuator arm contains a heavy duty roller.

Belt alignment switches are actuated when the conveyor belt becomes misaligned. Depending on the plant arrangements, this signal can be used to switch the equipment off or to provide automatic correction of the belt alignment. The actuator arm contains a heavy duty roller and can be actuated to either side.

The MSP452 **rotating spindle switch** with snap-action insert is suitable for use in normal to average operating conditions in machine tools, cranes, and conveyors. Actuation of the switch is adjustable and can be set between 4 and 55 spindle revolutions, with a 5 revolution run-out.

Gear-switches are suitable for use in the most varied application. In studios and on stages, applications include the control and positioning of carriages, portals and bridges. An important field of application is for the monitoring and control of outriggers, trolleys and lifting movements for cranes. On industrial ovens, gear-switches are used on door and gate control systems. Further applications are to be found on waterways (control of weirs and locks), in environmental protection (sewage plants, flue gas treatment plants), greenhouses and sport stadiums (roof controls). These switches are available with a variety of cam styles which can be offset for timing of particular events.



Series	T/M 441	M 330	T/M250	T/M441	G50	MSP452
Type	Slack wire	Belt Alignment	Belt Alignment	Belt Alignment	Geared	Rotating Spindle
Material	Cast iron	Die cast alloy	Cast iron	Cast iron	Die cast alloy	Cast iron
Dimensions	106 x 181 x 63 mm	40 x 76 x 40 mm	103 x 180 x 70 mm	106 x 99 x 63 mm	200 x 98 x 114 mm	118 x 174 x 64 mm
IP Rating	IP65	IP66	IP65	IP65	IP66	IP65
Connection	Screw Terminals	Screw Terminals	Screw Terminals	Screw Terminals	Screw Terminals	Screw Terminals
Actuation	Snap Action (M) Slow Action (T)	Snap Action	Snap Action (M) Slow Action (T)	Snap Action (M) Slow Action (T)	Snap Action (M, Z) Slow Action (T)	Snap Action
Contacts	1 NO & 1 NC	1 NO & 1 NC	1 NO & 1 NC 2 NO & 2 NC	1 Changover (M) 1 NO & 1 NC	1 to 4 NO 1 to 4 NC	2 NO & 2 NC
Notes		Rod lever with nylon roller	Lever arm with aluminum roller, several roller length available Extreme temp version (T)	Lever arm with aluminum roller, several roller length available Overlapping contacts (U) Extreme temp version (T)	Various cam shapes for varying switch travel. Additional gear ratios available.	Adjustable spindle revolutions

Pull-Wire Switches

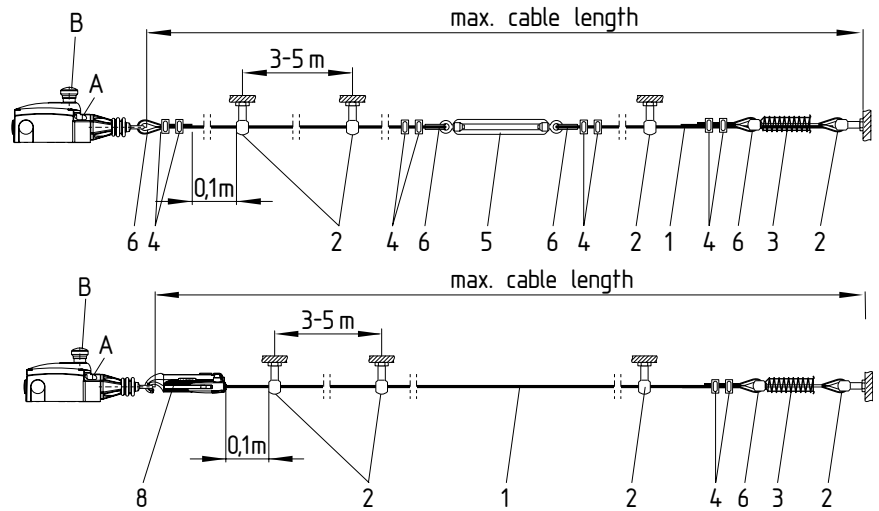
The pull-wire switches are used to give signals to start machines and to open or close electrically driven doors, gates and barriers. These switches are manually operated by pulling the wire.

TQ200 & ZQ700S

Vertical mounting application



Typical horizontal mounting application



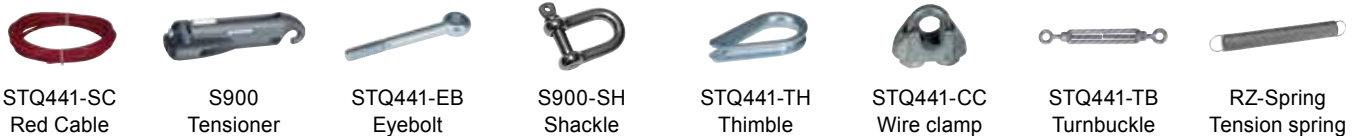
Legend

- 1 Wire rope (STQ441-SC)
- 2 Eyebolt (STQ441-EB)
- 3 Spring (RZ-Spring)
- 4 Wire clamp (STQ441-CC)
- 5 Tensioner (STQ441-TB)
- 6 Wire thimble (STQ441-TH)
- 7 Shackle (S900-SH)
- 8 Rope tensioner (S900)
- A Position indicator
- B Reset button



Series	TQ200	TQ700S	TQ700	TQ900	TQ441
Material	Light alloy die-cast	Thermoplastic	Thermoplastic	Zinc Die cast	Die cast alloy
Dimensions	60 x 250 x 32 mm	40.5 x 160 x 42.2 mm	40.5 x 160 x 42.2 mm	71.5 x 220.3 x 69.7 mm	106 x 99 x 63 mm
IP Rating	IP67	IP67	IP67	IP67	IP65
Connection	Screw Terminals	Screw terminals ST quick connect	Screw Terminals	Screw Terminals	Screw Terminals
Actuation	Slow Action	Slow action	Slow Action	Slow Action	Slow Action
Contacts	1 NC 1 NO / 1 NC	2 NO 1 NO / 1 NC 2 NC	2 NO 1 NO & 1 NC 2 NC	1 NO & 1 NC 2 NC 1 NO & 3 NC 2 NO & 2 NC 4 NC	2 NC
Notes	Vertical mount cable up to 3 m	Vertical mount With traction force	Cable up to 10 m	Cable up to 50 m	Cable up to 25 m Pushbutton or key reset

Pull-Wire Accessories



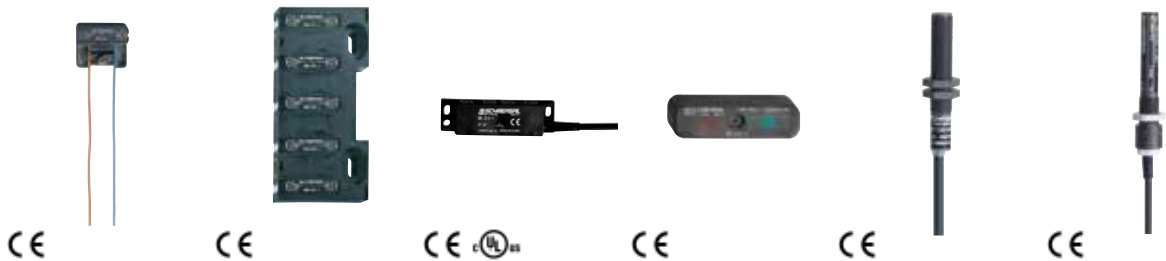
Magnetic Reed Switches

Schmersal offers a wide variety of magnetic reed switches, which actuate in the presence of a magnetic field. They are available in rectangular or cylindrical profiles, constructed from durable thermoplastics or robust metal housings for harsher environments.

These magnetic reed switches have been successfully applied as position sensors in elevators, suspension railways, amusement park rides, and on AGVs. A wide variety of actuators are available, based on desired sensing distance, housing material, and mounting type.



Series	BN12	BN20	BN32	BN65	BN75	BN80
Body Type	Cylindrical	Rectangular	Rectangular	Cylindrical	Float switch	Rectangular
Dimensions	10.7 mm Dia x 71 mm	104 x 52 x 47 mm	85 x 26 x 24 mm	13 mm Dia x 103 mm	80 x 99.5 x 55 mm	44 x 13 x 9 mm
Material	Metal	Aluminum	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
IP Rating	IP67	IP67	IP67	IP67	IP68	IP67
Connection	Prewired Cable (1M)	Screw terminals	Flat plug connector	Prewired Cable (1M)	Plug connection or Prewired Cable (1M)	Prewired Cable (1M)
Contacts	1 NO 1 NC 1 Bistable	1 NO, 1 NC 2NO, 2 NC, 1 Changeover 1 Bistable, 1 Changeover bistable	1 NO, 1 NC 1 Changeover 1 Bistable, 1 Changeover bistable	1 NO 1 NC 1 Bistable	1 NO 1 NC 1 Changeover	1 NO 1 NC 1 Bistable



Series	BN85	BN85-5	BN310	BN325	BN120	BN650
Body Type	Rectangular	Rectangular	Rectangular	Rectangular	Cylindrical	Cylindrical
Dimensions	40 x 35 x 16.5 mm	65 x 20 x 140 mm	88 x 25 x 13 mm	85 x 26 x 24 mm	10.7 mm Dia x 102 mm	13 mm Dia x 103 mm
Material	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic	Thermoplastic
IP Rating	IP40	IP30	IP67	IP40 (plug)/IP67 (cable)	IP67	IP67
Connection	2 wires	Connector, 10 pole	Prewired Cable (1M)	Flat plug connection or Prewired Cable (1M)	Prewired Cable (1M)	Prewired Cable (1M)
Contacts	1 Bistable	5 Bistable	1 NO 1 NC 1 Bistable	1 Bistable	1 NO 1 NC 1 Bistable	1 NO 1 NC 1 Bistable

Cable Care

- **HellermannTyton** - Cable ties and insulation tape
12 months
- **Sharpie** - Permanent markers / pens
1 month
- **Dymo** - Labelling machines and labels
12 months
- **Pemsa** - Mesh cable tray
12 months

Electrical Components

- **Flexelec** - Heat Trace Cables
12 months
- **GEN3** - Industrial switchgear
12 months

Motor Accessories & Control

- **Comar** - Capacitors
12 months
- **Lovato** - Motor control
12 months
- **Schurter** - Overloads
12 months

Power Engineering

- **Bowthorpe** - Line taps and accessories
12 months
- **Klein** - Chicago Grips
Working Lifetime

Power Protection & Safety

- **Spikefree** - Surge protected power boards
12 months
- **Powersafe** - Guardian & Duo power boards
5 Year Pro rata

Test Meters

- **Anco** - Multimeters
12 months
- **Klein** - Multimeters & Clamp Meters
24 months
- **Wavecom**
24 months

Tools

- **Klein** - Hand tools
Working Lifetime
- **Klauke** - Tools, crimpers & cutters 12 months
Battery operated tools - 24 months
- **Hamer Bags** - Bags & pouches 3 months
- **Taurus** - Leather
Working Lifetime
- **Greenlee**
12 months

Automation & Control

- **Schmersal**
12 months
- **Flash** - Timers & temperature controllers
12 months

HVAC & Refrigeration

- **Polyslab** - Air conditioning bases
3 months
- **Saginomiya** - Pressure, temperature & refrigeration
12 months
- **Rectorseal** - Mighty Bracket
12 months

Contact Us Today.

Our team is here to answer any questions you may have. Whether it be sales, distribution, warranty or after sales service, let us know how we can help.

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