

Product Overview

Safety Engineering electro-mechanical



EUCHNER

More than safety.

Safety Engineering at a Glance

Enabling Switches



Enabling switches
ZSE/ZXE











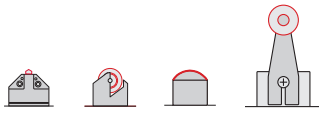
Enabling switches
ZSA/ZSB



Enabling switches
ZSM

Approvals			
Features/specific advantages	<ul style="list-style-type: none"> • three-stage built-in version • single or dual-channel 	<ul style="list-style-type: none"> • three-stage • single or dual-channel • kit available 	<ul style="list-style-type: none"> • three-stage • dual or three-channel • modular design • vibration signal optional • kit available
AS-Interface <i>Safety at Work</i>	–	●	–
Switching elements			
Total switching contacts	see product catalog	see product catalog	see product catalog
Conventional thermal current	4 A	4 A	–
Switching current, min. (at 24V)	1 mA (ZSE)/5 mA (ZXE)	1 mA	–
Mechanical life, max.	1 x 10 ⁵ (ZSE)/1 x 10 ⁵ (ZXE)	1 x 10 ⁵	1 x 10 ⁶
Environment			
Housing material	Plastic	Plastic	Plastic
Housing dimensions, min. (HxWxD)	see product catalog	see product catalog	see product catalog
Ambient temperature	-5 to +60 °C	-5 to +50 °C	-5 to +60 °C
Degree of protection, max. acc. to IEC 60529	IP65 (integrated)	IP65/IP67	IP54
LED display	–	●	●
Approach/actuating directions	–	–	–
Approach speed, max.	–	–	–
Guard locking			
Solenoid operating voltage	–	–	–
Power consumption	–	–	–
Locking force, max.	–	–	–
Connection			
Cable entry	–	∅ 4 – 8 mm	∅ 5 – 10 mm
Connection cable (pre-assembled)	–	●	●
Plug connector	–	●	●
Accessories			
Holder	–	●	●
Connection box/etc.	–	●	●
Kit	–	●	●

Safety Engineering at a Glance

		Safety Switches with Safety Function		
		 Position switches NZ	 Single limit switches NB01 Single limit switches N1A	 Safety switches NZ.VZ
Approvals				
Features/specific advantages		<ul style="list-style-type: none"> • according to EN 50041 (NZ) • according to DIN 43693 (N1A) 		<ul style="list-style-type: none"> • basic housing according to EN 50041
ASInterface Safety at Work 		●		●
Switching elements	Total switching contacts (max.)	4		4
	Conventional thermal current	4 A – 10 A depending on switching element		4 A – 6 A depending on switching element
	Switching current, min. (at 24V)	1 mA – 10 mA depending on switching element		1 mA – 10 mA depending on switching element
	Mechanical life, max.	30x10 ⁶		2 x 10 ⁶
Environment	Housing material	NZ: die-cast alloy, anodized N1A/NB01: die-cast aluminum, anodized		die-cast alloy, anodized
	Housing dimensions, min. (HxWxD)			115x40x42mm
	Ambient temperature	-25 to +80 °C*		-25 to +80 °C
	Degree of protection, max. acc. to IEC 60529	IP65/IP67		IP65/IP67
	LED display	● depending on actuator		●
	Approach/actuating directions			
Approach speed, max.	8 m/min. – 300 m/min.		20 m/min.	
Guard locking	Solenoid operating voltage	–		–
	Power consumption	–		–
	Locking force, max.	–		–
Connection	Cable entry	M20 x 1,5/M16 x 1,5		M20x1.5 ¹⁾
	Connection cable (pre-assembled)	○		○
	Plug connector	●		●
Accessories	Actuator straight/straight rubber-cushioned	Roller lever arm, chisel, roller and dome plungers, long roller plunger 		●/–
	Hinged actuator			●
	Min. door radius (hinged actuator)			165 mm
	Min. door radius (standard actuator)			1000 mm
	Bolts for safety guards			●

● available

● not available in all versions (see catalog)

○ available on request

– not available

Metal Housing

Safety Switches with Separate Actuator

Without guard locking

With guard locking and guard lock monitoring



Safety switches
NX



Safety switches
SGA



Safety switches
TZ



Safety switches
TX



Safety switches
STA



- physically compatible with TX

- physically compatible with GP und SGP

- two switching systems in one housing

- slim design
- auxiliary key, emergency or escape release

- physically compatible with TP and STP
- also as Twin and BiState version

●

–

●

●

●

4

4

8

4

4

4A

4A

4A

4A

4A

1 mA

1 mA

1 mA

1 mA

1 mA

2 x 10⁶

2 x 10⁶

1 x 10⁶

1 x 10⁶

1 x 10⁶

die-cast alloy,
cathodically dipped

die-cast alloy

die-cast alloy,
anodized

die-cast alloy,
cathodically dipped

die-cast alloy

160x42x52mm

123x40x42 mm

150x110x40mm

240x42x59mm

190x40x46.5mm

-25 to +80 °C

-20 to +80 °C

-25 to +80 °C

-20 to +80 °C

-20 to +80 °C

IP67

IP67

IP65/IP67

IP65/IP67

IP65/IP67

●

–

●

●

●



20 m/min.

20 m/min.

20 m/min.

20 m/min.

20 m/min.

–

–

24/110/230V

24/110/230V

24/110/230V

–

–

10W

8/10/11W

8W

–

–

2000N

1700N

3000N

3xM20x1.5

3xM20x1.5

M20x1.5¹⁾

3xM20x1.5¹⁾

3xM20x1.5

○

–

○

○

○

●

●

●

●

●

–/●

●/●

●/–

–/●

●/●

●

●

●

●

●

100 mm

200 mm

165 mm

100 mm

200 mm

300 mm

300 mm

1000 mm

300 mm

300 mm

●

●

●

●














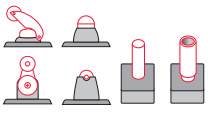
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* (Low and high temperature upon request)

1) further versions upon request

2) snap-action contact element 1 x 10⁶
















Safety Engineering at a Glance

		Safety Switches with Safety Function			
		Without guard locking			
		 Safety switches NM	 Safety switches NM.VZ	 Safety switches NQ	 Safety switches GP/SGP
Approvals					
Features/specific advantages		<ul style="list-style-type: none"> • small design • various lever/plunger forms and hinged actuators 	<ul style="list-style-type: none"> • small design • small approach radii 	<ul style="list-style-type: none"> • compact housing 	<ul style="list-style-type: none"> • GP/SGP: identical fixing dimensions to safety switches TP/STP • SGP: Actuating head made of metal, also as Twin version
AS-Interface <i>Safety at Work</i> 		-	-	-	●
Switching elements	Total switching contacts (max.)	3	3	3	4
	Conventional thermal current	4 A	4 A	2,5 A	4 A
	Switching current, min. (at 24V)	1 mA	1 mA	1 mA	1 mA
	Mechanical life, max.	30 x 10 ⁶	1 x 10 ⁶	1 x 10 ⁶	2 x 10 ⁶
Environment	Housing material	reinforced thermoplastic	reinforced thermoplastic	reinforced thermoplastic	reinforced thermoplastic
	Housing dimensions, min. (HxWxD)	77,5x25x32 mm	82x25x32 mm	78x30x15 mm	125x40x42 mm
	Ambient temperature	-20 to +80 °C	-20 to +80 °C	-25 to +70 °C	-20 to +80 °C
	Degree of protection, max. acc. to IEC 60529	IP67	IP67	IP67	IP67
	LED display	-	-	-	-
	Approach/actuating directions				
Approach speed, max.	60 m/min.	20 m/min.	60 m/min.	20 m/min.	
Zuhaltung	Solenoid operating voltage	-	-	-	-
	Power consumption	-	-	-	-
	Locking force, max.	-	-	-	-
Connection	Cable entry (max.)	3xM16x1.5	3xM16x1.5	-	3xM20x1.5
	Connection cable (pre-assembled)	○	○	●	○
	Plug connector	●	●	-	●
Accessories	Actuator straight/straight rubber-cushioned	various actuation elements 	●/●	-/●	●/●
	Hinged actuator		-	●	●
	Min. door radius (hinged actuator)		-	50 mm	GP: 90 mm SGP: 200 mm
	Min. door radius (standard actuator)		150 mm	160 mm	GP: 1000 mm SGP: 300 mm
	Bolts for safety guards		●	-	●

All data given refer to the respective minimal or maximal values for the entire series.

Plastic Housing

Safety Switches with Separate Actuator

With guard locking	With guard locking and guard lock monitoring			
				
Safety switches TQ	Safety switches STM	Safety switches TP	Safety switches STP	Safety switches TK
				
• compact housing	• compact housing	• auxiliary, key auxiliary, emergency or escape release optional • ideal for profile assembly • also as Twin and BiState version	• auxiliary, key auxiliary, emergency or escape release optional • ideal for profile assembly • also as Twin and BiState version	• very high locking force • no protection against unintentional closing
–	–	●	●	–
5	3	4	4	2
2,5A	4A	4A	4A	4A
1 mA	1 mA	1 mA	1 mA	1 mA
1 x 10 ⁶	2 x 10 ⁶	1 x 10 ⁶	1 x 10 ⁶	1 x 10 ⁶
reinforced thermoplastic	reinforced thermoplastic	reinforced thermoplastic	reinforced thermoplastic	reinforced thermoplastic
75 x 75 x 15 mm	96 x 79 x 38 mm	192 x 40 x 42 mm	192 x 40 x 42 mm	192 x 40 x 42 mm
-25 to +50 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C
IP65	IP67	IP67	IP67	IP67
–	●	●	●	●
				
60 m/min.	20 m/min.	20 m/min.	20 m/min.	20 m/min.
24V	24V/230V	24/110/230V	24/110/230V	24/48/230 V
2,7W	6 W	8 W	8W	8W
500N	plastic 1000N metal 2000N	1300N	2500N	5000N
–	M20x1.5	3xM20x1.5	3xM20x1.5	3xM20x1.5
●	○	○	○	○
–	●	●	●	●
–/●	–/●	●/●	●/●	–
●	●	●	●	–
50 mm	200 mm	90 mm	200 mm	–
160 mm	300 mm	1000 mm	300 mm	–
–	–	–	●	–





















Safety Engineering at a Glance

Bolts



Can be combined with	NZ, TP, STP, GP, SGP, STA, SGA, CTP	NZ.VZ, TZ, GP, TP, SGP, STP, SGA, STA, CTP	NM...VZ, NP, NZ.VZ, TZ, TX, GP, SGP, SGA, TP, STP, STA, CTP
Material	Plastic	Aluminum	Steel
Door hinge position	left and right	left and right	left and right
Detent mechanism open/closed	●/-	●/●	●/●
Escape release	●	●	●

Safety Engineering at a Glance

	Emergency Stop		Rope Pull Switches	
				
	Emergency stop	Emergency stop	Rope pull switches RPS-M	Rope pull switches RPS
Approvals				
Features/specific advantages	<ul style="list-style-type: none"> Built-in devices 	<ul style="list-style-type: none"> With housing 	<ul style="list-style-type: none"> Fast-action clamping and tensioning device with visualization integrated emergency stop function 	<ul style="list-style-type: none"> Fast-action clamping and tensioning device with visualization integrated emergency stop function
AS-Interface <i>Safety at Work</i> 	-	-	-	-
Switching elements				
Total switching contacts	4	3	4	4
Conventional thermal current	1 A	1 A	10 A	10 A
Switching current, min. (at 24V)	10 mA	10 mA	10 mA	10 mA
Mechanical life, min.	250.000	250.000	100.000	100.000
Environment				
Housing material	reinforced thermoplastic/policarbonate	reinforced thermoplastic/policarbonate	die-cast alloy	reinforced thermoplastic/policarbonate
Housing dimensions, min. (HxWxD)	29 x 29 x 40.1 mm	91.5 x 76 x 76 mm	282 x 90 x 88 mm	256 x 42 x 88 mm
Ambient temperature	-25 to +60 °C	-25 to +55 °C	-30 to +80 °C	-25 to +70 °C
Degree of protection max. acc. to IEC 60529	IP20/IP65	IP65	IP67	IP67
LED display				
Approach/actuating directions				
Approach speed, max.	-	-	-	-
Connection				
Cable entry	-	2 x 21.3 mm	3 x M20 x 1.5 ¹⁾	3 x M20 x 1.5 ¹⁾
Connection cable (pre-assembled)	-	-	-	-
Plug connector	-			
Screw terminal			-	-

1) further versions upon request

EUCHNER GmbH + Co. KG
 Kohlhammerstraße 16
 70771 Leinfelden-Echterdingen
 Germany

Tel. +49 711 7597-0
 Fax +49 711 753316
 info@euchner.de
 www.euchner.com

EUCHNER
 More than safety.