

# SMA – Magnetic safety switches



SMA 01xx



## Applications

- Machine and plant manufacturing
- Packing machines
- Wood-processing machines

## Features

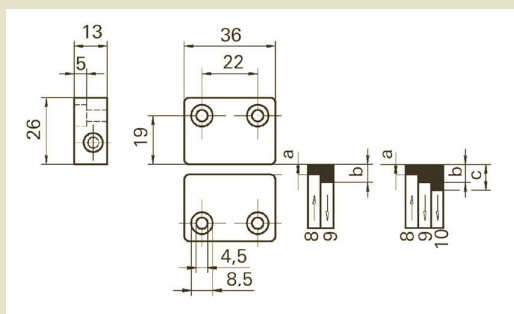
- Block-shaped design
- For harsh operating conditions
- Tamper proof
- Can be used up to PL e/Category 4 (EN ISO 13849-1)
- Degree of Protection IP67

## Technical data

Set	SMA 011x	SMA 012x
Dimensions / mm (L x W x H)	36 x 26 x 13 mm	
Actuating distance / (Sao / Sar)	8 / 17 mm	
Directions of actuation	Front - Front / Front - Side / Side - Side	
Protection degree	IP67	
Contact type	Reed	
Contact assignment	NC / NO	NO / NO
Switching voltage	48 V DC	
Switching current	0.2 A	
Maximum cable length	20 m	

## Dimension diagram

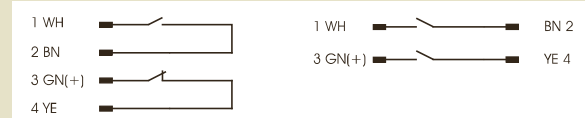
SMA 011x / SMA 012x



## Circuit diagram

SMA 011x

SMA 012x



Contacts are shown in non-operated state (magnet is out of actuating distance Sar)

# SMA – Magnetic safety switches



SMA 02xx  
SMA 06xx



## Applications

- Machine and plant manufacturing
- Packing machines
- Wood-processing machines

## Features

- Rectangle-shaped design
- For harsh operating conditions
- Tamper proof
- Can be used up to PL e/Category 4 (EN ISO 13849-1)
- Degree of Protection IP67

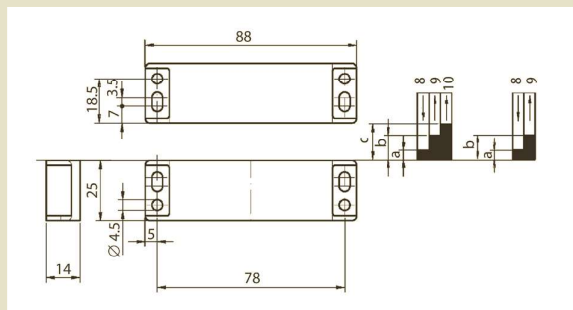
## Technical data

Set	SMA 021x	SMA 022x	SMA 023x/024x	SMA 061x	SMA 062x
Dimensions / mm (L x W x H)	88 x 25 x 14 mm				
Actuating distance / (Sao / Sar)	7 / 17 mm	7 / 18 mm	7 / 22 mm	4 / 16 mm	4 / 17 mm
Directions of actuation	Front - Front / Front - Side / Side - Side				
Protection degree	IP67				
Contact type	Reed				
Contact assignment	NC / NO	NO / NO	NO / NO / NC	NC / NO	NO / NO
Switching voltage	48 V DC				
Switching current	0.2 A				
Maximum cable length	20 m				

sensor PRO

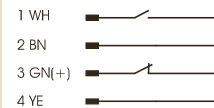
## Dimension diagram

SMA 021x/ SMA 022x/SMA 023x/SMA 024x

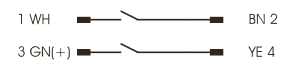


## Circuit diagram

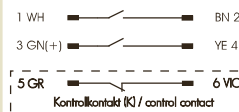
SMA 021x / SMA 0219



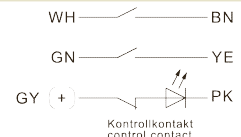
SMA 022x / SMA 0229



SMA 023x



SMA 024x (with LED)



Contacts are shown in non-operated state (magnet is out of actuating distance Sar)

# SMA – Magnetic safety switches



SMA 03xx



## Applications

- Machine and plant manufacturing
- Packing machines
- Wood-processing machines

## Features

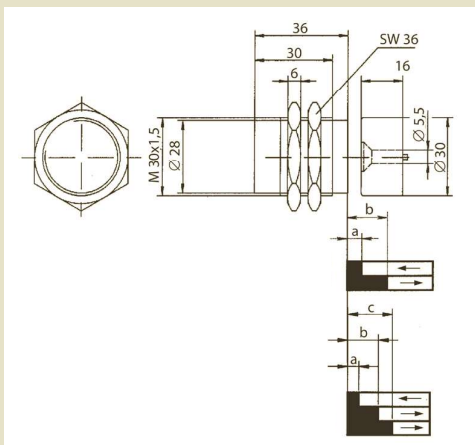
- Round-shaped design
- For harsh operating conditions
- Tamper proof
- Can be used up to PL e/Category 4 (EN ISO 13849-1)
- Degree of Protection IP67

## Technical data

Set	SMA 031x	SMA 032x
Dimensions / mm (Ø x L)		M30 x 32 mm
Actuating distance / (Sao / Sar)		7 / 20 mm
Directions of actuation		Front - Front
Protection degree		IP67
Contact type		Reed
Contact assignment	NC / NO	NO / NO
Switching voltage		48 V DC
Switching current		0.2 A
Maximum cable length		20 m

## Dimension diagram

SMA 031x / SMA 032x



## Circuit diagram

SMA 031x

SMA 032x



Contacts are shown in non-operated state (magnet is out of actuating distance Sar)

**Overview of devices | part numbers**

Type	Description	Contact	Part no.	Std. pack
SMA 0113	Switch-set with cable 3 m + magnet	NC / NO	R1.100.0113.0	1
SMA 0123	Switch-set with cable 3 m + magnet	NO / NO	R1.100.0123.0	1
SMA 0119	Switch-set mit with M8 connection + magnet	NC / NO	R1.100.0119.0	1
SMA 0129	Switch-set mit with M8 connection + magnet	NO / NO	R1.100.0129.0	1
SMA 0213	Switch-set with cable 3 m + magnet	NC / NO	R1.100.0213.0	1
SMA 0223	Switch-set with cable 3 m + magnet	NO / NO	R1.100.0223.0	1
SMA 0224	Switch-set with cable 5 m + magnet	NO / NO	R1.100.0224.0	1
SMA 0226	Switch-set with cable 10 m + magnet	NO / NO	R1.100.0226.0	1
SMA 0228	Switch-set with cable 20 m + magnet	NO / NO	R1.100.0228.0	1
SMA 0233	Switch-set with cable 3 m + magnet	NO / NO / NC	R1.100.0233.0	1
SMA 0243	Switch-set with cable 3 m, LED + magnet	NO / NO / NC	R1.100.0243.0	1
SMA 0249	Switch-set with M12 connection, LED + magnet	NO / NO / NC	R1.100.0249.0	1
SMA 0219	Switch-set with M8 connection + magnet	NC / NO	R1.100.0219.0	1
SMA 0229	Switch-set with M8 connection + magnet	NO / NO	R1.100.0229.0	1
SMA 0313	Switch-set with cable 3 m + magnet	NC / NO	R1.100.0313.0	1
SMA 0323	Switch-set with cable 3 m + magnet	NO / NO	R1.100.0323.0	1
SMA 0319	Switch-set with M8 connection + magnet	NC / NO	R1.100.0319.0	1
SMA 0329	Switch-set with M8 connection + magnet	NO / NO	R1.100.0329.0	1
SMA 0613	Switch-set with cable 3 m + magnet	NC / NO	R1.100.0613.0	1
SMA 0623	Switch-set with cable 3 m + magnet	NO / NO	R1.100.0623.0	1
SMA 0626	Switch-set with cable 10 m + magnet	NO / NO	R1.100.0626.0	1
SMA 0619	Switch-set with M8 + magnet	NC / NO	R1.100.0619.0	1
SMA 0629	Switch-set with M8 + magnet	NO / NO	R1.100.0629.0	1

**Accessories for SMA**



**sensor** PRO

**Overview of devices | part numbers**

Type	Description	Contact	Part no.	Std. pack
SMA 3110	Magnet (NC / NO) for SMA 011x		R1.100.3110.0	5
SMA 3120	Magnet (NO / NO) for SMA 012x		R1.100.3120.0	5
SMA 3200	Magnet for SMA 02xx		R1.100.3200.0	5
SMA 3300	Magnet for SMA 03xx		R1.100.3300.0	5
SMA 3600	Magnet for SMA 06xx		R1.100.3600.0	5
SMA 4100	Washer for SMA 01xx		R1.100.4100.0	10
SMA 4200	Washer for SMA 02xx / SMA 06xx		R1.100.4200.0	10
SMA 5004	Cable, 5 m		R1.100.5004.0	1
SMA 5005	Cable, 10 m		R1.100.5005.0	1

**Note:** Suitable M12 cables (SLX-CAB) can be selected on P.86

# SMI 1001 – Magnetic switch interface



## Applications

- Connecting in series of two-channel sensors with contact assignment NO/NO up to PL d/Categorie 3 (EN ISO 13849-1)

## Features

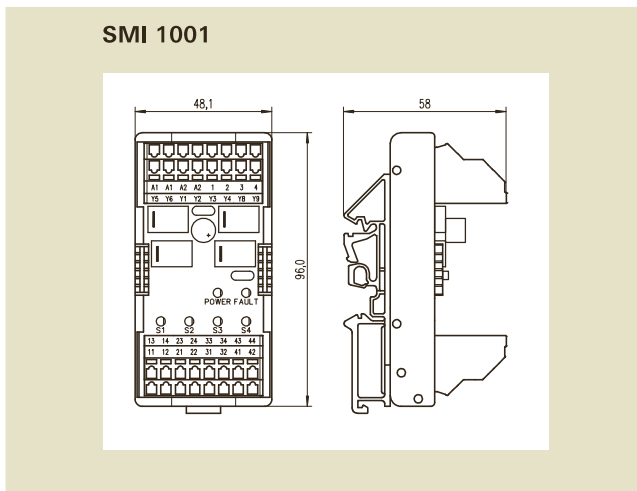
- Control via a maximum of 4 two-channel sensors
- Signal output for each sensor
- Optical indication of the switching state of each sensor

## Function

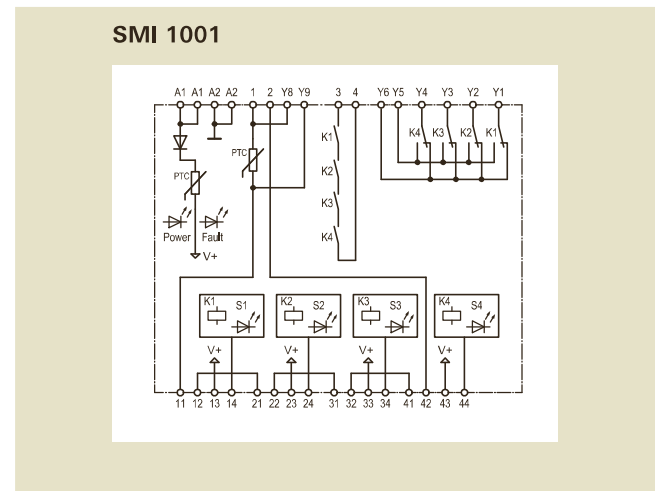
The SMI 1001 connects safety switches / position switches in series. Several safety switches or position switches can be connected to **safe** RELAY safety switching devices or to **samos**® and **samos**®PRO safety systems and evaluated.

The SMI 1001 features status displays for the switching state of the NO circuits of the connected sensors as well as four diagnostics outputs for the display of the switching state of the NO circuits via external LEDs or a control.

## Dimension diagram



## Circuit diagram



# SMI 1001 – Magnetic switch interface

## Overview of devices | part numbers

Type	Rated voltage	Terminals	Part no.	Std. pack
SMI 1001	24 V DC	Push-in terminals, fixed	R1.100.4001.0	1

## Technical data

Function	
Function display	1 x LEDs green, 5 x LEDs red
Power supply circuit	
Rated voltage	24 V DC
Rated consumption	1.5 W
Control circuit 11 – 44	
Max. cable length	30 m
Output circuit signal outputs Y1 – Y6	
Contact type	NO
Rated switching voltage	24 V DC
Max. switching current	0.5 A
Output circuit 1, 2, 3, 4	
Contact type	NO
Rated switching voltage	24 V DC
Max. switching current	150 mA
General data	
Creepage distances and clearances	according to EN 60664-1
Ambient temperature/ storage temperature	-25 – +55 °C / -25 – +70 °C
Wire ranges fine-stranded/ solid	0.08 – 2.5 mm <sup>2</sup>
or fine-stranded with ferrules	0.08 – 1 mm <sup>2</sup>
or fine-stranded with TWIN-ferrule	0.08 – 1.5 mm <sup>2</sup>
Weight	0.1 kg
Approvals	cULus

## Application

