

# 9

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## Detecting Devices



	<b>Price Groups</b> PG 102, 121	<b>3SF1 AS-Interface Position Switches</b>
9/2	<b>Introduction</b>	9/82 General data 9/84 Molded-plastic enclosures 9/86 Metal enclosures <u>With Separate Actuator</u>
9/4	<b>3SE5, 3SE2 Position Switches</b>	9/90 General data 9/91 Molded-plastic enclosures 9/92 Metal enclosures 9/93 Accessories <u>With Interlocking</u>
9/13	General data 3SE5, molded-plastic enclosures	9/94 General data 9/95 Molded-plastic enclosures 9/96 Metal enclosures <u>Hinge switches</u>
9/17	- Enclosure width 31 mm according to EN 50047	9/97 Molded-plastic enclosures 9/98 Metal enclosures
9/21	- Enclosure width 40 mm according to EN 50041 <b>new</b>	
9/25	- Enclosure width 50 mm	
9/27	- Ambient temperature up to -40 °C 3SE5, metal enclosures	
9/31	- Enclosure width 31 mm according to EN 50047 <b>new</b>	
9/35	- Enclosure width 40 mm according to EN 50041	
9/39	- Enclosure width 56 mm, XL <b>new</b>	
9/42	- Ambient temperature up to -40 °C	
9/44	- Compact design <b>new</b>	
9/46	3SE5, open-type design	
9/47	Accessories and spare parts	
9/50	<u>With Separate Actuator</u>	
9/55	General data	
9/57	3SE5, molded-plastic enclosures	
9/59	3SE5, metal enclosures	
9/60	Accessories	
9/61	3SE2, molded-plastic enclosures	
9/65	<u>With Interlocking</u>	
9/66	General data	
9/67	3SE5, metal enclosures	
9/68	Accessories	
9/70	3SE5, metal enclosures	
9/71	<u>Hinge switches</u>	
9/72	3SE5, molded-plastic enclosures	
9/74	3SE2, moldable plastic enclosures	
	<b>For Explosion Protection (ATEX)</b>	
	3SE5, metal enclosures	
	<b>3SE6 Magnetically Operated Switches</b>	
	9/99 Magnetic monitoring systems	
	<b>More technical information</b>	
	can be found at <a href="http://www.siemens.com/industrial-controls/support">www.siemens.com/industrial-controls/support</a>	
	under Product List: - Technical specifications	
	under Entry List: - Updates - Downloads - FAQ - Manuals - Characteristics - Certificates	
	and at <a href="http://www.siemens.com/industrial-controls/configurators">www.siemens.com/industrial-controls/configurators</a>	
	- Configurators	

## Actuating Devices



	Position switches, standard					Hinge switches	
H x D) in mm	✓ ✓ 31 x 68 x 33	✓ -- 50 x 53 x 33	✓ ✓ 40 x 78 x 38	-- ✓ 56 x 78 x 38	-- ✓ 56 x 100 x 38	✓ ✓ 31 x 68 x 33	✓ ✓ 40 x 78 x 38
Protection	IP65, IP66/IP67	IP66/IP67	IP66/IP67	IP66/IP67	IP66/IP67	IP65, IP66/IP67	IP66/IP67
	Mounting and operating points acc. to EN 50047	Operating points acc. to EN 50047	Mounting and operating points acc. to EN 50041	Operating points acc. to EN 50041	Operating points acc. to EN 50047	Mounting and operating points acc. to EN 50047	Mounting and operating points acc. to EN 50041
	CE, UL, CSA, CCC	CE, UL, CSA, CCC	CE, UL, CSA, CCC	CE, UL, CSA, CCC	CE, UL, CSA, CCC	CE, UL, CSA, CCC	CE, UL, CSA, CCC
Number of contacts	1 NO + 1 NC, 2 NC	1 NO + 1 NC, 2 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC
Number of contacts	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC	1 NO + 1 NC
Minimum contact gap	1 NO + 1 NC	✓	✓	✓	✓	✓	✓
Number of contacts	1 NO + 2 NC, 2 NO + 1 NC	1 NO + 2 NC, 2 NO + 1 NC	1 NO + 2 NC, 2 NO + 1 NC	1 NO + 2 NC, 2 NO + 1 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC
Pre-break	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC
Number of contacts (products)	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC	1 NO + 2 NC
Dimensions	--	--	--	✓	--	--	--
Material	✓	✓	✓	--	✓	✓	✓
Electrostatic protection	✓	✓	✓	✓	✓	✓	✓
Extection (ATEX)	--	✓	✓	✓	✓	✓	✓
Rated	✓	✓	✓	--	✓	✓	✓
Specifications							
Rated voltage U <sub>r</sub>	400 V	400 V	400 V	400 V	400 V	400 V	400 V
Normal current I <sub>th</sub>	6 A/10 A (3-/2-pole)	6 A/10 A (3-/2-pole)	6 A/10 A (3-/2-pole)	6 A/10 A (3-/2-pole)	6 A/10 A (3-/2-pole)	6 A/10 A (3-/2-pole)	6 A/10 A (3-/2-pole)
Socket, 4-, 5- or 6-pole + PE	1 x M20 x 1.5 ✓	2 x M20 x 1.5 ✓	1 x M20 x 1.5 ✓	3 x M20 x 1.5 ✓	1 x M20 x 1.5 ✓	1 x M20 x 1.5 ✓	1 x M20 x 1.5 ✓
	--	--	--	--	--	--	--

## Detecting Devices

### Introduction



	Compact design	Open-type	Position switches with separate actuator	Position switches with interlocking	Magnetically operated switches	
H x D) in mm tection	--	✓	✓	✓	✓	
	✓		✓	✓	--	
	30 x .. x .., 40 x .. x ..	30 x 48,5 x 20	31 x 68 x 33, 50 x 53 x 33	40 x 78 x 38, 56 x 78 x 38	54 x 185 x 44	M30 x 44, 19 x 33 x 13, 25 x 88 x 13
	IP66/IP67	IP10 or IP20	IP65, IP66/IP67	IP66/IP67	IP66/IP67	IP67
	--	Mounting and operating points acc. to EN 50047	Mounting acc. to EN 50047	Mounting acc. to EN 50041	EN 1088	Category 3 or 4 acc. to ISO 13849-1 (EN 954-1)
	CE, UL, CSA	--	CE, TÜV, UL, CSA, CCC	CE, TÜV, UL, CSA, CCC	CE, TÜV, UL, CSA	
Contacts	--	1 NO + 1 NC	1 NO + 1 NC	--	--	
Contacts	1 NO + 1 NC	1 NO + 1 NC	--	--	--	
contact gap	--	✓				
Contacts	--	1 NO + 2 NC	1 NO + 2 NC	--	--	
pre-break	--	1 NO + 2 NC	--	--	--	
Contacts	--	1 NO + 2 NC	--	--	--	
Contacts	--	--	--	2 x (1 NO + 2 NC)	--	
--	--	--	--	--	1 NO + 1 NC or 2 NC	
6						
play	--	--	✓	✓	--	
ision protection	--	--	✓	✓	--	
ction (ATEX)	--	--	✓	--	--	
ated	--	--	✓	✓	--	
ifications						
re $U_i$		400 V	400 V	400 V	--	
ormal current $I_{the}$		6 A	6 A	6 A	--	
	--	--	1 x M20 x 1.5, 2 x M20 x 1.5	1 x M20 x 1.5, 3 x M20 x 1.5	3 x M20 x 1.5	--

## 5, 3SE2 Position Switches

SIRIUS 3SE5 position switches are modern in design, modular and simple to connect. They save time and flexibility during installation of a whole range of applications. In principle it is possible to combine any enclosure and operating mechanism, paying due consideration to IEC and EN 50047 standards where necessary.

Components of the position switches in standard enclosures are complete units.



Position switches with plastic and metal enclosures

This new modular system comprising the basic switch and an actuator which must be selected individually. Thanks to the modular design of the switch, you can select the right solution for his application from numerous variants and install it himself in a very short time.

This method enables fast replacement of the actuators.



### Enclosure sizes

The 3SE5 switches are available in five different enclosure sizes with 2 or 3 contacts and with the XL enclosure:

- Open-type position switch IP20 or IP10
- Molded-plastic enclosures according to EN 50047, 31 mm wide, IP65, 1 cable entry
- Metal enclosures according to EN 50047, 31 mm wide, IP66/IP67, 1 cable entry
- Plastic and metal enclosures according to EN 50041, 40 mm wide, IP66/IP67, 1 cable entry
- Molded-plastic enclosures, 50 mm wide, IP66/IP67, 2 cable entries
- Metal enclosures, 56 mm wide, IP66/IP67, 3 cable entries
- XL metal enclosures with 4 to 6 contacts, 56 mm wide, IP66/IP67, 3 cable entries

### Enclosure versions

Various basic switches can be selected for the 3SE5 series:

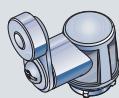
- With contact blocks with two or three contacts (screw terminals) designed as slow-action or snap-action contacts; the slow-action contacts also with make-before-break
- Optional LED status display
- With mounted four- or five-pole M12 connector socket (available for the wide enclosures as an accessory for self-assembly)
- With 6-pole connector socket + PE on the metal enclosures
- Versions with increased corrosion protection
- Versions for operating temperature up to -40 °C
- Metal enclosures for explosion protection (ATEX) ([see page 9/74](#))
- AS-Interface version with integrated ASI-safe electronics for all enclosure designs ([see page 9/82](#))

### Actuator variants

All operating mechanisms can be rotated around the axis in increments of 22.5°. The following actuator variants are available:

- Standard, rounded and roller plungers
- Roller and angular roller levers
- Spring rod
- Twist levers and rod actuators with twist actuator
- Fork levers with twist actuator

The actuator rollers are available with various materials and diameters.



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## 3SE5, 3SE2 Position Switches

### General data

#### Mounting

Easy plug-in method  
for fast replacement of the actuator heads



Open the cover (1)  
Actuate the locking lever (2)  
Replace the head (turnable by 16 x 22.5°) (3)  
Lock and close the cover

#### Quick-connect technology

For molded-plastic enclosure with a width of 31 mm



6

These position switches can be wired quickly and easily as an added customer benefit. The connecting cable is first connected to the terminals of the contact block and then guided through a slit into the cable gland opening. The time saved through this new connection method is approx. 20 to 25 %.

#### Indicators

enclosure sizes



versions can be supplied with an LED signaling (green + 1 x yellow). This is the first time that optional equipment is also available for small standard enclosures according to EN 50047. The LED signaling indicators are available for all common voltages (24 V DC and 230 V AC).

#### Contacts

two and three-pole contact blocks  
available in all enclosure sizes



contact block with snap-action or slow-action contacts. It is particularly available for all enclosure forms. The same number of terminals is required as for a two-pole block. The version with two poles (2 NC contacts) offers for example more safety through redundant contacts (2 NC contacts) with simultaneous signaling. The three-pole blocks are also available with

## 5, 3SE2 Position Switches

Position switches differ from the previous series by showing new characteristics:

The structure of the product range allows a number of variants with a smaller number of bearing types for enclosing different mechanisms.

Actuation can be turned around the axis in increments of 10° (see picture on page 9/5).

Standard roller plungers according to EN 50041 with lateral travel (total travel 9 mm) for greater tolerance when actuating.

Enclosure sizes – now also including the small enclosure variants – are optionally available with an LED signaling function (see picture on page 9/5).

Standard variants have an integrated chlorinated rubber seal for high functional safety in cold and aggressive environments.

Standard lock blocks are replaceable (see page 9/48).

Standard contact blocks are available for all enclosure variants (see picture on page 9/5).

Standard element with 1 NO + 2 NC slow-action contacts with make-before-break and 2 NO + 1 NC contacts.

Standard single contact block 1 NO + 1 NC improves the pre-switching operation through a reduced actuation force.

Standard element with 1 NO + 1 NC snap-action contacts with make-before-break and simultaneous contact opening is suitable for simultaneous control and signaling, particularly in the elevator industry.

Standard enclosures for accommodating two 2- or 3-pole contact blocks.

Standard plastic enclosure with a width of 31 mm has simplified wiring equipment which makes it possible to save up to 20 to 25 % of the time when connecting (see picture on page 9/5).

Standard electric component is integrated for the versions with interface connection (see page 9/82); an additional adapter is not required.

Standard position switches, mechanical positions of the parts are converted into electrical signals. The modular and uniform design and large number of variants can meet practically all requirements in the industry.

Standard position switches are available with enclosure versions to suit the particular application conditions. Different control tasks can be performed with the best contact blocks suited for the particular purpose. Many different actuator variants are available to match the mechanical configuration of the moved machine components, fixing points and characteristics are largely in accordance with the EN 50041 or EN 50047 standards.

### Safety position switches

For controls according to IEC 60204-1 or EN 60204-1 the devices can be used as a safety position switch. To secure position switches against changes in their position, keyed techniques must be employed on installation.

### Safety circuits

IEC 60947-5-1 and EN 60947-5-1 require positive opening of the NC contacts, i.e. for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked accordingly to the IEC standard 60947-5-1 with the symbol  $\ominus$ .

Category 2 according to ISO 13849-1 (EN 954-1) can be attained with 3SE5 position switches with  $\ominus$ , and category 3 or 4 when using an additional position switch, if the corresponding failsafe evaluation units are selected and correctly installed, e.g. the 3TK28 safety relays or matching devices from the ASIsafe, SIMATIC or SINUMERIK product ranges. The operating mechanisms (actuators) must also be connected to the enclosure by keyed techniques. The corresponding operating mechanisms are marked in the catalog with  $\ominus$ .

### Contacts for each application

- Snap-action contacts: NC and NO contacts switch simultaneously – regardless of the actuating speed ( $v_{min} = 0.01 \text{ m/s}$ ) and contact erosion.
- Slow-action contacts: Difference in travel between "NC contact opens" and "NO contact closes"; the switching speed is the same as or proportional to the actuating speed ( $v_{min} = 0.4 \text{ m/s}$ ).
- Slow-action contacts with make-before-break: e.g. suitable for adding a second function to a sequence control.

### Operating mechanisms for each application

#### Standard, rounded and roller plungers

- Operation in direction of the plunger axis or in case of roller plunger with bar at right angles to the plunger axis
- The roller plunger is recommended for lateral actuation and requires relatively long overtravel.

#### Roller and angular roller levers

- For actuators made of finely ground steel in the form of cams, straight-edges (approach angle 30°) or cam disks

#### Spring rod

- Can be used for undefined actuations and changing starting conditions
- Starting from any direction is possible.

#### Twist levers and rod actuators

- For a high starting speed ( $v = 1.5 \text{ m/s}$ )
- Variety of starting options
- Insensitive to oil, grinding dust and coarse-grained material
- Adjustment of the lever in increments of 10°
- Can be adjusted with left or right switching

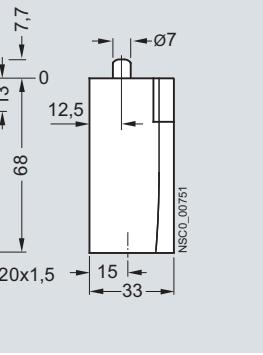
#### Fork lever



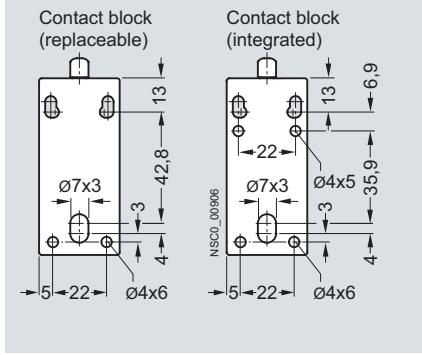
## 5, 3SE2 Position Switches

### Dimensions of the basic switches

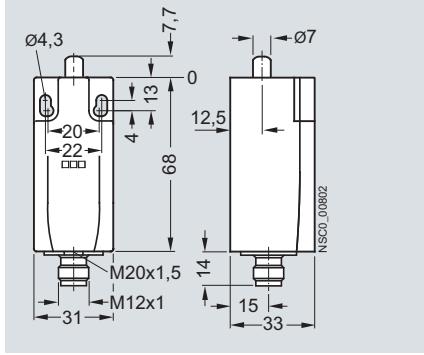
31 mm, EN 50047,  
connecting thread  
3SE5 212



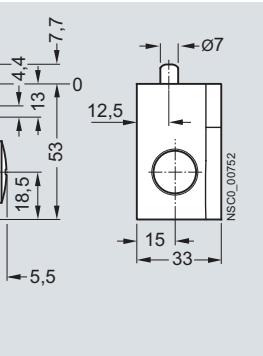
Enclosure width 31 mm, EN 50047,  
rear with fixing holes  
3SE5 232, 3SE5 212



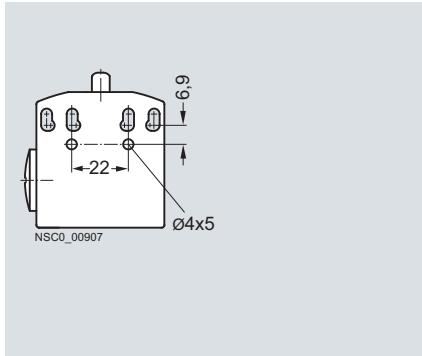
Enclosure width 31 mm, EN 50047,  
with M12 connector socket  
3SE5 234, 3SE5 212



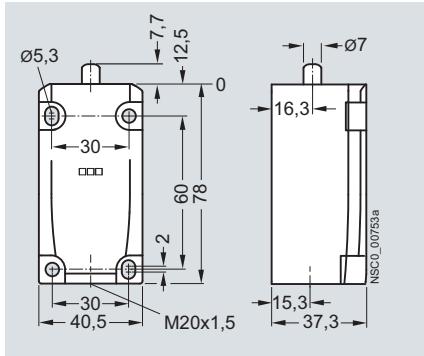
50 mm,  
connecting thread



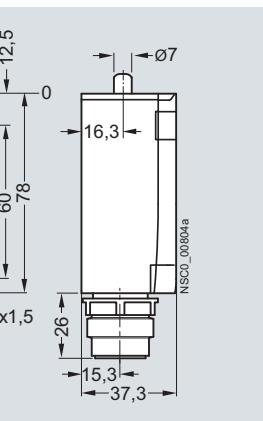
Enclosure width 50 mm,  
rear with fixing holes  
3SE5 242



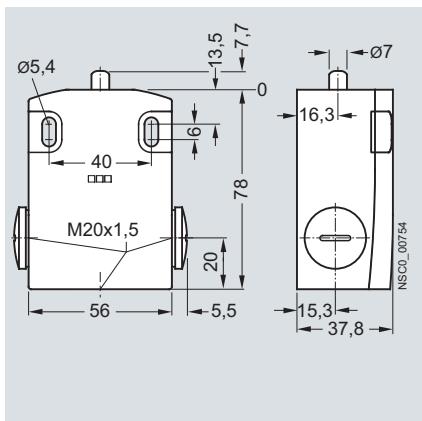
Enclosure width 40 mm, EN 50041,  
with M20 x 1.5 connecting thread  
3SE5 112, 3SE5 132



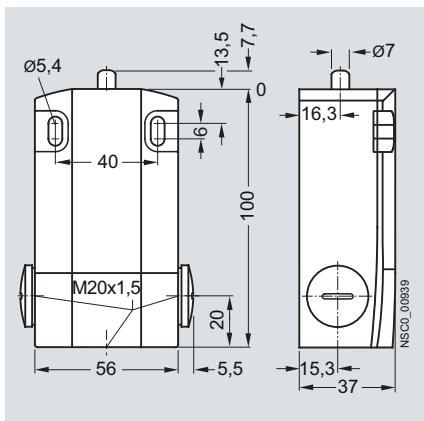
40 mm, EN 50041,  
vector socket



Enclosure width 56 mm,  
with M20 x 1.5 connecting thread  
3SE5 122



XL enclosure, width 56 mm,  
with M20 x 1.5 connecting thread  
3SE5 162



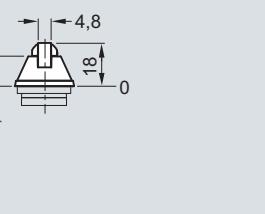
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## 3SE5, 3SE2 Position Switches

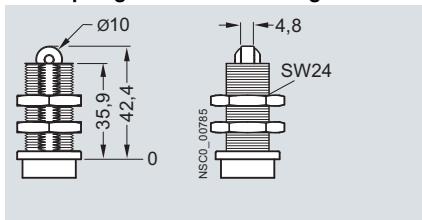
### General data

#### Mechanisms for enclosure width 31 mm and 50 mm

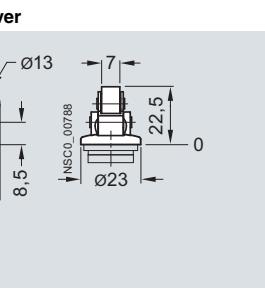
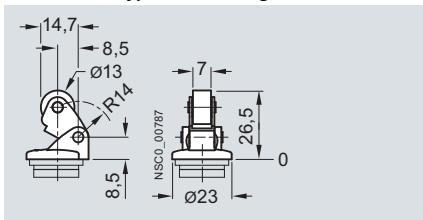
Type C acc. to EN 50047



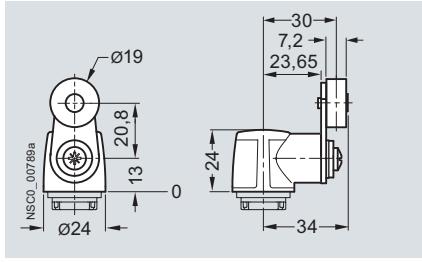
Roller plunger with central fixing



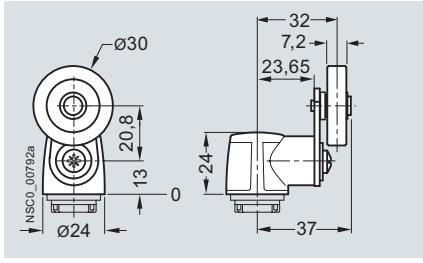
Roller lever, type E according to EN 50047



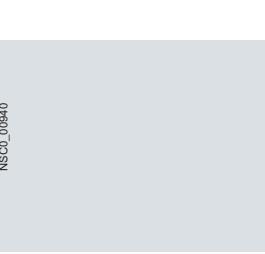
Twist lever, type A acc. to EN 50047



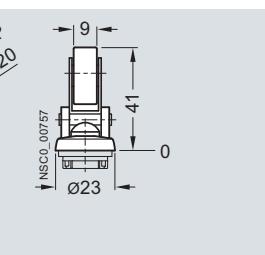
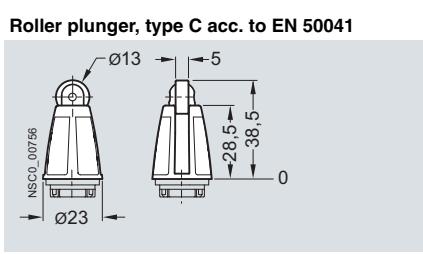
Twist lever, roller 30 mm



#### Mechanism for enclosure width 40 mm and 56 mm

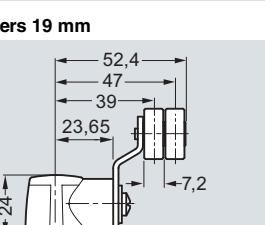
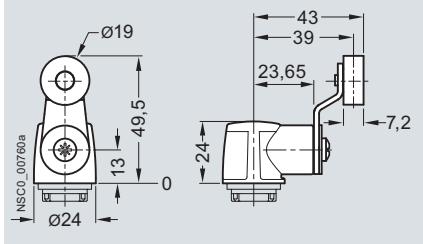


Rounded plunger, type B acc. to EN 50041



Angular roller lever

Roller plunger, type C acc. to EN 50041

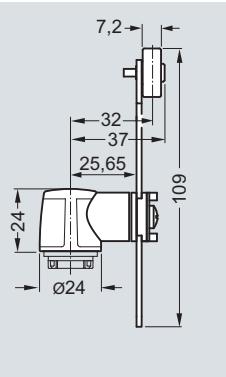


Fork lever, roller 19 mm

## 5, 3SE2 Position Switches

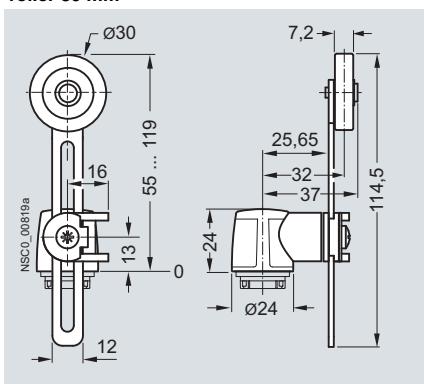
### Mechanisms for all enclosure widths

stable length,

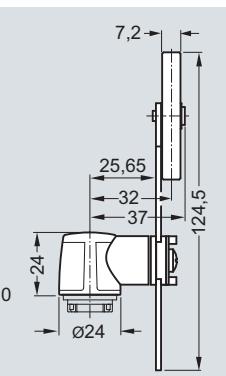


Twist lever, adjustable length,  
with grid hole, roller 19 mm

Twist lever, adjustable length,  
roller 30 mm

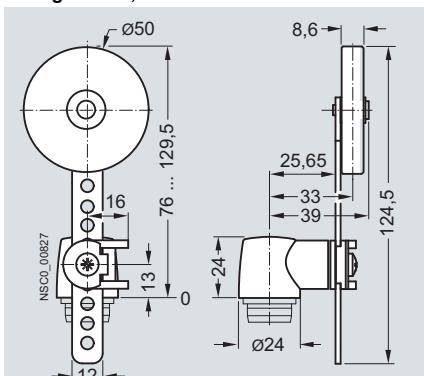


stable length,

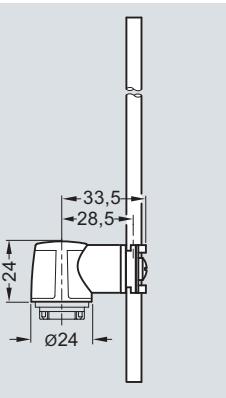


Twist lever, adjustable length,  
rubber roller 50 mm

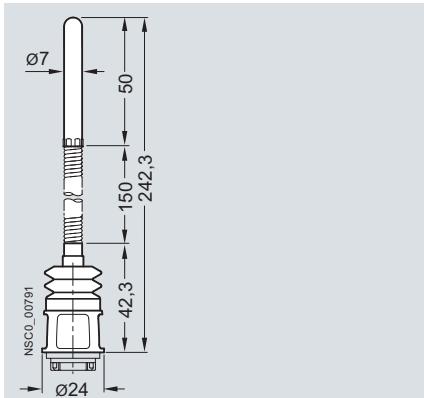
Twist lever, adjustable length,  
with grid hole, rubber roller 50 mm



Spring rod, length 142.5 mm



Spring rod, length 242.5 mm



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## 3SE5, 3SE2 Position Switches

### General data

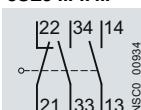
ns

ns 31, 40, 50 and 56 mm

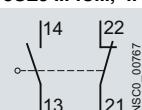
acts

..

**Slow-action contacts**  
2 NO + 1 NC  
3SE5 ...-P...



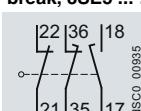
**Snap-action contacts**  
1 NO + 1 NC  
3SE5 ...-C..., -F..., -G..., -H..., -N...



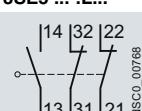
acts

..

**Slow-action contacts**  
1 NO + 2 NC with make-before-break, 3SE5 ...-M...



**Snap-action contacts**  
1 NO + 2 NC  
3SE5 ...-L...

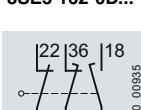


width 56 mm

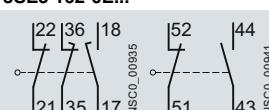
acts

..

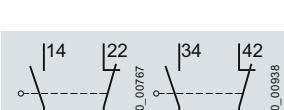
**Slow-action contacts**  
2 x (1 NO + 2 NC) with make-before-break, 3SE5 162-0D...



**For slow-action contacts**  
1 NO + 2 NC with make-before-break, 1 NO + 1 NC  
3SE5 162-0E...



**Snap-action contacts**  
2 x (1 NO + 1 NC)  
3SE5 162-0C...



Port assignment

Socket, 4-pole

M12 connector socket, 5-pole  
3SY3 128



M12 connector socket, 8-pole  
3SY3 134



Connector socket, 6-pole + PE  
3SY3 131



6

Connector sockets	Contacts	LEDs	Connections							
			Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
<b>sockets (4-, 5- or 8-pole)</b>										
3SY3 127	1 NO + 1 NC	--	21	22	13	14	--	--	--	--
3SY3 128	1 NO + 1 NC	--	21	22	13	14	PE	--	--	--
3SY3 127	2 NC	--	21	22	31	32	--	--	--	--
3SY3 128	2 NC	--	21	22	31	32	PE	--	--	--
3SY3 128	1 NO + 1 NC	2 LEDs	21	22	13 / LED gn	14 / LED ye	Ground LED	--	--	--
3SY3 134	1 NO + 2 NC	2 LEDs	21	22	13 / LED gn	14 / LED ye	31	32	Ground LED	PE

## 5, 3SE2 Position Switches

In the following pages you will find selection tables for complete units and components of the modular system.

Complete units

Basic units

Differences between the units are indicated in the selection tables and ordering data by the symbols shown on the background colors.

In the modular system you can assemble switch variants available as complete units. Each complete unit is supplied as a module.

The modular system comprises an enclosure, a contact block and a cover. Among the basic switches the following, for example, can be selected:

With teflon plunger

Increased corrosion protection

- Version with 2 LEDs
- Version with M12 connector socket or 6-pole + PE
- Version with M12 connector socket and with 2 LEDs

For the molded-plastic enclosures with a width of 31 and 50 mm the basic switches are designed as complete units with rounded plunger (according to standard).

### Online configurator

The online configurator helps you not only to select and order the right switch but also to create complete product documentation.

- Product data sheets
- Dimensional drawings
- Operating travel diagrams
- CAD data in 2D and 3D model images
- Ordering data
- Product photos

[www.siemens.com/industrial-controls/configurators](http://www.siemens.com/industrial-controls/configurators)

To be ordered:

Version	Complete units <input type="checkbox"/>	Order No.
<b>Complete units • Enclosure width 31 mm</b>		
 Angular roller levers With metal lever and plastic roller 13 mm Slow-action contacts 1 NO + 1 NC		<b>3SE5 232-0BF10</b>

### Ordering example 2

Required:

- Position switch according to EN 50047 in a molded-plastic enclosure
- Contact block with slow-action contacts 1 NO + 1 NC
- Twist lever, high-grade steel lever and plastic roller

To be ordered separately:

Version	Modular system <input type="checkbox"/>	Order No.
<b>Basic switches • Enclosure width 31 mm</b>		
 With teflon plunger Slow-action contacts		<b>3SE5 232-0BC05</b>

## 3SE5, 3SE2 Position Switches

**3SE5, molded-plastic enclosures  
Enclosure width 31 mm according to EN 50047**

### ordering data

s

- Degree of protection IP65 · Cable entry M20 x 1.5<sup>1)</sup>

Version	Contacts	LEDs	DT	<b>Complete units</b>		PU (UNIT, SET, M)	PS*	PG						
				Order No.	Price per PU									
<b><sup>2)</sup> Enclosure width 31 mm</b>														
<b>Rounded plungers, type B, acc. to EN 50047</b>														
<b>With teflon plunger</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ ▶	<b>3SE5 232-0BC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 232-0CC05</b>		1	1 unit	102						
Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --		⊕ ▶	<b>3SE5 232-0HC05</b>		1	1 unit	102						
Snap-action contacts • Short-stroke, integrated <sup>3)</sup>	1 NO + 1 NC --		⊕ B	<b>3SE5 232-0FC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 232-0GC05</b>		1	1 unit	102						
• 2 x 2 mm contact gap														
Slow-action contacts	1 NO + 2 NC --		⊕ A	<b>3SE5 232-0KC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC --		⊕ A	<b>3SE5 232-0LC05</b>		1	1 unit	102						
Slow-action contacts with make-before-break	1 NO + 2 NC --		⊕ A	<b>3SE5 232-0MC05</b>		1	1 unit	102						
Slow-action contacts	2 NO + 1 NC --		⊕ A	<b>3SE5 232-0PC05</b>		1	1 unit	102						
<b>With increased corrosion protection</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 232-0BC05-1CA0</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 232-0CC05-1CA0</b>		1	1 unit	102						
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 232-0KC05-1CA0</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 232-0LC05-1CA0</b>		1	1 unit	102						
Slow-action contacts with make-before-break	1 NO + 2 NC --		⊕ B	<b>3SE5 232-0MC05-1CA0</b>		1	1 unit	102						
Slow-action contacts	2 NO + 1 NC --		⊕ B	<b>3SE5 232-0PC05-1CA0</b>		1	1 unit	102						
<b>With M12 connector socket, 4-pole (250 V, 4 A)</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 234-0BC05-1AC4</b>		1	1 unit	102						
Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --		⊕ A	<b>3SE5 234-0HC05-1AC4</b>		1	1 unit	102						
Slow-action contacts	2 NC --		⊕ B	<b>3SE5 234-0KC05-1AE0</b>		1	1 unit	102						
Snap-action contacts	2 NC --		⊕ A	<b>3SE5 234-0LC05-1AE0</b>		1	1 unit	102						
<b>With 2 LEDs, yellow/green</b>														
Slow-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 232-1KC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 232-1LC05</b>		1	1 unit	102						
Slow-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 232-3KC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 232-3LC05</b>		1	1 unit	102						
<b>With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs</b>														
Slow-action contacts	1 NO + 1 NC 24 V DC		⊕ B	<b>3SE5 234-1BC05-1AF3</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC 24 V DC		⊕ B	<b>3SE5 234-1CC05-1AF3</b>		1	1 unit	102						
<b>Roller plungers, type C acc. to EN 50047</b>														
<b>With plastic roller 10 mm</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 232-0BD03</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ ▶	<b>3SE5 232-0HD03</b>		1	1 unit	102						
• Integrated <sup>3)</sup>														
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 232-0FD03</b>		1	1 unit	102						



## 5, 3SE2 Position Switches

### Standard plastic enclosures Width 31 mm according to EN 50047

- Degree of protection IP65 • Cable entry M20 x 1.5<sup>1)</sup>

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			

<sup>2)</sup> • Enclosure width 31 mm

#### Roller levers, type E acc. to EN 50047

##### With metal lever and plastic roller 13 mm

Slow-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 232-0BE10</b>		1	1 unit	102
Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ ▶	<b>3SE5 232-0HE10</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0KE10</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0LE10</b>		1	1 unit	102

##### With M12 connector socket, 4-pole (250 V, 4 A)

Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ B	<b>3SE5 234-0HE10-1AC4</b>		1	1 unit	102
--	----------------	-----	----------------------------	--	---	--------	-----

#### Angular roller levers

##### With metal lever and plastic roller 13 mm

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0BF10</b>		1	1 unit	102
Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ A	<b>3SE5 232-0HF10</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0KF10</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0LF10</b>		1	1 unit	102

#### Spring rods

##### Length 142.5 mm, with plastic plunger 50 mm

Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	A	<b>3SE5 232-0HR01</b>		1	1 unit	102
--	----------------	---	-----------------------	--	---	--------	-----

##### With M12 connector socket, 4-pole (250 V, 4 A)

Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	B	<b>3SE5 234-0HR01-1AC4</b>		1	1 unit	102
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#### Twist levers, type A acc. to EN 50047

##### With metal lever 21 mm and plastic roller 19 mm

Slow-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 232-0BK21</b>		1	1 unit	102
Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0HK21</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0KK21</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0LK21</b>		1	1 unit	102

##### With M12 connector socket, 4-pole (250 V, 4 A)

Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ B	<b>3SE5 234-0HK21-1AC4</b>		1	1 unit	102
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##### With metal lever 35 mm and plastic roller 19 mm

Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0HK15</b>		1	1 unit	102
--	----------------	-----	-----------------------	--	---	--------	-----

#### Twist levers, adjustable length

##### With metal lever with grid hole and plastic roller 19 mm

Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ A	<b>3SE5 232-0HK60</b>		1	1 unit	102
--	----------------	-----	-----------------------	--	---	--------	-----

##### With metal lever and plastic roller 19 mm

Slow-action contacts	1 NO + 1 NC --	B	<b>3SE5 232-0BK50</b>		1	1 unit	102
Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	▶	<b>3SE5 232-0HK50</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	B	<b>3SE5 232-0LK50</b>		1	1 unit	102

##### With M12 connector socket, 4-pole (250 V, 4 A)

Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	B	<b>3SE5 234-0HK50-1AC4</b>		1	1 unit	102
--	----------------	---	----------------------------	--	---	--------	-----

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## 3SE5, 3SE2 Position Switches

**3SE5, molded-plastic enclosures  
Enclosure width 31 mm according to EN 50047**

m

· Degree of protection IP65 · Cable entry M20 x 1.5<sup>1)</sup>

Version	Contacts	LEDs	DT	<b>Modular system</b>		PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			

### • Enclosure width 31 mm (with rounded plunger<sup>2)</sup>)

#### With teflon plunger

Slow-action contacts	1 NO + 1 NC --	⊕ ▶	<b>3SE5 232-0BC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0CC05</b>			1	1 unit	102
Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ ▶	<b>3SE5 232-0HC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0FC05</b>			1	1 unit	102
• Short-stroke, integrated <sup>3)</sup>								
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0GC05</b>			1	1 unit	102
• 2 x 2 mm contact gap								
Slow-action contacts	1 NO + 2 NC --	⊕ A	<b>3SE5 232-0KC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ A	<b>3SE5 232-0LC05</b>			1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --	⊕ A	<b>3SE5 232-0MC05</b>			1	1 unit	102
Slow-action contacts	2 NO + 1 NC --	⊕ A	<b>3SE5 232-0PC05</b>			1	1 unit	102

#### With increased corrosion protection<sup>4)</sup>

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0BC05-1CA0</b>			1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0CC05-1CA0</b>			1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0KC05-1CA0</b>			1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0LC05-1CA0</b>			1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0MC05-1CA0</b>			1	1 unit	102
Slow-action contacts	2 NO + 1 NC --	⊕ B	<b>3SE5 232-0PC05-1CA0</b>			1	1 unit	102

#### With M12 connector socket, 4-pole (250 V, 4 A)

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 234-0BC05-1AC4</b>			1	1 unit	102
Snap-action contacts, integrated <sup>3)</sup>	1 NO + 1 NC --	⊕ A	<b>3SE5 234-0HC05-1AC4</b>			1	1 unit	102
Slow-action contacts	2 NC --	⊕ B	<b>3SE5 234-0KC05-1AE0</b>			1	1 unit	102
Snap-action contacts	2 NC --	⊕ A	<b>3SE5 234-0LC05-1AE0</b>			1	1 unit	102

#### With 2 LEDs, yellow/green

Slow-action contacts	1 NO + 2 NC 24 V DC	⊕ B	<b>3SE5 232-1KC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 2 NC 24 V DC	⊕ B	<b>3SE5 232-1LC05</b>			1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC	⊕ B	<b>3SE5 232-3KC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 2 NC 230 V AC	⊕ B	<b>3SE5 232-3LC05</b>			1	1 unit	102

#### With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs

Slow-action contacts	1 NO + 1 NC 24 V DC	⊕ B	<b>3SE5 234-1BC05-1AF3</b>			1	1 unit	102
Snap-action contacts	1 NO + 1 NC 24 V DC	⊕ B	<b>3SE5 234-1CC05-1AF3</b>			1	1 unit	102



## 5, 3SE2 Position Switches

**Standard-plastic enclosures**  
Width 31 mm according to EN 50047

Version	Diameter mm	DT	Modular system Order No.	PU (UNIT, SET, M) Price per PU	PS*	PG
<b>Mechanisms</b>						
<b>Roller plungers, type C acc. to EN 50047</b>						
Plastic rollers	10	Ⓐ A	<b>3SE5 000-0AD03</b>		1	1 unit 102
High-grade steel rollers	10	Ⓑ B	<b>3SE5 000-0AD04</b>		1	1 unit 102
<b>Roller plungers with central fixing</b>						
Plastic rollers	10	Ⓑ B	<b>3SE5 000-0AD10</b>		1	1 unit 102
High-grade steel rollers	10	Ⓑ B	<b>3SE5 000-0AD11</b>		1	1 unit 102
<b>Roller levers, type E acc. to EN 50047</b>						
Metal lever, plastic roller	13	Ⓐ A	<b>3SE5 000-0AE10</b>		1	1 unit 102
Metal lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-0AE11</b>		1	1 unit 102
High-grade steel lever, plastic roller	13	Ⓑ B	<b>3SE5 000-0AE12</b>		1	1 unit 102
High-grade steel lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-0AE13</b>		1	1 unit 102
<b>Angular roller levers</b>						
Metal lever, plastic roller	13	Ⓐ A	<b>3SE5 000-0AF10</b>		1	1 unit 102
Metal lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-0AF11</b>		1	1 unit 102
High-grade steel lever, plastic roller	13	Ⓐ A	<b>3SE5 000-0AF12</b>		1	1 unit 102
High-grade steel lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-0AF13</b>		1	1 unit 102
<b>Spring rods</b> (for switches with snap-action contacts only)						
Plastic plunger:						
• Length 142.5 mm (spring 50 mm, plunger 50 mm)	B	<b>3SE5 000-0AR01</b>		1	1 unit 102	
• Length 76 mm (spring 23.5 mm, plunger 10 mm)	B	<b>3SE5 000-0AR03</b>		1	1 unit 102	
• Length 242.5 mm (spring 150 mm, plunger 50 mm)	B	<b>3SE5 000-0AR04</b>		1	1 unit 102	
High-grade steel plunger:						
• Length 142.5 mm (spring 50 mm, plunger 50 mm)	B	<b>3SE5 000-0AR02</b>		1	1 unit 102	
<b>Actuators</b>						
<b>Twist actuators, plastic (without lever)</b>						
Switching right and/or left, adjustable	Ⓐ A	<b>3SE5 000-0AK00</b>		1	1 unit 102	
<b>Levers for twist actuators</b>						
<b>Twist levers 21 mm, straight, type A acc. to EN 50047</b>						
Metal lever, plastic roller	19	Ⓐ A	<b>3SE5 000-0AA21</b>		1	1 unit 102
Metal lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-0AA22</b>		1	1 unit 102
Metal lever, roller with ball bearing	19	Ⓑ B	<b>3SE5 000-0AA23</b>		1	1 unit 102
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-0AA25</b>		1	1 unit 102
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-0AA31</b>		1	1 unit 102
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-0AA32</b>		1	1 unit 102
<b>Twist levers 30 mm, straight<sup>1)</sup></b>						
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-0AA24</b>		1	1 unit 102
<b>Twist levers, adjustable length, with grid hole</b>						
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-0AA60</b>		1	1 unit 102
Metal lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-0AA61</b>		1	1 unit 102
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-0AA67</b>		1	1 unit 102
Metal lever, rubber roller	50	Ⓑ B	<b>3SE5 000-0AA68</b>		1	1 unit 102

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## 3SE5, 3SE2 Position Switches

3SE5, molded-plastic enclosures  
Enclosure width 40 mm according to EN 50041

### ordering data

s

- Degree of protection IP66/67 · Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
<b><sup>1)</sup> Enclosure width 40 mm</b>								
<b>Plain plungers</b>								
With high-grade steel plunger								
Slow-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 132-0BB01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 132-0CB01</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0KB01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0LB01</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --		⊕ B	<b>3SE5 132-0PB01</b>		1	1 unit	102
<b>Rounded plungers, type B acc. to EN 50041</b>								
With plastic plunger								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0BC03</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 132-0CC03</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0KC03</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ A	<b>3SE5 132-0LC03</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --		⊕ B	<b>3SE5 132-0PC03</b>		1	1 unit	102
<b>Roller plungers, type C acc. to EN 50041</b>								
With plastic roller 13 mm								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0BD05</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0CD05</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0KD05</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0LD05</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --		⊕	<b>3SE5 132-0PD05</b>		1	1 unit	102
<b>Roller levers</b>								
With metal lever and plastic roller 22 mm								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0BE05</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0CE05</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0KE05</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0LE05</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --		⊕ B	<b>3SE5 132-0PE05</b>		1	1 unit	102
<b>Angular roller levers</b>								
With metal lever and plastic roller 22 mm								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0BF05</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0CF05</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0LF05</b>		1	1 unit	102
<b>Spring rods</b>								



## 5, 3SE2 Position Switches

### Standard plastic enclosures Width 40 mm according to EN 50041

- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
<b><sup>1)</sup> • Enclosure width 40 mm</b>								
<b>Twist levers, type A acc. to EN 50041</b>								
<b>With metal lever 27 mm and plastic roller 19 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0BJ01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 132-0CJ01</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0KJ01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0LJ01</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --		⊕ B	<b>3SE5 132-0PJ01</b>		1	1 unit	102
<b>Twist levers, adjustable length</b>								
<b>With metal lever with grid hole and plastic roller 19 mm</b>								
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 132-0CJ60</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 132-0LJ60</b>		1	1 unit	102
<b>With metal lever and plastic roller 19 mm</b>								
Snap-action contacts	1 NO + 1 NC --		B	<b>3SE5 132-0CJ50</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		B	<b>3SE5 132-0LJ50</b>		1	1 unit	102
<b>Rod actuators, type D, acc. to EN 50041</b>								
<b>With aluminum rod, length 200 mm</b>								
Snap-action contacts	1 NO + 1 NC --		A	<b>3SE5 132-0CJ80</b>		1	1 unit	102
<b>With plastic rod, length 200 mm</b>								
Snap-action contacts	1 NO + 1 NC --		B	<b>3SE5 132-0CJ82</b>		1	1 unit	102

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## 3SE5, 3SE2 Position Switches

**3SE5, molded-plastic enclosures  
Enclosure width 40 mm according to EN 50041**

m

- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	<b>Modular system</b>		PU (UNIT, SET, M)	PS*	PG						
				Order No.	Price per PU									
<b>• Enclosure width 40 mm</b>														
<b>With M20 x 1.5 connecting thread</b>														
Slow-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 132-0BA00</b>			1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 132-0CA00</b>			1	1 unit	102						
• Gold-plated contacts		⊕ B	<b>3SE5 132-0CA00-1AC1</b>			1	1 unit	102						
Slow-action contacts	1 NO + 2 NC --	⊕ A	<b>3SE5 132-0KA00</b>			1	1 unit	102						
Snap-action contacts	1 NO + 2 NC --	⊕ A	<b>3SE5 132-0LA00</b>			1	1 unit	102						
Slow-action contacts with make-before-break	1 NO + 2 NC --	⊕ A	<b>3SE5 132-0MA00</b>			1	1 unit	102						
Slow-action contacts	2 NO + 1 NC --	⊕ A	<b>3SE5 132-0PA00</b>			1	1 unit	102						
<b>With increased corrosion protection<sup>1)</sup></b>														
Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 132-0BA00-1CA0</b>			1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 132-0CA00-1CA0</b>			1	1 unit	102						
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 132-0KA00-1CA0</b>			1	1 unit	102						
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 132-0LA00-1CA0</b>			1	1 unit	102						
Slow-action contacts with make-before-break	1 NO + 2 NC --	⊕ B	<b>3SE5 132-0MA00-1CA0</b>			1	1 unit	102						
Slow-action contacts	2 NO + 1 NC --	⊕ B	<b>3SE5 132-0PA00-1CA0</b>			1	1 unit	102						
<b>With M12 connector socket, 4-pole (250 V, 4 A)</b>														
Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 134-0BA00-1AC4</b>			1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 134-0CA00-1AC4</b>			1	1 unit	102						
Slow-action contacts	2 NC --	⊕ B	<b>3SE5 134-0KA00-1AE0</b>			1	1 unit	102						
Snap-action contacts	2 NC --	⊕ B	<b>3SE5 134-0LA00-1AE0</b>			1	1 unit	102						
<b>With 2 LEDs, yellow/green</b>														
Slow-action contacts	1 NO + 2 NC 24 V DC	⊕ B	<b>3SE5 132-1KA00</b>			1	1 unit	102						
Snap-action contacts	1 NO + 2 NC 24 V DC	⊕ B	<b>3SE5 132-1LA00</b>			1	1 unit	102						
Slow-action contacts	1 NO + 2 NC 230 V AC	⊕ C	<b>3SE5 132-3KA00</b>			1	1 unit	102						
Snap-action contacts	1 NO + 2 NC 230 V AC	⊕ C	<b>3SE5 132-3LA00</b>			1	1 unit	102						

g according to IEC 60947-5-1, Appendix K, or  
an actuator, necessary in safety circuits.

using high-grade steel lever.

*Note: For selection aid, see page 9/12.*



## 5, 3SE2 Position Switches

### Standard-plastic enclosures width 40 mm according to EN 50041

Version	Diameter mm	DT	<b>Modular system</b>	 PU (UNIT, SET, M)	PS*	PG						
<b>Mechanisms</b>												
<b>Plain plungers</b>												
High-grade steel plungers	10	⊖ A	<b>3SE5 000-0AB01</b>		1	1 unit	102					
<b>Rounded plungers, type B acc. to EN 50041</b>												
Plastic plungers	10	⊖ A	<b>3SE5 000-0AC03</b>		1	1 unit	102					
<b>Roller plungers, type C acc. to EN 50041</b>												
High-grade steel lever, plastic roller	13	⊖ A	<b>3SE5 000-0AD05</b>		1	1 unit	102					
Plastic plunger, high-grade steel roller	13	⊖ A	<b>3SE5 000-0AD06</b>		1	1 unit	102					
<b>Roller levers</b>												
Metal lever with plastic roller, plastic base	22	⊖ A	<b>3SE5 000-0AE05</b>		1	1 unit	102					
<b>Angular roller levers</b>												
Metal lever with plastic roller, plastic base	22	⊖ A	<b>3SE5 000-0AF05</b>		1	1 unit	102					
<b>Spring rods</b> (for switches with snap-action contacts only)												
Plastic plunger:												
• Length 142.5 mm (spring 50 mm, plunger 50 mm)	B	<b>3SE5 000-0AR01</b>		1	1 unit	102						
• Length 76 mm (spring 23.5 mm, plunger 10 mm)	B	<b>3SE5 000-0AR03</b>		1	1 unit	102						
• Length 242.5 mm (spring 150 mm, plunger 50 mm)	B	<b>3SE5 000-0AR04</b>		1	1 unit	102						
High-grade steel plunger:												
• Length 142.5 mm (spring 50 mm, plunger 50 mm)	B	<b>3SE5 000-0AR02</b>		1	1 unit	102						
<b>Actuators</b>												
<b>Twist actuators</b> , plastic (without lever)												
• For twist levers and rod actuators, switching right and/or left, adjustable	⊖ A	<b>3SE5 000-0AJ00</b>		1	1 unit	102						
<b>Levers for twist actuators</b>												
<b>Twist levers, offset, type A acc. to EN 50041</b>												
Metal lever 27 mm, plastic roller	19	⊖ A	<b>3SE5 000-0AA01</b>		1	1 unit	102					
Metal lever 27 mm, high-grade steel roller	19	⊖ A	<b>3SE5 000-0AA02</b>		1	1 unit	102					
Metal lever 27 mm, roller with ball bearing	19	⊖ B	<b>3SE5 000-0AA03</b>		1	1 unit	102					
Metal lever 27 mm, 2 plastic rollers	19	⊖ B	<b>3SE5 000-0AA04</b>		1	1 unit	102					
Metal lever 27 mm, plastic roller	30	⊖ B	<b>3SE5 000-0AA05</b>		1	1 unit	102					
Metal lever 27 mm, rubber roller	50	⊖ B	<b>3SE5 000-0AA08</b>		1	1 unit	102					
High-grade steel lever 27 mm, plastic roller	19	⊖ B	<b>3SE5 000-0AA11</b>		1	1 unit	102					
High-grade steel lever 27 mm, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA12</b>		1	1 unit	102					
Metal lever 35 mm, plastic roller	19	⊖ B	<b>3SE5 000-0AA15</b>		1	1 unit	102					
<b>Twist levers 30 mm, straight<sup>1)</sup></b>												
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA24</b>		1	1 unit	102					
Metal lever, plastic roller	30	⊖ B	<b>3SE5 000-0AA26</b>		1	1 unit	102					
<b>Twist levers, adjustable length, with grid hole</b>												
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA60</b>		1	1 unit	102					
Metal lever, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA61</b>		1	1 unit	102					

## 3SE5, 3SE2 Position Switches

**3SE5, molded-plastic enclosures  
Enclosure width 50 mm**

### ordering data

s

- Degree of protection IP66/IP67 · Cable entry 2 × (M20 × 1.5)

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		
<b>s<sup>1)</sup> • Enclosure width 50 mm</b>								
<b>Rounded plungers</b>								
<b>With teflon plunger</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 242-0BC05</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0CC05</b>		1	1 unit	102
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --		⊕ ▶	<b>3SE5 242-0HC05</b>		1	1 unit	102
Snap-action contacts • Short-stroke, integrated <sup>2)</sup>	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0FC05</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0GC05</b>		1	1 unit	102
• 2 × 2 mm contact gap								
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 242-0KC05</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 242-0LC05</b>		1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --		⊕ A	<b>3SE5 242-0MC05</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --		⊕ A	<b>3SE5 242-0PC05</b>		1	1 unit	102
<b>With increased corrosion protection</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0BC05-1CA0</b>		1	1 unit	102
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0HC05-1CA0</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 242-0KC05-1CA0</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 242-0LC05-1CA0</b>		1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --		⊕ B	<b>3SE5 242-0MC05-1CA0</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --		⊕ B	<b>3SE5 242-0PC05-1CA0</b>		1	1 unit	102
<b>With 2 LEDs, yellow/green</b>								
Slow-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 242-1KC05</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 242-1LC05</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 242-3KC05</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 242-3LC05</b>		1	1 unit	102
<b>Roller plungers</b>								
<b>With plastic roller 10 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0BD03</b>		1	1 unit	102
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0HD03</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 242-0LD03</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K.

s.

placement of contact blocks is not possible.



## 5, 3SE2 Position Switches

### Steel-plastic enclosures width 50 mm

- Degree of protection IP66/IP67 · Cable entry 2 × (M20 × 1.5)

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
<b><sup>1)</sup> • Enclosure width 50 mm</b>								
<b>Roller levers</b>								
<b>With metal lever and plastic roller 13 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0BE10</b>		1	1 unit	102
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --		⊕ A	<b>3SE5 242-0HE10</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 242-0LE10</b>		1	1 unit	102
<b>With M12 connector socket, 4-pole right (250 V, 4 A)</b>								
Snap-action contacts	2 NC --		⊕ B	<b>3SE5 244-0LE10-1AE0</b>		1	1 unit	102
<b>Twist levers</b>								
<b>With metal lever 21 mm and plastic roller 19 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0BK21</b>		1	1 unit	102
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0HK21</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 242-0LK21</b>		1	1 unit	102
<b>Twist levers, adjustable length</b>								
<b>With metal lever and plastic roller 19 mm</b>								
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --		B	<b>3SE5 242-0HK50</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K.

s.

placement of contact blocks is not possible.

*Note:* If the device you require is not available as a complete unit, see "Modular system" on the next page.

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## 3SE5, 3SE2 Position Switches

**3SE5, molded-plastic enclosures  
Enclosure width 50 mm**

m

- Degree of protection IP66/IP67
- Cable entry 2 × (M20 × 1.5)

Version	Contacts	LEDs	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU		
<b>• Enclosure width 50 mm (with rounded plunger<sup>1)</sup></b>							
<b>With teflon plunger</b>							
Slow-action contacts	1 NO + 1 NC --	⊕ A	3SE5 242-0BC05		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	3SE5 242-0CC05		1	1 unit	102
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --	⊕ ▶	3SE5 242-0HC05		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	3SE5 242-0FC05		1	1 unit	102
• Short-stroke, integrated <sup>2)</sup>							
Snap-action contacts	1 NO + 1 NC --	⊕ B	3SE5 242-0GC05		1	1 unit	102
• 2 × 2 mm contact gap							
Slow-action contacts	1 NO + 2 NC --	⊕ B	3SE5 242-0KC05		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	3SE5 242-0LC05		1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --	⊕ A	3SE5 242-0MC05		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --	⊕ A	3SE5 242-0PC05		1	1 unit	102
<b>With increased corrosion protection<sup>3)</sup></b>							
Slow-action contacts	1 NO + 1 NC --	⊕ B	3SE5 242-0BC05-1CA0		1	1 unit	102
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --	⊕ B	3SE5 242-0HC05-1CA0		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	3SE5 242-0KC05-1CA0		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	3SE5 242-0LC05-1CA0		1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --	⊕ B	3SE5 242-0MC05-1CA0		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --	⊕ B	3SE5 242-0PC05-1CA0		1	1 unit	102
<b>With 2 LEDs, yellow/green</b>							
Slow-action contacts	1 NO + 2 NC 24 V DC	⊕ B	3SE5 242-1KC05		1	1 unit	102
Snap-action contacts	1 NO + 2 NC 24 V DC	⊕ B	3SE5 242-1LC05		1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC	⊕ B	3SE5 242-3KC05		1	1 unit	102
Snap-action contacts	1 NO + 2 NC 230 V AC	⊕ B	3SE5 242-3LC05		1	1 unit	102

g according to IEC 60947-5-1, Appendix K, or actuator, necessary in safety circuits.

In version the basic switch is a complete unit with rounded

placement of contact blocks is not possible.  
ing high-grade steel lever.

*Note: For selection aid, see page 9/12.*



Version	Diameter	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
	mm		Order No.	Price per PU		
<b>Mechanisms</b>						
<b>Roller plungers, type C acc. to EN 50047</b>						
Plastic rollers	10	⊕ A	3SE5 000-0AD03	1	1 unit	102
High-grade steel rollers	10	⊕ B	3SE5 000-0AD04	1	1 unit	102

## 5, 3SE2 Position Switches

**Standard-plastic enclosures**  
Width 50 mm

Version	Diameter mm	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU		
<b>Mechanisms</b>						
<b>Roller levers, type E acc. to EN 50047</b>						
Metal lever, plastic roller	13	Ⓐ A	<b>3SE5 000-OAE10</b>	1	1 unit	102
Metal lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-OAE11</b>	1	1 unit	102
High-grade steel lever, plastic roller	13	Ⓑ B	<b>3SE5 000-OAE12</b>	1	1 unit	102
High-grade steel lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-OAE13</b>	1	1 unit	102
<b>Angular roller levers</b>						
Metal lever, plastic roller	13	Ⓐ A	<b>3SE5 000-OAF10</b>	1	1 unit	102
Metal lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-OAF11</b>	1	1 unit	102
High-grade steel lever, plastic roller	13	Ⓐ A	<b>3SE5 000-OAF12</b>	1	1 unit	102
High-grade steel lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-OAF13</b>	1	1 unit	102
<b>Spring rods</b> (for switches with snap-action contacts only)						
Plastic plunger:						
• Length 142.5 mm (spring 50 mm, plunger 50 mm)		B	<b>3SE5 000-OAR01</b>	1	1 unit	102
• Length 76 mm (spring 23.5 mm, plunger 10 mm)		B	<b>3SE5 000-OAR03</b>	1	1 unit	102
• Length 242.5 mm (spring 150 mm, plunger 50 mm)		B	<b>3SE5 000-OAR04</b>	1	1 unit	102
High-grade steel plunger:						
• Length 142.5 mm (spring 50 mm, plunger 50 mm)		B	<b>3SE5 000-OAR02</b>	1	1 unit	102
<b>Actuators</b>						
<b>Twist actuators</b> , plastic (without lever)						
Switching right and/or left, adjustable		Ⓐ A	<b>3SE5 000-OAK00</b>	1	1 unit	102
<b>Levers for twist actuators</b>						
<b>Twist levers 21 mm, straight, type A acc. to EN 50047</b>						
Metal lever, plastic roller	19	Ⓐ A	<b>3SE5 000-OAA21</b>	1	1 unit	102
Metal lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA22</b>	1	1 unit	102
Metal lever, roller with ball bearing	19	Ⓑ B	<b>3SE5 000-OAA23</b>	1	1 unit	102
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA25</b>	1	1 unit	102
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA31</b>	1	1 unit	102
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA32</b>	1	1 unit	102
<b>Twist levers 30 mm, straight<sup>1)</sup></b>						
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA24</b>	1	1 unit	102
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA26</b>	1	1 unit	102
<b>Twist levers, adjustable length, with grid hole</b>						
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA60</b>	1	1 unit	102
Metal lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA61</b>	1	1 unit	102
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-OAA67</b>	1	1 unit	102
Metal lever, rubber roller	50	Ⓑ B	<b>3SE5 000-OAA68</b>	1	1 unit	102
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA62</b>	1	1 unit	102
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA63</b>	1	1 unit	102
<b>Twist levers, adjustable length</b>						
Metal lever, plastic roller	19	A	<b>3SE5 000-OAA50</b>	1	1 unit	102
Metal lever, high-grade steel roller	19	B	<b>3SE5 000-OAA51</b>	1	1 unit	102
Metal lever, plastic roller	30	B	<b>3SE5 000-OAA55</b>	1	1 unit	102
Metal lever, plastic roller	50	B	<b>3SE5 000-OAA57</b>	1	1 unit	102

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## 3SE5, 3SE2 Position Switches

**3SE5, molded-plastic enclosures**  
**Ambient temperature up to -40 °C**

## ordering data

5

- Degree of protection IP65 or IP66/IP67 • Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
						Order No.	Price per PU	
s <sup>1)</sup> • Enclosure width 31 mm								
<b>Twist levers, type A acc. to EN 50047</b>								
With high-grade steel lever 21 mm and plastic roller 19 mm								
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 232-0CK31-1AJ0</b>		1	1 unit	102
<b>Twist levers, adjustable length</b>								
With high-grade steel lever with grid hole and plastic roller 19 mm								
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 232-0CK62-1AJ0</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 232-0LK62-1AJ0</b>		1	1 unit	102
s <sup>1)</sup> • Enclosure width 50 mm								
<b>Twist levers</b>								
With metal lever 21 mm and plastic roller 19 mm								
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0HK21-1AJ0</b>		1	1 unit	102
<b>Twist levers, adjustable length</b>								
With high-grade steel lever with grid hole and plastic roller 19 mm								
Snap-action contacts, integrated <sup>2)</sup>	1 NO + 1 NC --		⊕ B	<b>3SE5 242-0HK62-1AJ0</b>		1	1 unit	102



m

- Degree of protection IP65 or IP66/IP67 · Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		
• Enclosure width 31 mm (with rounded plunger <sup>1)</sup>								
<b>With teflon plunger</b>								
Snap-action contacts	1 NO + 1 NC	--	 B	<b>3SE5 232-0CC05-1AJ0</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC	--	 B	<b>3SE5 232-0KC05-1AJ0</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC	--	 B	<b>3SE5 232-0L C05-1AJ0</b>		1	1 unit	102

## 5, 3SE2 Position Switches

**Steel-plastic enclosures  
Temperature up to -40 °C**

Version	Diameter mm	DT	<b>Modular system</b>		PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			
<b>Mechanisms</b>							
<b>Roller plungers, type C acc. to EN 50047</b>							
Plastic rollers	10	⊖ B	<b>3SE5 000-0AD03-1AJ0</b>		1	1 unit	102
<b>Roller levers, type E acc. to EN 50047</b>							
Metal lever, plastic roller	13	⊖ B	<b>3SE5 000-0AE10-1AJ0</b>		1	1 unit	102
High-grade steel lever, plastic roller	13	⊖ B	<b>3SE5 000-0AE12-1AJ0</b>		1	1 unit	102
<b>Angular roller levers</b>							
Metal lever, plastic roller	13	⊖ B	<b>3SE5 000-0AF10-1AJ0</b>		1	1 unit	102
High-grade steel lever, plastic roller	13	⊖ B	<b>3SE5 000-0AF12-1AJ0</b>		1	1 unit	102
<b>Actuators</b>							
<b>Twist actuators, plastic (without lever)</b>							
Switching right and/or left, adjustable		⊖ B	<b>3SE5 000-0AK00-1AJ0</b>		1	1 unit	102
<b>Levers for twist actuators</b>							
<b>Twist levers straight, 21 mm, type A acc. to EN 50047</b>							
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA21-1AJ0</b>		1	1 unit	102
High-grade steel lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA31-1AJ0</b>		1	1 unit	102
<b>Twist levers, adjustable length, with grid hole</b>							
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA60-1AJ0</b>		1	1 unit	102
High-grade steel lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA62-1AJ0</b>		1	1 unit	102

An actuator, necessary in safety circuits.

## 3SE5, 3SE2 Position Switches

**3SE5, metal enclosures  
Enclosure width 31 mm according to EN 50047**

### Ordering data

s

- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	<b>Complete units</b>		PU (UNIT, SET, M)	PS*	PG						
				Order No.	Price per PU									
<b>s<sup>1)</sup> • Enclosure width 31 mm</b>														
<b>Rounded plungers, type B, acc. to EN 50047</b>														
<b>With plunger</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 212-0BC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 212-0CC05</b>		1	1 unit	102						
Slow-action contacts	1 NO + 2 NC --		⊕ A	<b>3SE5 212-0KC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC --		⊕ A	<b>3SE5 212-0LC05</b>		1	1 unit	102						
Slow-action contacts with make-before-break	1 NO + 2 NC --		⊕ A	<b>3SE5 212-0MC05</b>		1	1 unit	102						
Slow-action contacts	2 NO + 1 NC --		⊕ A	<b>3SE5 212-0PC05</b>		1	1 unit	102						
<b>With increased corrosion protection</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 212-0BC05-1CA0</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 212-0CC05-1CA0</b>		1	1 unit	102						
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0KC05-1CA0</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0LC05-1CA0</b>		1	1 unit	102						
Slow-action contacts with make-before-break	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0MC05-1CA0</b>		1	1 unit	102						
Slow-action contacts	2 NO + 1 NC --		⊕ B	<b>3SE5 212-0PC05-1CA0</b>		1	1 unit	102						
<b>With M12 connector socket, 5-pole (125 V, 4 A)</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 214-0BC05-1AC5</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 214-0CC05-1AC5</b>		1	1 unit	102						
Slow-action contacts	2 NC --		⊕ B	<b>3SE5 214-0KC05-1AE1</b>		1	1 unit	102						
Snap-action contacts	2 NC --		⊕ B	<b>3SE5 214-0LC05-1AE1</b>		1	1 unit	102						
<b>With 2 LEDs, yellow/green</b>														
Slow-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 212-1KC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC 24 V DC		⊕ A	<b>3SE5 212-1LC05</b>		1	1 unit	102						
Slow-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 212-3KC05</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 212-3LC05</b>		1	1 unit	102						
<b>With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs</b>														
Slow-action contacts	1 NO + 1 NC 24 V DC		⊕ B	<b>3SE5 214-1BC05-1AF3</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC 24 V DC		⊕ B	<b>3SE5 214-1CC05-1AF3</b>		1	1 unit	102						
<b>Plain plungers</b>														
<b>With high-grade steel plunger</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 212-0BB01</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 212-0CB01</b>		1	1 unit	102						
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0KB01</b>		1	1 unit	102						
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0LB01</b>		1	1 unit	102						
<b>Roller plungers, type C acc. to EN 50047</b>														
<b>With plastic roller 10 mm</b>														
Slow-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 212-0BD03</b>		1	1 unit	102						
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 212-0CD03</b>		1	1 unit	102						



## 5, 3SE2 Position Switches

### enclosures width 31 mm according to EN 50047

- Degree of protection IP66/IP67 • Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
<b>s<sup>1)</sup> • Enclosure width 31 mm</b>								
<b>Roller levers, type E acc. to EN 50047</b>								
<b>With metal lever and plastic roller 13 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 212-0BE10</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 212-0CE10</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0KE10</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0LE10</b>		1	1 unit	102
<b>Angular roller levers</b>								
<b>With metal lever and plastic roller 13 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 212-0BF10</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 212-0CF10</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0KF10</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0LF10</b>		1	1 unit	102
<b>Twist levers, type A acc. to EN 50047</b>								
<b>With metal lever 21 mm and plastic roller 19 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 212-0BK21</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 212-0CK21</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0KK21</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0LK21</b>		1	1 unit	102
<b>Twist levers, adjustable length</b>								
<b>With metal lever with grid hole and plastic roller 19 mm</b>								
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 212-0CK60</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0KK60</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 212-0LK60</b>		1	1 unit	102
<b>With metal lever and plastic roller 19 mm</b>								
Slow-action contacts	1 NO + 1 NC --		A	<b>3SE5 212-0BK50</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		B	<b>3SE5 212-0CK50</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		B	<b>3SE5 212-0LK50</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K.

*Note: If the device you require is not available as a complete unit, see "Modular system" on the next page.*

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## 3SE5, 3SE2 Position Switches

**3SE5, metal enclosures  
Enclosure width 31 mm according to EN 50047**

m

- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			

### • Enclosure width 31 mm (with rounded plunger<sup>1)</sup>

<b>With plunger</b>								
Slow-action contacts	1 NO + 1 NC --	 A	<b>3SE5 212-0BC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	 A	<b>3SE5 212-0CC05</b>			1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	 A	<b>3SE5 212-0KC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	 A	<b>3SE5 212-0LC05</b>			1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --	 A	<b>3SE5 212-0MC05</b>			1	1 unit	102
Slow-action contacts	2 NO + 1 NC --	 A	<b>3SE5 212-0PC05</b>			1	1 unit	102
<b>With increased corrosion protection<sup>2)</sup></b>								
Slow-action contacts	1 NO + 1 NC --	 B	<b>3SE5 212-0BC05-1CA0</b>			1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	 B	<b>3SE5 212-0CC05-1CA0</b>			1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	 B	<b>3SE5 212-0KC05-1CA0</b>			1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	 B	<b>3SE5 212-0LC05-1CA0</b>			1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --	 B	<b>3SE5 212-0MC05-1CA0</b>			1	1 unit	102
Slow-action contacts	2 NO + 1 NC --	 B	<b>3SE5 212-0PC05-1CA0</b>			1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A)</b>								
Slow-action contacts	1 NO + 1 NC --	 B	<b>3SE5 214-0BC05-1AC5</b>			1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	 B	<b>3SE5 214-0CC05-1AC5</b>			1	1 unit	102
Slow-action contacts	2 NC --	 B	<b>3SE5 214-0KC05-1AE1</b>			1	1 unit	102
Snap-action contacts	2 NC --	 B	<b>3SE5 214-0LC05-1AE1</b>			1	1 unit	102
<b>With 2 LEDs, yellow/green</b>								
Slow-action contacts	1 NO + 2 NC 24 V DC	 B	<b>3SE5 212-1KC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 2 NC 24 V DC	 A	<b>3SE5 212-1LC05</b>			1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC	 B	<b>3SE5 212-3KC05</b>			1	1 unit	102
Snap-action contacts	1 NO + 2 NC 230 V AC	 B	<b>3SE5 212-3LC05</b>			1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs</b>								
Slow-action contacts	1 NO + 1 NC 24 V DC	 B	<b>3SE5 214-1BC05-1AF3</b>			1	1 unit	102
Snap-action contacts	1 NO + 1 NC 24 V DC	 B	<b>3SE5 214-1CC05-1AF3</b>			1	1 unit	102



g according to IEC 60947-5-1, Appendix K, or  
n actuator, necessary in safety circuits.

width 31 mm the basic switch is a complete unit with  
r.

ing high-grade steel lever.

*Note: For selection aid, see page 9/12.*

Version	Diameter	DT	Modular system		PU	PS*	PG
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## 5, 3SE2 Position Switches

**enclosures**  
**width 31 mm according to EN 50047**

Version	Diameter mm	DT	<b>Modular system</b>		PU (UNIT, SET, M)	PS*	PG							
<b>mechanisms</b>														
<b>Roller plungers with central fixing</b>														
Plastic rollers	10	⊕ B	<b>3SE5 000-0AD10</b>		1	1 unit	102							
High-grade steel rollers	10	⊕ B	<b>3SE5 000-0AD11</b>		1	1 unit	102							
<b>Roller levers, type E acc. to EN 50047</b>														
Metal lever, plastic roller	13	⊕ A	<b>3SE5 000-0AE10</b>		1	1 unit	102							
Metal lever, high-grade steel roller	13	⊕ B	<b>3SE5 000-0AE11</b>		1	1 unit	102							
High-grade steel lever, plastic roller	13	⊕ B	<b>3SE5 000-0AE12</b>		1	1 unit	102							
High-grade steel lever, high-grade steel roller	13	⊕ B	<b>3SE5 000-0AE13</b>		1	1 unit	102							
<b>Angular roller levers</b>														
Metal lever, plastic roller	13	⊕ A	<b>3SE5 000-0AF10</b>		1	1 unit	102							
Metal lever, high-grade steel roller	13	⊕ B	<b>3SE5 000-0AF11</b>		1	1 unit	102							
High-grade steel lever, plastic roller	13	⊕ A	<b>3SE5 000-0AF12</b>		1	1 unit	102							
High-grade steel lever, high-grade steel roller	13	⊕ B	<b>3SE5 000-0AF13</b>		1	1 unit	102							
<b>Spring rods</b> (for switches with snap-action contacts only)														
Plastic plunger:														
• Length 142.5 mm (spring 50 mm, plunger 50 mm)		B	<b>3SE5 000-0AR01</b>		1	1 unit	102							
• Length 76 mm (spring 23.5 mm, plunger 10 mm)		B	<b>3SE5 000-0AR03</b>		1	1 unit	102							
• Length 242.5 mm (spring 150 mm, plunger 50 mm)		B	<b>3SE5 000-0AR04</b>		1	1 unit	102							
High-grade steel plunger:														
• Length 142.5 mm (spring 50 mm, plunger 50 mm)		B	<b>3SE5 000-0AR02</b>		1	1 unit	102							
<b>Switches</b>														
<b>Twist actuators</b> , plastic (without lever)														
Switching right and/or left, adjustable		⊕ A	<b>3SE5 000-0AK00</b>		1	1 unit	102							
<b>Levers for twist actuators</b>														
<b>Twist levers, straight, type A acc. to EN 50047</b>														
Metal lever 21 mm, plastic roller	19	⊕ A	<b>3SE5 000-0AA21</b>		1	1 unit	102							
Metal lever 21 mm, high-grade steel roller	19	⊕ B	<b>3SE5 000-0AA22</b>		1	1 unit	102							
Metal lever 21 mm, roller with ball bearing	19	⊕ B	<b>3SE5 000-0AA23</b>		1	1 unit	102							
Metal lever 21 mm, plastic roller	30	⊕ B	<b>3SE5 000-0AA25</b>		1	1 unit	102							
High-grade steel lever 21 mm, plastic roller	19	⊕ B	<b>3SE5 000-0AA31</b>		1	1 unit	102							
High-grade steel lever 21 mm, high-grade steel roller	19	⊕ B	<b>3SE5 000-0AA32</b>		1	1 unit	102							
<b>Twist levers 30 mm, straight<sup>1)</sup></b>														
Metal lever, plastic roller	19	⊕ B	<b>3SE5 000-0AA24</b>		1	1 unit	102							
Metal lever, plastic roller	30	⊕ B	<b>3SE5 000-0AA26</b>		1	1 unit	102							
<b>Twist levers, adjustable length, with grid hole</b>														
Metal lever, plastic roller	19	⊕ B	<b>3SE5 000-0AA60</b>		1	1 unit	102							
Metal lever, high-grade steel roller	19	⊕ B	<b>3SE5 000-0AA61</b>		1	1 unit	102							
Metal lever, plastic roller	50	⊕ B	<b>3SE5 000-0AA67</b>		1	1 unit	102							
Metal lever, rubber roller	50	⊕ B	<b>3SE5 000-0AA68</b>		1	1 unit	102							
High-grade steel lever, plastic roller	19	⊕ B	<b>3SE5 000-0AA62</b>		1	1 unit	102							
High-grade steel lever, high-grade steel roller	19	⊕ B	<b>3SE5 000-0AA63</b>		1	1 unit	102							

## 3SE5, 3SE2 Position Switches

**3SE5, metal enclosures  
Enclosure width 40 mm according to EN 50041**

### ordering data

s

- Degree of protection IP66/IP67
- Cable entry M20 × 1.5

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		
<b>s<sup>1)</sup> • Enclosure width 40 mm</b>								
<b>Plain plungers</b>								
With high-grade steel plunger								
Slow-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 112-0BB01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 112-0CB01</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0KB01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0LB01</b>		1	1 unit	102
<b>Rounded plungers, type B acc. to EN 50041</b>								
With high-grade steel plungers, with 3 mm overtravel								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0BC02</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ ▶	<b>3SE5 112-0CC02</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0KC02</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0LC02</b>		1	1 unit	102
<b>Roller plungers, type C acc. to EN 50041</b>								
With high-grade steel roller 13 mm, with 3 mm overtravel								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0BD02</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ ▶	<b>3SE5 112-0CD02</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0KD02</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0LD02</b>		1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs</b>								
Snap-action contacts	1 NO + 1 NC 24 V DC		⊕ B	<b>3SE5 114-1CD02-1AF3</b>		1	1 unit	102
<b>Roller levers</b>								
With metal lever and plastic roller 22 mm								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0BE01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ ▶	<b>3SE5 112-0CE01</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0KE01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0LE01</b>		1	1 unit	102
<b>Angular roller levers</b>								
With metal lever and plastic roller 22 mm								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0BF01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 112-0CF01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0LF01</b>		1	1 unit	102



## 5, 3SE2 Position Switches

### enclosures width 40 mm according to EN 50041

- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
<b>s<sup>1)</sup> • Enclosure width 40 mm</b>								
<b>Twist levers, type A acc. to EN 50041</b>								
<b>With metal lever 27 mm and plastic roller 19 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0BH01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ ▶	<b>3SE5 112-0CH01</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0KH01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0LH01</b>		1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A)</b>								
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 114-0CH01-1AC5</b>		1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs</b>								
Snap-action contacts	1 NO + 1 NC 24 V DC		⊕ B	<b>3SE5 114-1CH01-1AF3</b>		1	1 unit	102
<b>With metal lever 27 mm and high-grade steel roller 19 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0BH02</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 112-0CH02</b>		1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs</b>								
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 114-1CH02-1AF3</b>		1	1 unit	102
<b>With metal lever 30 mm and plastic roller 19 mm</b>								
Snap-action contacts	1 NO + 1 NC --		⊕ ▶	<b>3SE5 112-0CH24</b>		1	1 unit	102
<b>Twist levers, adjustable length</b>								
<b>With metal lever with grid hole and plastic roller 19 mm</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0BH60</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		⊕ ▶	<b>3SE5 112-0CH60</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0LH60</b>		1	1 unit	102
<b>With metal lever and plastic roller 19 mm</b>								
Slow-action contacts	1 NO + 1 NC --		B	<b>3SE5 112-0BH50</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --		▶	<b>3SE5 112-0CH50</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		B	<b>3SE5 112-0LH50</b>		1	1 unit	102
<b>With M12 connector socket, 8-pole (30 V, 2 A) and 2 LEDs</b>								
Snap-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 114-1LH50-1AD4</b>		1	1 unit	102
<b>With metal lever and high-grade steel roller 19 mm</b>								
Snap-action contacts	1 NO + 1 NC --		B	<b>3SE5 112-0CH51</b>		1	1 unit	102
<b>Fork levers, latching</b>								
<b>With metal lever and 2 plastic rollers 19 mm</b>								
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0CT11</b>		1	1 unit	102

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## 3SE5, 3SE2 Position Switches

**3SE5, metal enclosures  
Enclosure width 40 mm according to EN 50041**

m

- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version	Contacts	LEDs	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU		
<b>• Enclosure width 40 mm</b>							
<b>With M20 x 1.5 connecting thread</b>							
Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 112-0BA00</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 112-0CA00</b>		1	1 unit	102
• Gold-plated contacts		⊕ B	<b>3SE5 112-0CA00-1AC1</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ A	<b>3SE5 112-0KA00</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ A	<b>3SE5 112-0LA00</b>		1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --	⊕ A	<b>3SE5 112-0MA00</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --	⊕ A	<b>3SE5 112-0PA00</b>		1	1 unit	102
<b>With increased corrosion protection<sup>1)</sup></b>							
Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 112-0BA00-1CA0</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 112-0CA00-1CA0</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 112-0KA00-1CA0</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 112-0LA00-1CA0</b>		1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC --	⊕ B	<b>3SE5 112-0MA00-1CA0</b>		1	1 unit	102
Slow-action contacts	2 NO + 1 NC --	⊕ B	<b>3SE5 112-0PA00-1CA0</b>		1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A)</b>							
Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 114-0BA00-1AC5</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 114-0CA00-1AC5</b>		1	1 unit	102
Slow-action contacts	2 NC --	⊕ B	<b>3SE5 114-0KA00-1AE1</b>		1	1 unit	102
Snap-action contacts	2 NC --	⊕ B	<b>3SE5 114-0LA00-1AE1</b>		1	1 unit	102
<b>With connector socket, 6-pole + PE (250 V, 10 A)</b>							
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 115-0KA00-1AD1</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 115-0LA00-1AD1</b>		1	1 unit	102
<b>With connector socket, 6-pole + PE (250 V, 10 A) and quick-release device</b>							
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 115-0CA00-1AD0</b>		1	1 unit	102
<b>With 2 LEDs, yellow/green</b>							
Slow-action contacts	1 NO + 2 NC 24 V DC	⊕ B	<b>3SE5 112-1KA00</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC 24 V DC	⊕ B	<b>3SE5 112-1LA00</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC	⊕ B	<b>3SE5 112-3KA00</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC 230 V AC	⊕ B	<b>3SE5 112-3LA00</b>		1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs</b>							
Slow-action contacts	1 NO + 1 NC 24 V DC	⊕ B	<b>3SE5 114-1BA00-1AF3</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC 24 V DC	⊕ B	<b>3SE5 114-1CA00-1AF3</b>		1	1 unit	102
<b>With M12 connector socket, 8-pole (30 V, 2 A) and 2 LEDs</b>							
Snap-action contacts	1 NO + 2 NC 24 V DC	⊕ B	<b>3SE5 114-1LA00-1AD4</b>		1	1 unit	102



## 5, 3SE2 Position Switches

**enclosures**  
**width 40 mm according to EN 50041**

Version	Diameter mm	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			
<b>mechanisms</b>							
<b>Plain plungers</b>							
High-grade steel plungers	10	⊕ A	<b>3SE5 000-0AB01</b>		1	1 unit	102
<b>Rounded plungers, type B acc. to EN 50041</b>							
High-grade steel plungers, with 3 mm overtravel	10	⊕ B	<b>3SE5 000-0AC02</b>		1	1 unit	102
<b>Roller plungers, type C acc. to EN 50041</b>							
High-grade steel roller, with 3 mm overtravel	13	⊕ B	<b>3SE5 000-0AD02</b>		1	1 unit	102
<b>Roller levers</b>							
Metal lever, plastic roller	22	⊕ A	<b>3SE5 000-0AE01</b>		1	1 unit	102
Metal lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AE02</b>		1	1 unit	102
High-grade steel lever, plastic roller	22	⊕ B	<b>3SE5 000-0AE03</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AE04</b>		1	1 unit	102
<b>Angular roller levers</b>							
Metal lever, plastic roller	22	⊕ A	<b>3SE5 000-0AF01</b>		1	1 unit	102
Metal lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AF02</b>		1	1 unit	102
High-grade steel lever, plastic roller	22	⊕ B	<b>3SE5 000-0AF03</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AF04</b>		1	1 unit	102
<b>Spring rods</b> (for switches with snap-action contacts only)							
Plastic plunger:							
• Length 142.5 mm (spring 50 mm, plunger 50 mm)		B	<b>3SE5 000-0AR01</b>		1	1 unit	102
• Length 76 mm (spring 23.5 mm, plunger 10 mm)		B	<b>3SE5 000-0AR03</b>		1	1 unit	102
• Length 242.5 mm (spring 150 mm, plunger 50 mm)		B	<b>3SE5 000-0AR04</b>		1	1 unit	102
High-grade steel plunger:							
• Length 142.5 mm (spring 50 mm, plunger 50 mm)		B	<b>3SE5 000-0AR02</b>		1	1 unit	102
<b>Levers</b>							
<b>Twist actuators</b> , metal (without lever)							
• For twist levers and rod actuators, switching right and/or left, adjustable	⊕ A		<b>3SE5 000-0AH00</b>		1	1 unit	102
• For fork levers, latching	⊕ B		<b>3SE5 000-0AT10</b>		1	1 unit	102
<b>Levers for twist actuators</b>							
<b>Twist levers, offset, type A acc. to EN 50041</b>							
Metal lever 27 mm, plastic roller	19	⊕ A	<b>3SE5 000-0AA01</b>		1	1 unit	102
Metal lever 27 mm, high-grade steel roller	19	⊕ A	<b>3SE5 000-0AA02</b>		1	1 unit	102
Metal lever 27 mm, roller with ball bearing	19	⊕ B	<b>3SE5 000-0AA03</b>		1	1 unit	102
Metal lever 27 mm, 2 plastic rollers	19	⊕ B	<b>3SE5 000-0AA04</b>		1	1 unit	102
Metal lever 27 mm, plastic roller	30	⊕ B	<b>3SE5 000-0AA05</b>		1	1 unit	102
Metal lever 27 mm, rubber roller	50	⊕ B	<b>3SE5 000-0AA08</b>		1	1 unit	102
High-grade steel lever 27 mm, plastic roller	19	⊕ B	<b>3SE5 000-0AA11</b>		1	1 unit	102
High-grade steel lever 27 mm, high-gr. steel roller	19	⊕ B	<b>3SE5 000-0AA12</b>		1	1 unit	102
Metal lever 35 mm, plastic roller	19	⊕ B	<b>3SE5 000-0AA15</b>		1	1 unit	102
<b>Twist levers 30 mm, straight<sup>1)</sup></b>							
Metal lever, plastic roller	19	⊕ B	<b>3SE5 000-0AA24</b>		1	1 unit	102
<b>Twist levers, adjustable length, with grid hole</b>							
Metal lever, plastic roller	19	⊕ B	<b>3SE5 000-0AA60</b>		1	1 unit	102
Metal lever, high-grade steel roller	19	⊕ B	<b>3SE5 000-0AA61</b>		1	1 unit	102
Metal lever, rubber roller	50	⊕ B	<b>3SE5 000-0AA68</b>		1	1 unit	102
High-grade steel lever, plastic roller	19	⊕ B	<b>3SE5 000-0AA62</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	19	⊕ B	<b>3SE5 000-0AA63</b>		1	1 unit	102

## 3SE5, 3SE2 Position Switches

**3SE5, metal enclosures  
Enclosure width 56 mm**

### ordering data

s

- Degree of protection IP66/IP67 · Cable entry 3 × (M20 × 1.5)

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		
<b>s<sup>1)</sup> • Enclosure width 56 mm</b>								

#### Plain plungers

##### With high-grade steel plunger

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0BB01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0CB01</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0KB01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0LB01</b>		1	1 unit	102

#### Rounded plungers

##### With high-grade steel plungers, with 3 mm overtravel

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0BC02</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ ▶ B	<b>3SE5 122-0CC02</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0KC02</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0LC02</b>		1	1 unit	102

#### Roller plungers

##### With high-grade steel roller 13 mm, with 3 mm overtravel

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0BD02</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 122-0CD02</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0KD02</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0LD02</b>		1	1 unit	102

#### Roller levers

##### With metal lever and plastic roller 22 mm

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0BE01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 122-0CE01</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0KE01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0LE01</b>		1	1 unit	102

##### With metal lever and high-grade steel roller 22 mm

Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0CE02</b>		1	1 unit	102
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#### Angular roller levers

##### With metal lever and plastic roller 22 mm

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0BF01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0CF01</b>		1	1 unit	102



## 5, 3SE2 Position Switches

### enclosures width 56 mm

- Degree of protection IP66/IP67 · Cable entry 3 × (M20 × 1.5)

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
s <sup>1)</sup> • Enclosure width 56 mm								

#### Twist levers

##### With metal lever 27 mm and plastic roller 19 mm

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0BH01</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 122-0CH01</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0KH01</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0LH01</b>		1	1 unit	102

##### With metal lever 27 mm and high-grade steel roller 19 mm

Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0CH02</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0LH02</b>		1	1 unit	102

#### Twist levers, adjustable length

##### With metal lever with grid hole and plastic roller 19 mm

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0BH60</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	⊕ A	<b>3SE5 122-0CH60</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 122-0LH60</b>		1	1 unit	102

##### With metal lever and plastic roller 19 mm

Slow-action contacts	1 NO + 1 NC --	B	<b>3SE5 122-0BH50</b>		1	1 unit	102
Snap-action contacts	1 NO + 1 NC --	A	<b>3SE5 122-0CH50</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --	B	<b>3SE5 122-0LH50</b>		1	1 unit	102

#### Fork levers, latching

##### With metal lever and 2 plastic rollers 19 mm

Snap-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 122-0CT11</b>		1	1 unit	102
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#### Rod actuators

##### With aluminum rod, length 200 mm

Snap-action contacts	1 NO + 1 NC --	B	<b>3SE5 122-0CH80</b>		1	1 unit	102
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##### With plastic rod, length 200 mm

Snap-action contacts	1 NO + 1 NC --	B	<b>3SE5 122-0CH82</b>		1	1 unit	102
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## 3SE5, 3SE2 Position Switches

3SE5, metal enclosures  
Enclosure width 56 mm

m

- Degree of protection IP66/IP67
- Cable entry 3 × (M20 × 1.5)

Version	Contacts	LEDs	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		
<b>• Enclosure width 56 mm</b>								
<b>With 3 x M20 x 1.5 connecting thread</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 122-0BA00</b>			1	1 unit 102
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 122-0CA00</b>			1	1 unit 102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 122-0KA00</b>			1	1 unit 102
Snap-action contacts	1 NO + 2 NC --		⊕ A	<b>3SE5 122-0LA00</b>			1	1 unit 102
Slow-action contacts with make-before-break	1 NO + 2 NC --		⊕ A	<b>3SE5 122-0MA00</b>			1	1 unit 102
Slow-action contacts	2 NO + 1 NC --		⊕ A	<b>3SE5 122-0PA00</b>			1	1 unit 102
<b>With increased corrosion protection<sup>1)</sup></b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 122-0BA00-1CA0</b>			1	1 unit 102
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 122-0CA00-1CA0</b>			1	1 unit 102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 122-0KA00-1CA0</b>			1	1 unit 102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 122-0LA00-1CA0</b>			1	1 unit 102
Slow-action contacts with make-before-break	1 NO + 2 NC --		⊕ B	<b>3SE5 122-0MA00-1CA0</b>			1	1 unit 102
Slow-action contacts	2 NO + 1 NC --		⊕ B	<b>3SE5 122-0PA00-1CA0</b>			1	1 unit 102
<b>With 2 LEDs, yellow/green</b>								
Slow-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 122-1KA00</b>			1	1 unit 102
Snap-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 122-1LA00</b>			1	1 unit 102
Slow-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 122-3KA00</b>			1	1 unit 102
Snap-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 122-3LA00</b>			1	1 unit 102

g according to IEC 60947-5-1, Appendix K, or  
n actuator, necessary in safety circuits.  
ing high-grade steel lever.

*Note: For selection aid, see page 9/12.*



Version	Diameter	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
	mm		Order No.		Price per PU		
<b>Mechanisms</b>							
<b>Plain plungers</b>							
High-grade steel plungers	10	⊕ A	<b>3SE5 000-0AB01</b>			1	1 unit 102
<b>Rounded plungers, type B acc. to EN 50041</b>							
High-grade steel plungers, with 3 mm overtravel	10	⊕ B	<b>3SE5 000-0AC02</b>			1	1 unit 102
<b>Roller plungers, type C acc. to EN 50041</b>							
High-grade steel roller, with 3 mm overtravel	13	⊕ B	<b>3SE5 000-0AD02</b>			1	1 unit 102
<b>Roller levers</b>							
Metal lever, plastic roller	22	⊕ A	<b>3SE5 000-0AE01</b>			1	1 unit 102
Metal lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AE02</b>			1	1 unit 102
High-grade steel lever, plastic roller	22	⊕ B	<b>3SE5 000-0AE03</b>			1	1 unit 102
High-grade steel lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AE04</b>			1	1 unit 102

## 5, 3SE2 Position Switches

### enclosures width 56 mm

Version	Diameter mm	DT	<b>Modular system</b>		PU (UNIT, SET, M)	PS*	PG			
								Order No.	Price per PU	
<b>S</b>										
<b>Twist actuators</b> , metal (without lever)										
• For twist levers and rod actuators, switching right and/or left, adjustable		Ⓐ A	<b>3SE5 000-0AH00</b>			1	1 unit	102		
• For fork levers, latching		Ⓑ B	<b>3SE5 000-0AT10</b>			1	1 unit	102		
<b>Levers for twist actuators</b>										
<b>Twist levers 27 mm, offset, type A acc. to EN 50041</b>										
Metal lever, plastic roller	19	Ⓐ A	<b>3SE5 000-OAA01</b>			1	1 unit	102		
Metal lever, high-grade steel roller	19	Ⓐ A	<b>3SE5 000-OAA02</b>			1	1 unit	102		
Metal lever, roller with ball bearing	19	Ⓑ B	<b>3SE5 000-OAA03</b>			1	1 unit	102		
Metal lever, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-OAA04</b>			1	1 unit	102		
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA05</b>			1	1 unit	102		
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-OAA07</b>			1	1 unit	102		
Metal lever, rubber roller	50	Ⓑ B	<b>3SE5 000-OAA08</b>			1	1 unit	102		
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA11</b>			1	1 unit	102		
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA12</b>			1	1 unit	102		
<b>Twist levers 35 mm, offset</b>										
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA15</b>			1	1 unit	102		
<b>Twist levers 30 mm, straight<sup>1)</sup></b>										
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA24</b>			1	1 unit	102		
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA26</b>			1	1 unit	102		
<b>Twist levers, adjustable length, with grid hole</b>										
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA60</b>			1	1 unit	102		
Metal lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA61</b>			1	1 unit	102		
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-OAA67</b>			1	1 unit	102		
Metal lever, rubber roller	50	Ⓑ B	<b>3SE5 000-OAA68</b>			1	1 unit	102		
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA62</b>			1	1 unit	102		
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA63</b>			1	1 unit	102		
<b>Twist levers, adjustable length</b>										
Metal lever, plastic roller	19	A	<b>3SE5 000-OAA50</b>			1	1 unit	102		
Metal lever, high-grade steel roller	19	B	<b>3SE5 000-OAA51</b>			1	1 unit	102		
Metal lever, plastic roller	30	B	<b>3SE5 000-OAA55</b>			1	1 unit	102		
Metal lever, plastic roller	50	B	<b>3SE5 000-OAA57</b>			1	1 unit	102		
Metal lever, rubber roller	50	B	<b>3SE5 000-OAA58</b>			1	1 unit	102		
High-grade steel lever, plastic roller	19	B	<b>3SE5 000-OAA52</b>			1	1 unit	102		
High-grade steel lever, high-grade steel roller	19	B	<b>3SE5 000-OAA53</b>			1	1 unit	102		
<b>Fork levers</b> (for switches with snap-action contacts only)										
2 metal levers, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-0AT01</b>			1	1 unit	102		
2 metal levers, 2 high-grade steel rollers	19	Ⓑ B	<b>3SE5 000-0AT02</b>			1	1 unit	102		
2 high-grade steel levers, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-0AT03</b>			1	1 unit	102		
2 high-grade steel levers, 2 high-grade steel rollers	19	Ⓑ B	<b>3SE5 000-0AT04</b>			1	1 unit	102		
<b>Rod actuators, type D acc. to EN 50041</b>										
Aluminum rod, length 200 mm	6	B	<b>3SE5 000-OAA80</b>			1	1 unit	102		
Spring rod, length 200 mm	6	B	<b>3SE5 000-OAA81</b>			1	1 unit	102		
Plastic rod, length 200 mm	6	B	<b>3SE5 000-OAA82</b>			1	1 unit	102		

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## 3SE5, 3SE2 Position Switches

Metal enclosures  
Enclosure width 56 mm, XL

### ordering data

s

- Degree of protection IP66/IP67 · Cable entry 3 × (M20 × 1.5)

Version	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		

<sup>1)</sup> • Enclosure width 56 mm, XL

#### Plain plungers

##### With high-grade steel plunger

Snap-action contacts	2 × (1 NO + 1 NC) --	⊕ B	3SE5 162-0CB01		1	1 unit	102
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#### Rounded plungers

##### With high-grade steel plungers, with 3 mm overtravel

Slow-action contacts	1 NO + 1 NC and --	⊕ B	3SE5 162-0EC02		1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC						

#### Roller plungers

##### With high-grade steel roller 13 mm, with 3 mm overtravel

Slow-action contacts	2 × (1 NO + 1 NC) --	⊕ B	3SE5 162-0BD02		1	1 unit	102
Snap-action contacts	2 × (1 NO + 1 NC) --	⊕ A	3SE5 162-0CD02		1	1 unit	102

#### Roller levers

##### With metal lever and plastic roller 22 mm

Slow-action contacts	2 × (1 NO + 1 NC) --	⊕ B	3SE5 162-0BE01		1	1 unit	102
Snap-action contacts	2 × (1 NO + 1 NC) --	⊕ A	3SE5 162-0CE01		1	1 unit	102

##### With metal lever and high-grade steel roller 22 mm

Snap-action contacts	2 × (1 NO + 1 NC) --	⊕ B	3SE5 162-0CE02		1	1 unit	102
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#### Angular roller levers

##### With metal lever and plastic roller 22 mm

Snap-action contacts	2 × (1 NO + 1 NC) --	⊕ B	3SE5 162-0CF01		1	1 unit	102
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#### Twist levers

##### With metal lever 27 mm and plastic roller 19 mm

Snap-action contacts	2 × (1 NO + 1 NC) --	⊕ A	3SE5 162-0CH01		1	1 unit	102
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## 5, 3SE2 Position Switches

### Enclosures Width 56 mm, XL

m

- Degree of protection IP66/IP67
- Cable entry 3 × (M20 × 1.5)

Version	Contacts	LEDs	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
<b>• Enclosure width 56 mm, XL</b>								
<b>With 3 x M20 x 1.5 connecting thread</b>								
Slow-action contacts	2 × (1 NO + 1 NC) --		⊕ A	<b>3SE5 162-0BA00</b>		1	1 unit	102
Snap-action contacts	2 × (1 NO + 1 NC) --		⊕ A	<b>3SE5 162-0CA00</b>		1	1 unit	102
Slow-action contacts with make-before-break	2 × (1 NO + 2 NC) --		⊕ A	<b>3SE5 162-0DA00</b>		1	1 unit	102
<b>With increased corrosion protection<sup>1)</sup></b>								
Slow-action contacts	2 × (1 NO + 1 NC) --		⊕ B	<b>3SE5 162-0BA00-1CA0</b>		1	1 unit	102
Snap-action contacts	2 × (1 NO + 1 NC) --		⊕ B	<b>3SE5 162-0CA00-1CA0</b>		1	1 unit	102
Slow-action contacts with make-before-break	2 × (1 NO + 2 NC) --		⊕ B	<b>3SE5 162-0DA00-1CA0</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K, or actuator, necessary in safety circuits.

*Note: For selection aid, see page 9/12.*

ing high-grade steel lever.

Version	Diameter	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
	mm		Order No.	Price per PU			
<b>Mechanisms</b>							
<b>Plain plungers</b>							
High-grade steel plungers	10	⊕ A	<b>3SE5 000-0AB01</b>		1	1 unit	102
<b>Rounded plungers, type B acc. to EN 50041</b>							
High-grade steel plungers, with 3 mm overtravel	10	⊕ B	<b>3SE5 000-0AC02</b>		1	1 unit	102
<b>Roller plungers, type C acc. to EN 50041</b>							
High-grade steel roller, with 3 mm overtravel	13	⊕ B	<b>3SE5 000-0AD02</b>		1	1 unit	102
<b>Roller levers</b>							
Metal lever, plastic roller	22	⊕ A	<b>3SE5 000-0AE01</b>		1	1 unit	102
Metal lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AE02</b>		1	1 unit	102
High-grade steel lever, plastic roller	22	⊕ B	<b>3SE5 000-0AE03</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AE04</b>		1	1 unit	102
<b>Angular roller levers</b>							
Metal lever, plastic roller	22	⊕ A	<b>3SE5 000-0AF01</b>		1	1 unit	102
Metal lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AF02</b>		1	1 unit	102
High-grade steel lever, plastic roller	22	⊕ B	<b>3SE5 000-0AF03</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	22	⊕ B	<b>3SE5 000-0AF04</b>		1	1 unit	102

## 3SE5, 3SE2 Position Switches

### Metal enclosures Enclosure width 56 mm, XL

Version	Diameter mm	DT	<b>Modular system</b>	PU (UNIT, SET, M)	PS*	PG
<b>S</b>						
<b>Twist actuators</b> , metal (without lever)						
• For twist levers and rod actuators, switching right and/or left, adjustable		Ⓐ A	<b>3SE5 000-0AH00</b>		1	1 unit
• For fork levers, latching		Ⓑ B	<b>3SE5 000-0AT10</b>		1	1 unit
<b>Levers for twist actuators</b>						
<b>Twist levers 27 mm, offset, type A acc. to EN 50041</b>						
Metal lever, plastic roller	19	Ⓐ A	<b>3SE5 000-OAA01</b>		1	1 unit
Metal lever, high-grade steel roller	19	Ⓐ A	<b>3SE5 000-OAA02</b>		1	1 unit
Metal lever, roller with ball bearing	19	Ⓑ B	<b>3SE5 000-OAA03</b>		1	1 unit
Metal lever, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-OAA04</b>		1	1 unit
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA05</b>		1	1 unit
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-OAA07</b>		1	1 unit
Metal lever, rubber roller	50	Ⓑ B	<b>3SE5 000-OAA08</b>		1	1 unit
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA11</b>		1	1 unit
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA12</b>		1	1 unit
<b>Twist levers 35 mm, offset</b>						
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA15</b>		1	1 unit
<b>Twist levers 30 mm, straight<sup>1)</sup></b>						
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA24</b>		1	1 unit
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA26</b>		1	1 unit
<b>Twist levers, adjustable length, with grid hole</b>						
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA60</b>		1	1 unit
Metal lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA61</b>		1	1 unit
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-OAA67</b>		1	1 unit
Metal lever, rubber roller	50	Ⓑ B	<b>3SE5 000-OAA68</b>		1	1 unit
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA62</b>		1	1 unit
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA63</b>		1	1 unit
<b>Twist levers, adjustable length</b>						
Metal lever, plastic roller	19	A	<b>3SE5 000-OAA50</b>		1	1 unit
Metal lever, high-grade steel roller	19	B	<b>3SE5 000-OAA51</b>		1	1 unit
Metal lever, plastic roller	30	B	<b>3SE5 000-OAA55</b>		1	1 unit
Metal lever, plastic roller	50	B	<b>3SE5 000-OAA57</b>		1	1 unit
Metal lever, rubber roller	50	B	<b>3SE5 000-OAA58</b>		1	1 unit
High-grade steel lever, plastic roller	19	B	<b>3SE5 000-OAA52</b>		1	1 unit
High-grade steel lever, high-grade steel roller	19	B	<b>3SE5 000-OAA53</b>		1	1 unit
<b>Fork levers</b> (for switches with snap-action contacts only)						
2 metal levers, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-0AT01</b>		1	1 unit
2 metal levers, 2 high-grade steel rollers	19	Ⓑ B	<b>3SE5 000-0AT02</b>		1	1 unit
2 high-grade steel levers, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-0AT03</b>		1	1 unit
2 high-grade steel levers, 2 high-grade steel rollers	19	Ⓑ B	<b>3SE5 000-0AT04</b>		1	1 unit
<b>Rod actuators, type D acc. to EN 50041</b>						
Aluminum rod, length 200 mm	6	B	<b>3SE5 000-OAA80</b>		1	1 unit
Spring rod, length 200 mm	6	B	<b>3SE5 000-OAA81</b>		1	1 unit
Plastic rod, length 200 mm	6	B	<b>3SE5 000-OAA82</b>		1	1 unit
Plastic rod, length 330 mm	6	B	<b>3SE5 000-OAA83</b>		1	1 unit



## 5, 3SE2 Position Switches

enclosures  
temperature up to -40 °C

### ordering data

s

- Degree of protection IP66/IP67 · Cable entry M20 × 1.5

Version	Contacts	LEDs	DT	<b>Complete units</b>	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		
<b>• Enclosure width 40 mm</b>								
<b>Twist levers, adjustable length</b>								
With high-grade steel lever with grid hole and plastic roller 19 mm								
Snap-action contacts	1 NO + 1 NC --		⊕ A	<b>3SE5 112-0CH62-1AJ0</b>		1	1 unit	102

m

- Degree of protection IP66/IP67 · Cable entry M20 × 1.5

Version	Contacts	LEDs	DT	<b>Modular system</b>	<input checked="" type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		
<b>• Enclosure width 40 mm</b>								
<b>With M20 × 1.5 connecting thread</b>								
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 112-0CA00-1AJ0</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0KA00-1AJ0</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 112-0LA00-1AJ0</b>		1	1 unit	102
<b>• Enclosure width 56 mm</b>								
<b>With 3 x M20 × 1.5 connecting thread</b>								
Snap-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 122-0CA00-1AJ0</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 122-0KA00-1AJ0</b>		1	1 unit	102
Snap-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 122-0LA00-1AJ0</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K or positively  
necessary in safety circuits.

*Note: For selection aid, see page 9/12.*

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## 3SE5, 3SE2 Position Switches

**3SE5, metal enclosures  
Ambient temperature up to -40 °C**

Version	Diameter mm	DT	<b>Modular system</b>		PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			
<b>Mechanisms</b>							
<b>Rounded plungers, type B acc. to EN 50041</b>							
High-grade steel plungers, with 3 mm overtravel	10	⊖ B	<b>3SE5 000-0AC02-1AJ0</b>		1	1 unit	102
<b>Roller plungers, type C acc. to EN 50041</b>							
High-grade steel roller, with 3 mm overtravel	10	⊖ B	<b>3SE5 000-0AD02-1AJ0</b>		1	1 unit	102
<b>Roller levers</b>							
Metal lever, plastic roller	13	⊖ B	<b>3SE5 000-0AE01-1AJ0</b>		1	1 unit	102
High-grade steel lever, plastic roller	13	⊖ B	<b>3SE5 000-0AE03-1AJ0</b>		1	1 unit	102
<b>Angular roller levers</b>							
Metal lever, plastic roller	13	⊖ B	<b>3SE5 000-0AF01-1AJ0</b>		1	1 unit	102
High-grade steel lever, plastic roller	13	⊖ B	<b>3SE5 000-0AF03-1AJ0</b>		1	1 unit	102
<b>Twist actuators</b>							
<b>Twist actuators</b> , metal (without lever) Switching right and/or left, adjustable		⊖ B	<b>3SE5 000-0AH00-1AJ0</b>		1	1 unit	102
<b>Levers for twist actuators</b>							
<b>Twist levers, type A acc. to EN 50041</b>							
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA01-1AJ0</b>		1	1 unit	102
High-grade steel lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA11-1AJ0</b>		1	1 unit	102
<b>Twist levers, adjustable length, with grid hole</b>							
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA60-1AJ0</b>		1	1 unit	102
High-grade steel lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA62-1AJ0</b>		1	1 unit	102



## 5, 3SE2 Position Switches

enclosures  
sign



in width 30 mm

In harsh environments or on equipment with limited space, the 3SE5 4 position switches in compact design have a width of only 16 mm and a weight of only 80 g (without cable). All the versions with molded cable can be used in most confined places.

These position switches are available in two different complete units:

The 3 series complies with the EU standard and features a wide enclosure with drilled holes at a distance of 5 mm.

The 3 series meets the requirements of the US market and features a 40 mm wide enclosure with drilled holes at a distance of 5 mm.

The housing and the twist actuator are made of metal and feature a high IP67 degree of protection. Following actuators are available:

- Fingers
- Fingers with central fixing
- Fingers with external seal
- Bars
- Bars with central fixing

The switch is designed with snap-action contacts. The NC contact complies with the requirements of IEC 60947-5-1.

Circuits up to Category 4 according to IEC 60947-5-1.

cable, 2 m or 5 m long  
connector socket

### Benefits

- Very compact yet with the same rating as the 3SE51 standard switches, for notable space savings in confined installation conditions
- Various actuator versions available
- The actuators can be rotated in 90° increments
- Time is saved when mounting the fully assembled unit
- Ideal for use in harsh industrial environments thanks to metal enclosure with degrees of protection IP67
- Insensitive to electromagnetic interference

## 3SE5, 3SE2 Position Switches

**3SE5, metal enclosures  
Compact design**

### Ordering data

contacts 1 NO + 1 NC · Degree of protection IP67 · With connecting cable or M12 connector socket

Operating mechanism	Enclosure width mm	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>• Enclosure width 30 or 40 mm</b>							
<b>Rounded plungers</b>							
• Standard mounting							
- With 2 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓐ A	<b>3SE5 413-0CC20-1EA2</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CC20-1EA2</b>	1	1 unit	102	
- With 5 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓑ B	<b>3SE5 413-0CC20-1EA5</b>	1	1 unit	102	
- With M12 connector socket	30	Ⓐ A	<b>3SE5 413-0CC20-1EB1</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CC20-1EB1</b>	1	1 unit	102	
• With M12 central fixing							
- With 2 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓐ A	<b>3SE5 413-0CC21-1EA2</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CC21-1EA2</b>	1	1 unit	102	
• With external seal							
- With 2 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓐ A	<b>3SE5 413-0CC22-1EA2</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CC22-1EA2</b>	1	1 unit	102	
<b>Roller plungers</b>							
• Standard mounting							
- With 2 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓐ A	<b>3SE5 413-0CD20-1EA2</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CD20-1EA2</b>	1	1 unit	102	
- With 5 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓑ B	<b>3SE5 413-0CD20-1EA5</b>	1	1 unit	102	
- With M12 connector socket	30	Ⓐ A	<b>3SE5 413-0CD20-1EB1</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CD20-1EB1</b>	1	1 unit	102	
• With M12 central fixing							
- With 2 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓐ A	<b>3SE5 413-0CD21-1EA2</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CD21-1EA2</b>	1	1 unit	102	
• Actuator head rotated 90°							
- With 2 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓐ A	<b>3SE5 413-0CD23-1EA2</b>	1	1 unit	102	
<b>Twist levers</b>							
• Standard mounting							
- With 2 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓐ A	<b>3SE5 413-0CN20-1EA2</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CN20-1EA2</b>	1	1 unit	102	
- With 5 m cable 5 x 0.75 mm <sup>2</sup>	30	Ⓐ A	<b>3SE5 413-0CN20-1EA5</b>	1	1 unit	102	
- With M12 connector socket	30	Ⓐ A	<b>3SE5 413-0CN20-1EB1</b>	1	1 unit	102	
	40	Ⓐ A	<b>3SE5 423-0CN20-1EB1</b>	1	1 unit	102	



# 5, 3SE2 Position Switches

## type design



Their compact design makes these switches particularly suitable for use in confined conditions. The fixing dimensions and operating points are according to EN 50047.

The switches are equipped with two or three contacts in slow-action or snap-action versions. The stroke is 6 mm.

The empty enclosure can be equipped with all switch block variants ([see page 9/48](#)).

## ordering data

- Degree of protection IP20 (2 contacts), IP10 (3 contacts)

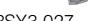
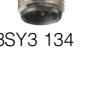
Version	Contacts	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>enclosures • Enclosure width 30 mm</b>							
<b>With teflon plunger, Ø 6 mm</b>							
With contact block with 2 contacts							
Slow-action contacts	1 NO + 1 NC	⊕ A	<b>3SE5 250-0BC05</b>	1	1 unit	102	
Snap-action contacts	1 NO + 1 NC	⊕ ▶	<b>3SE5 250-0CC05</b>	1	1 unit	102	
With contact block with 3 contacts							
Slow-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 250-0KC05</b>	1	1 unit	102	
Snap-action contacts	1 NO + 2 NC	⊕ A	<b>3SE5 250-0LC05</b>	1	1 unit	102	
Slow-action contacts with make-before-break	1 NO + 2 NC	⊕ A	<b>3SE5 250-0MC05</b>	1	1 unit	102	
Slow-action contacts	2 NO + 1 NC	⊕ A	<b>3SE5 250-0PC05</b>	1	1 unit	102	
Empty enclosures without contact block	--	⊕ B	<b>3SE5 250-0AC05</b>	1	1 unit	102	

## 3SE5, 3SE2 Position Switches

### Accessories and spare parts

#### Ordering data

These devices and plug-in connections are used for assembly and replacement of position switches.

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>Devices for enclosure width 40 mm</b>						
	B	<b>3SY3 110</b>		1	1 unit	102
	B	<b>3SY3 027</b>		1	1 unit	102
<b>Connections for M20 x 1.5 connecting threads</b>						
	C	<b>3SY3 131</b> Connector sockets (6-pole + PE), for M20 x 1.5 For max. 250 V, 10 A With 0.75 mm <sup>2</sup> connecting cable, plastic, degree of protection IP65, ambient temperature -40 to +90 °C		1	1 unit	102
	A	<b>3SY3 136</b> Cable boxes (6-pole + PE) <sup>1)</sup> With terminal compartment, can be pre-assembled, plastic, degree of protection IP65		1	1 unit	102
	B	<b>3SY3 127</b> Connector sockets (4-pole), M12, for M20 x 1.5, fixed For max 250 V, 4 A, U <sub>imp</sub> = 2500 V With four 0.25 mm <sup>2</sup> connecting cables, plastic, degree of protection IP67, ambient temperature -40 to +85 °C		1	1 unit	102
	B	<b>3SY3 128</b> Connector sockets (5-pole), M12, for M20 x 1.5, fixed For max. 125 V, 4 A, U <sub>imp</sub> = 1500 V With five 0.25 mm <sup>2</sup> connecting cables, plastic, degree of protection IP67, ambient temperature -40 to +85 °C		1	1 unit	102
	C	<b>3SY3 134</b> Connector sockets (8-pole), M12, for M20 x 1.5, fixed, metal version For max. 30 V, 2 A, U <sub>imp</sub> = 800 V With eight 0.25 mm <sup>2</sup> connecting cables, metal, degree of protection IP67, ambient temperature -40 to +85 °C		1	1 unit	102
<b>Cable glands for M20 x 1.5 connecting threads</b>						
	B	<b>3SX9 917</b> Adapters according to   and  For cable entry from M20 x 1.5 to NPT 1/2	1	1 unit	102	
	D	<b>3SX9 918</b>	1	1 unit	102	



## 5, 3SE2 Position Switches

### Accessories and spare parts

Version	Color/ contacts	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>Accessories for 3SE52</b>							
<b>Protective caps, rubber,</b> for rounded plungers acc. to EN 50047, 3SE5 ...-C05	Black	A	<b>3SE5 000-0AC30</b>		1	1 unit	102
<b>3SE51, 3SE52</b>							
<b>Empty enclosures, plastic</b>	Turquoise	B	<b>3SE5 232-0AC05</b>		1	1 unit	102
Enclosure width 31 mm		B	<b>3SE5 232-0AC05-1CA0</b>		1	1 unit	102
• With increased corrosion protection		B	<b>3SE5 242-0AC05</b>		1	1 unit	102
Enclosure width 50 mm		B	<b>3SE5 242-0AC05-1CA0</b>		1	1 unit	102
• With increased corrosion protection		B			1	1 unit	102
1 mm							
<b>Empty enclosures, metal</b>	Turquoise	B	<b>3SE5 212-0AC05</b>		1	1 unit	102
Enclosure width 31 mm		B	<b>3SE5 212-0AC05-1CA0</b>		1	1 unit	102
• With increased corrosion protection		B	<b>3SE5 112-0AA00</b>		1	1 unit	102
Enclosure width 40 mm		B	<b>3SE5 112-0AA00-1CA0</b>		1	1 unit	102
• With increased corrosion protection		B	<b>3SE5 122-0AA00</b>		1	1 unit	102
Enclosure width 56 mm		B	<b>3SE5 122-0AA00-1CA0</b>		1	1 unit	102
• With increased corrosion protection		B	<b>3SE5 162-0AA00</b>		1	1 unit	102
0 mm							
<b>Contact blocks with 2 contacts</b>							
• Slow-action contacts	1 NO + 1 NC	⊕ B	<b>3SE5 000-0BA00</b>		1	1 unit	102
• Snap-action contacts	1 NO + 1 NC	⊕ B	<b>3SE5 000-0CA00</b>		1	1 unit	102
- Standard		⊕ B	<b>3SE5 000-0CA00-1AC1</b>		1	1 unit	102
- Gold-plated contacts		⊕ B	<b>3SE5 000-0GA00</b>		1	1 unit	102
- 2 × 2 mm switching interval		⊕ B	<b>3SE5 000-0NA00</b>		1	1 unit	102
- Short stroke		⊕ B			1	1 unit	102
<b>Contact blocks with 3 contacts</b>							
• Slow-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 000-0KA00</b>		1	1 unit	102
• Snap-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 000-0LA00</b>		1	1 unit	102
• Slow-action contacts with make-before-break	1 NO + 2 NC	⊕ A	<b>3SE5 000-0MA00</b>		1	1 unit	102
• Slow-action contacts	2 NO + 1 NC	A	<b>3SE5 000-0PA00</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K.

Accessories only with contact combinations according to 9 and 9/40.

## 3SE5, 3SE2 Position Switches

### Accessories and spare parts

Version	Rated voltage LED V	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>3SE51, 3SE52</b>							
<b>Covers for molded-plastic enclosures, width 31 mm</b>							
• Turquoise with LED	24 DC	B	<b>3SE5 230-1AA00</b>		1	1 unit	102
	230 AC	B	<b>3SE5 230-3AA00</b>		1	1 unit	102
• Yellow	--	B	<b>3SE5 230-0AA00-1AG0</b>		1	1 unit	102
• Yellow with LED	24 DC	B	<b>3SE5 230-1AA00-1AG0</b>		1	1 unit	102
	230 AC	B	<b>3SE5 230-3AA00-1AG0</b>		1	1 unit	102
<b>Covers for molded-plastic enclosures, width 40 mm</b>							
• Turquoise with LED	24 DC	B	<b>3SE5 130-1AA00</b>		1	1 unit	102
	230 AC	B	<b>3SE5 130-3AA00</b>		1	1 unit	102
• Yellow	--	B	<b>3SE5 130-0AA00-1AG0</b>		1	1 unit	102
• Yellow with LED	24 DC	B	<b>3SE5 130-1AA00-1AG0</b>		1	1 unit	102
	230 AC	B	<b>3SE5 130-3AA00-1AG0</b>		1	1 unit	102
<b>Covers for molded-plastic enclosures, width 50 mm</b>							
• Turquoise with LED	24 DC	B	<b>3SE5 240-1AA00</b>		1	1 unit	102
	230 AC	B	<b>3SE5 240-3AA00</b>		1	1 unit	102
• Yellow	--	B	<b>3SE5 240-0AA00-1AG0</b>		1	1 unit	102
• Yellow with LED	24 DC	B	<b>3SE5 240-1AA00-1AG0</b>		1	1 unit	102
	230 AC	B	<b>3SE5 240-3AA00-1AG0</b>		1	1 unit	102
<b>Covers for metal enclosures, width 31 mm</b>							
• Turquoise with LED	24 DC	B	<b>3SE5 210-1AA00</b>		1	1 unit	102
	230 AC	B	<b>3SE5 210-3AA00</b>		1	1 unit	102
• Yellow	--	B	<b>3SE5 210-0AA00-1AG0</b>		1	1 unit	102
• Yellow with LED	24 DC	B	<b>3SE5 210-1AA00-1AG0</b>		1	1 unit	102
	230 AC	B	<b>3SE5 210-3AA00-1AG0</b>		1	1 unit	102
<b>Covers for metal enclosures, width 40 mm</b>							
• Turquoise with LED	24 DC	B	<b>3SE5 110-1AA00</b>		1	1 unit	102
	230 AC	B	<b>3SE5 110-3AA00</b>		1	1 unit	102
• Yellow	--	B	<b>3SE5 110-0AA00-1AG0</b>		1	1 unit	102
• Yellow with LED	24 DC	B	<b>3SE5 110-1AA00-1AG0</b>		1	1 unit	102
	230 AC	B	<b>3SE5 110-3AA00-1AG0</b>		1	1 unit	102
<b>Covers for metal enclosures, width 56 mm</b>							
• Turquoise with LED	24 DC	B	<b>3SE5 120-1AA00</b>		1	1 unit	102
	230 AC	B	<b>3SE5 120-3AA00</b>		1	1 unit	102
• Yellow	--	B	<b>3SE5 120-0AA00-1AG0</b>		1	1 unit	102
• Yellow with LED	24 DC	B	<b>3SE5 120-1AA00-1AG0</b>		1	1 unit	102
	230 AC	B	<b>3SE5 120-3AA00-1AG0</b>		1	1 unit	102
<b>Covers for XL metal enclosures, width 56 mm</b>							
• Yellow	--	B	<b>3SE5 160-0AA00-1AG0</b>		1	1 unit	102



## 5, 3SE2 Position Switches with Separate Actuator

Position switches with separate actuator are used where the protective covers or protective grills must be monitored for opening.

Position switches with separate actuator have the same basic design as the standard switches (modular system).



with head for separate actuator

Position switches are available in various enclosure sizes:  
• Plastic enclosures according to EN 50047, 31 mm wide, 1 cable entry

• Plastic enclosures according to EN 50047, 31 mm wide, 2 cable entries

• Plastic and metal enclosures according to EN 50041, IP66/IP67, 1 cable entry

• Plastic enclosures, 50 mm wide, IP66/IP67, 2 cable entries

• Plastic enclosures, 56 mm wide, IP66/IP67, 3 cable entries

• A switch in the 3SE2 series which has arisen in response to general market requirements:

• Plastic enclosures outside of the standards, enclosure protection class IP67

• Options

• Various versions can be selected for the enclosures of the

• Versions with two- or three-pole switching elements designed for normally open contacts

• Versions with status display

• Versions with four- or five-pole M12 connector socket

• Versions with the wide enclosures as an accessory for

### Operation

The actuator head is included in the scope of supply. For actuation from four directions it can be adjusted through  $4 \times 90^\circ$ . The switches can also be approached from above.

The twist actuators of the 3SE2 243 and 3SE2 257 switches with special enclosures cannot be changed. The switches can be approached from the two broad sides and from above.

The actuators are not included in the scope of supply of the position switch and must be ordered separately from a choice of six versions to suit the application ([see page 9/59](#)).

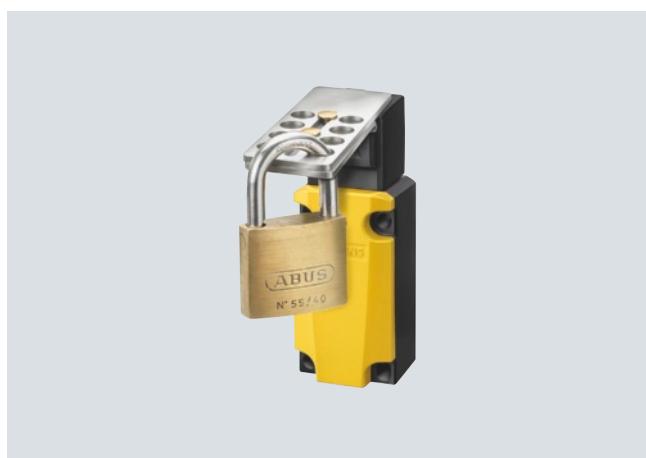
The actuator is encoded. Simple overruling by hand or auxiliary devices is impossible.

### Radius actuators

The position switches with radius actuators are particularly suitable for rotatable protective devices. The movable actuation key allows even small radii to be approached. Damage to the switch and the actuator due to inaccurate approach is prevented.

### Locking devices

A high-grade steel blocking insert for attaching up to eight padlocks is available for even more safety ([see page 9/59](#)).



Blocking insert with padlock

### Dust protection

A rubber cap to protect the twist actuator from contamination is available for operation in dusty environments ([see page 9/59](#)).

### Contact reliability

The new switching blocks ensure an extremely high contact stability. This applies even when the devices are switching low voltages and currents, e.g. 1 mA at 5 V DC.

### Positive opening

## **3SE5, 3SE2 Position Switches**

With Separate Actuator

## General data

accordance with EN 50041 or EN 50047 standards. The devices are suitable for use in any climate.

## **Standards**

IEC 60947-5-1 or EN 60947-5-1.

The protective measure of "total insulation" by the molded-plastic enclosure is guaranteed by the use of molded-plastic screw-glands.

## **Safety position switches**

For controls according to IEC 60204-1 or EN 60204-1 the devices can be used as a safety position switch. To secure position switches against changes in their position, keyed techniques must be employed on installation.

### **Safety circuits**

IEC 60947-5-1 and EN 60947-5-1 require positive opening of the NC contacts, i.e. for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to the IEC standard 60947-5-1 with the symbol .

Category 3 according to ISO 13849-1 (EN 954-1) can be attained with a position switch with a separate actuator if the corresponding failsafe evaluation units are selected and correctly installed, e.g. the 3TK28 safety relays or matching units from the ASIsafe, SIMATIC or SINUMERIK product ranges.

Category 4 can be achieved when using an additional position switch.

#### Definitions

		3SE5 1...-V.., 3SE5 2...-V..	3SE2 257-.XX..	3SE2 243-.XX..
IEC 60947-5-1, EN 60947-5-1				
voltage $U_i$	V	400 acc. to EN 60664-1	500 Class 3	
Withstand voltage $U_{imp}$	kV	6	6	
Normal voltage $U_e$	V	400 AC; over 300 V AC only equal potential	500 AC; over 380 V AC only equal potential	
Normal current $I_{th}$	A	6	10	
Normal current $I_e$		2-pole      3-pole	1-pole	3-pole
current 50/60 Hz		$I_e/AC-15$	$I_e/AC-15$	$I_e/AC-15$
	A	6	6	10
	A	6	3	10
	A	3	1.5	6
	A	--	--	10
	A	--	--	4
			10	10
			3	4
				3
Current		$I_e/DC-13$	$I_e/DC-13$	$I_e/DC-12$
	A	3	3	10
	A	0.55	0.55	10
	A	0.27	0.27	--
			--	--
			--	--
			--	--
	A	--	--	4
	A	--	--	1
	A	--	--	0.4
			1	1
			0.2	0.4
				0.2

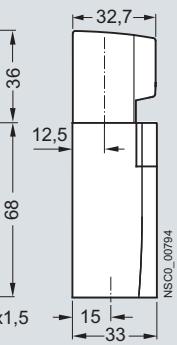


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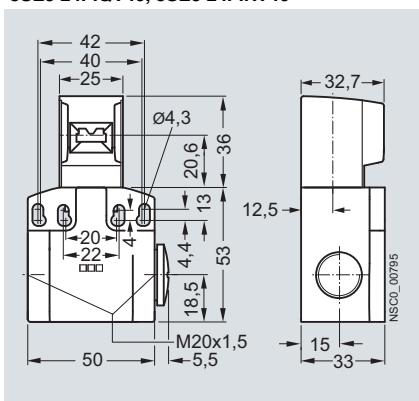
## 5, 3SE2 Position Switches Separate Actuator

### configuration

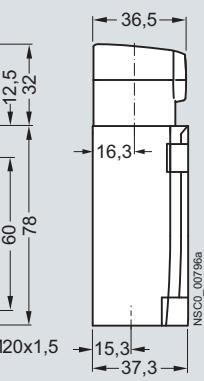
31 mm  
3SE5 23.-.RV40



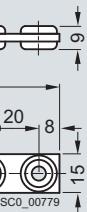
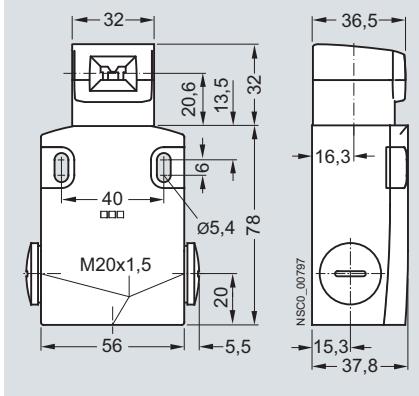
Enclosure width 50 mm  
3SE5 24.-.QV40, 3SE5 24.-.RV40



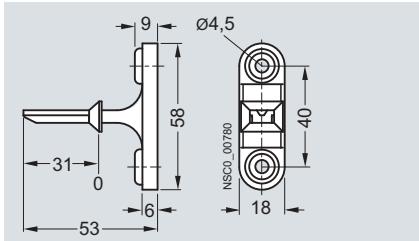
40 mm  
3SE5 11.-.RV10



Enclosure width 56 mm  
3SE5 12.-.QV10, 3SE5 12.-.RV10



3SE5 000-0AV02  
actuator with vertical fixing



3SE5 000-0AV03  
actuator with horizontal fixing

approach from left



3SE5 000-0AV06  
radius actuator approach from right



3SE5 000-0AV05  
universal radius actuator

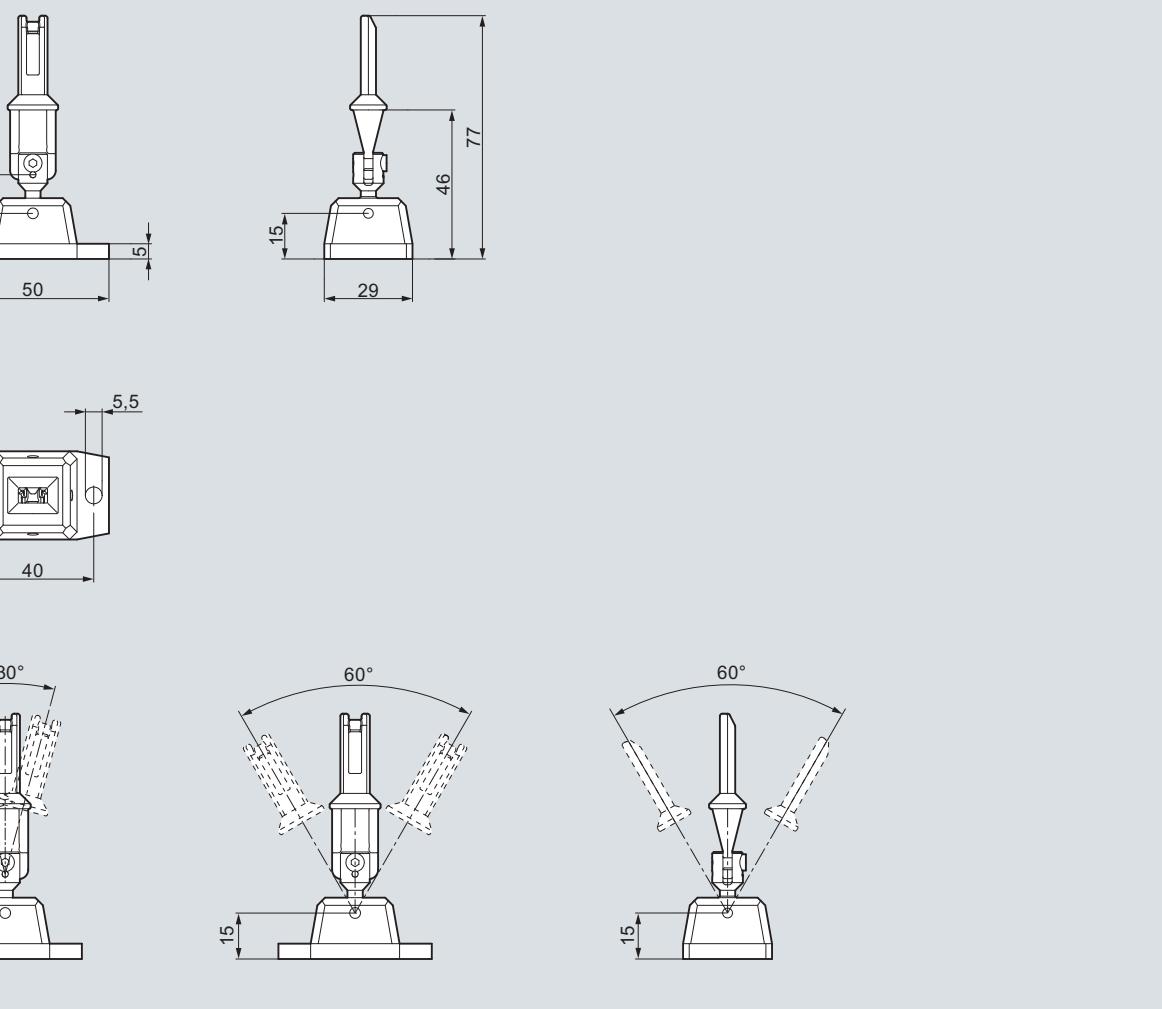


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## 3SE5, 3SE2 Position Switches With Separate Actuator

### General data

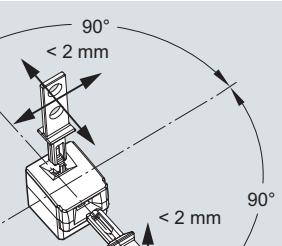
actuator, heavy duty



operating travel

Actuators

Lateral actuation ( $4 \times 90^\circ$ )



Lateral actuation ( $4 \times 90^\circ$ )

Slow-action contacts

**1 NO + 1 NC**, Ident. No. **11**

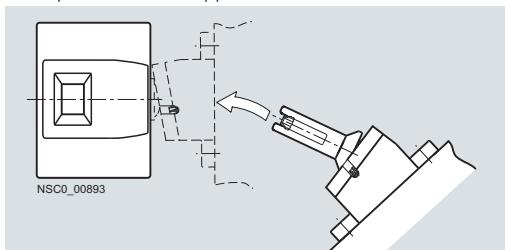
0	→	1,7	2,5	NSCO_00921	13-14	21-22 **
mm		2,4**			≥30	

**1 NO + 2 NC**, Ident. No. **12**

0	→	1,7	2,5	NSCO_00923
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**Radius actuators (all directions of approach)**

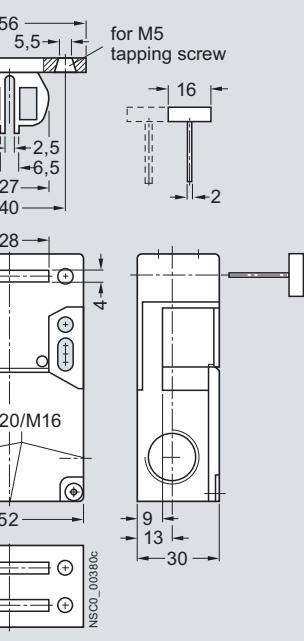
Example: Direction of approach from the left



## 5, 3SE2 Position Switches Separate Actuator

### 3SE2 257 configuration

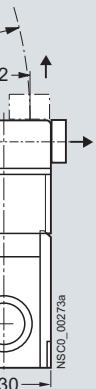
and front-end actuation,  
standard actuator



Operating travel

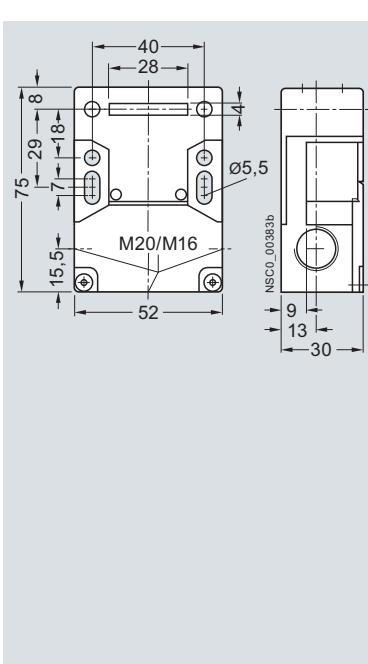
Lateral actuators

Actuation

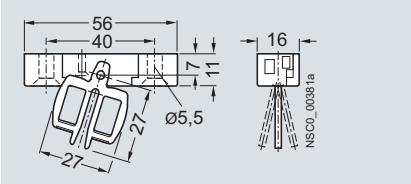


Actuator:  $R_{min} > 38$  mm.

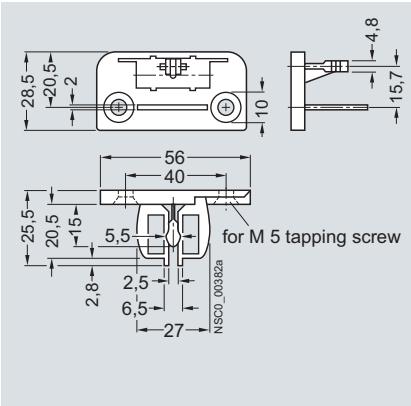
### 3SE2 257, lateral and front-end actuation



### 3SX3 228 universal radius actuator



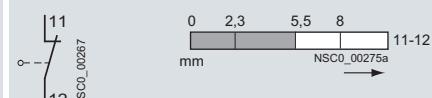
### 3SX3 217 actuator with ball locating



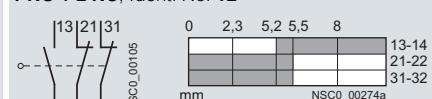
Lateral actuation

Slow-action contacts

**1 NC**, Ident. No. **01**



**1 NO + 2 NC**, Ident. No. **12**



□ Contact closed  
□ Contact open

Actuator in actuator head:  
NC is closed

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## 3SE5, 3SE2 Position Switches With Separate Actuator

3SE5, molded-plastic enclosures  
Enclosure width 31 mm acc. to EN 50047/50 mm

### ordering data

s

- 5 directions of approach · Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm) · Cable entry M20 x 1.5

Version <sup>1)</sup>	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			

#### With 31 mm according to EN 50047

##### 5 directions of approach

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 232-0RV40</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ ▶ B	<b>3SE5 232-0QV40</b>		1	1 unit	102
With increased minimum pull-out force 30 N							
Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 232-0QV40-1AA1</b>		1	1 unit	102

#### With M12 connector socket, 4-pole (250 V, 4 A)

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 234-0RV40-1AC4</b>		1	1 unit	102
Slow-action contacts	2 NC --	⊕ B	<b>3SE5 234-0QV40-1AE0</b>		1	1 unit	102

#### With 2 LEDs, yellow/green

Slow-action contacts	1 NO + 1 NC 24 V DC	⊕ B	<b>3SE5 232-1RV40</b>		1	1 unit	102
Slow-action contacts	1 NO + 1 NC 230 V AC	⊕ B	<b>3SE5 232-3RV40</b>		1	1 unit	102

#### With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs

Slow-action contacts	1 NO + 1 NC 24 V DC	⊕ B	<b>3SE5 234-1RV40-1AF3</b>		1	1 unit	102
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#### With 50 mm

##### 5 directions of approach

Slow-action contacts	1 NO + 2 NC --	⊕ B	<b>3SE5 242-0QV40</b>		1	1 unit	102
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##### With increased minimum pull-out force 30 N

Slow-action contacts	1 NO + 1 NC --	⊕ B	<b>3SE5 242-0RV40-1AA1</b>		1	1 unit	102
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#### With 2 LEDs, yellow/green

Slow-action contacts	1 NO + 2 NC 24 V DC	⊕ B	<b>3SE5 242-1QV40</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC	⊕ B	<b>3SE5 242-3QV40</b>		1	1 unit	102



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## 5, 3SE2 Position Switches Separate Actuator

Steel-plastic enclosures  
Width 40 mm according to EN 50041

### Ordering data

s

- 5 directions of approach
- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version <sup>1)</sup>	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
<b>Width 40 mm according to EN 50041</b>								
<b>5 directions of approach</b>								
Slow-action contacts	1 NO + 2 NC --		⊕ A	<b>3SE5 132-0QV20</b>		1	1 unit	102
<b>With 2 LEDs, yellow/green</b>								
Slow-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 132-1QV20</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC		⊕ C	<b>3SE5 132-3QV20</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K.

<sup>1)</sup> Supplied without actuator. Please order separately (see page 9/59).

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## 3SE5, 3SE2 Position Switches With Separate Actuator

3SE5, metal enclosures  
Enclosure width 31 mm according to EN 50047

### ordering data

s

- 5 directions of approach · IP66/IP67 · Cable entry M20 x 1.5

Version <sup>1)</sup>	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			

#### With 31 mm according to EN 50047

##### 5 directions of approach

Slow-action contacts	1 NO + 1 NC --	⊕ A	3SE5 212-0RV40		1	1 unit	102
Slow-action contacts	1 NO + 2 NC --	⊕ B	3SE5 212-0QV40		1	1 unit	102

#### With 2 LEDs, yellow/green

Slow-action contacts	1 NO + 1 NC 24 V DC	⊕ B	3SE5 212-1RV40		1	1 unit	102
Slow-action contacts	1 NO + 1 NC 230 V AC	⊕ B	3SE5 212-3RV40		1	1 unit	102

g according to IEC 60947-5-1, Appendix K.

<sup>1)</sup> Supplied without actuator. Please order separately ([see page 9/59](#)).

# 5, 3SE2 Position Switches

## Separate Actuator

enclosures  
width 40 mm acc. to EN 50041/56 mm

### Ordering data

s

- 5 directions of approach
- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version <sup>1)</sup>	Contacts	LEDs	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
<b>With 40 mm according to EN 50041</b>								
<b>5 directions of approach</b>								
Slow-action contacts	1 NO + 2 NC --		⊕ ▶ B	<b>3SE5 112-0QV10</b>		1	1 unit	102
<b>With increased minimum pull-out force 30 N</b>								
Slow-action contacts	1 NO + 2 NC --		⊕ ▶ B	<b>3SE5 112-0QV10-1AA7</b>		1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A)</b>								
Slow-action contacts	1 NO + 1 NC --		⊕ B	<b>3SE5 114-0RV10-1AC5</b>		1	1 unit	102
Slow-action contacts	2 NC --		⊕ B	<b>3SE5 114-0QV10-1AE1</b>		1	1 unit	102
<b>With connector socket, 6-pole + PE (250 V, 10 A)</b>								
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 115-0QV10-1AD1</b>		1	1 unit	102
<b>With 2 LEDs, yellow/green</b>								
Slow-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 112-1QV10</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 112-3QV10</b>		1	1 unit	102
<b>With M12 connector socket, 5-pole (125 V, 4 A) and 2 LEDs</b>								
Slow-action contacts	1 NO + 1 NC 24 V DC		⊕ B	<b>3SE5 114-1RV10-1AF3</b>		1	1 unit	102
<b>With connector socket, 6-pole + PE (10 A), and 2 LEDs</b>								
Slow-action contacts	1 NO + 1 NC 24 V DC		⊕ B	<b>3SE5 115-1RV10-1AF2</b>		1	1 unit	102
<b>With 56 mm</b>								
<b>5 directions of approach</b>								
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 122-0QV10</b>		1	1 unit	102
<b>With increased minimum pull-out force 30 N</b>								
Slow-action contacts	1 NO + 2 NC --		⊕ B	<b>3SE5 122-0QV10-1AA7</b>		1	1 unit	102
<b>With 2 LEDs, yellow/green</b>								
Slow-action contacts	1 NO + 2 NC 24 V DC		⊕ B	<b>3SE5 122-1QV10</b>		1	1 unit	102
Slow-action contacts	1 NO + 2 NC 230 V AC		⊕ B	<b>3SE5 122-3QV10</b>		1	1 unit	102

## 3SE5, 3SE2 Position Switches With Separate Actuator

### Accessories

#### ordering data

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>3SE5</b>						
<b>Standard actuators</b>						
• Length 75.6 mm	►	<b>3SE5 000-0AV01</b>		1	1 unit	102
• With vertical fixing, length 53 mm	A	<b>3SE5 000-0AV02</b>		1	1 unit	102
• With transverse fixing, length 47 mm	A	<b>3SE5 000-0AV03</b>		1	1 unit	102
<b>Radius actuators, length 51 mm</b>						
• Direction of approach from the left	A	<b>3SE5 000-0AV04</b>		1	1 unit	102
• Direction of approach from the right	A	<b>3SE5 000-0AV06</b>		1	1 unit	102
<b>Universal radius actuators, length 77 mm</b>						
<b>Universal radius actuators, heavy-duty</b>						
• Length 67 mm	A	<b>3SE5 000-0AV07-1AK2</b>		1	1 unit	102
• Length 77 mm	A	<b>3SE5 000-0AV07</b>		1	1 unit	102
<b>Accessories for 3SE5</b>						
Protective caps made of black rubber for the actuator head, to protect the actuator openings from contamination (Only for enclosure width 40 or 56 mm)	B	<b>3SE5 000-0AV08-1AA2</b>		1	1 unit	102
Blocking inserts, high-grade steel, for actuator head, for up to 8 padlocks	C	<b>3SE5 000-0AV08-1AA3</b>		1	1 unit	102
<b>for 3SE5, 3SE2</b>						
Connector sockets (4-pole), M12, fixed for M20 x 1.5 For max. 250 V, 4 A With 0.25 mm <sup>2</sup> connecting cable, plastic, degree of protection IP67, ambient temperature -40 to +85 °C	B	<b>3SY3 127</b>		1	1 unit	102
Connector sockets (5-pole), M12, fixed for M20 x 1.5 For max. 250 V, 4 A	B	<b>3SY3 128</b>		1	1 unit	102



# 5, 3SE2 Position Switches

## Separate Actuator

Steel-plastic enclosures  
width 52 mm

### Ordering data

s

- 3 directions of approach
- Degree of protection IP67

Version	Operation	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			

#### enclosures in special width of 52 mm

Lateral and front-end actuation <sup>1)</sup>	6 mm stroke						
• With M20 × 1.5 connecting thread							
- Slow-action contacts 1 NO + 2 NC	Holding force 5 N ►	3SE2 243-0XX40		1	1 unit	102	
	Holding force 30 N ►	3SE2 243-0XX		1	1 unit	102	
	With automatic ejection B	3SE2 243-0XX30		1	1 unit	102	
- Slow-action contacts 1 NC	Holding force 5 N ►	3SE2 257-6XX40		1	1 unit	102	
	Holding force 30 N ►	3SE2 257-6XX		1	1 unit	102	
	With automatic ejection B	3SE2 257-6XX30		1	1 unit	102	
• With M16 × 1.5 connecting thread							
- Slow-action contacts 1 NO + 2 NC	Holding force 5 N B	3SE2 243-0XX48		1	1 unit	102	
	Holding force 30 N A	3SE2 243-0XX18		1	1 unit	102	
	With automatic ejection C	3SE2 243-0XX38		1	1 unit	102	
- Slow-action contacts 1 NC	Holding force 5 N B	3SE2 257-6XX48		1	1 unit	102	
	Holding force 30 N C	3SE2 257-6XX18		1	1 unit	102	
	With automatic ejection ►	3SE2 257-6XX38		1	1 unit	102	

#### Actuators

• Standard actuators ( $r_{min} = 150$ mm), length 28 mm	A	3SX3 218		1	1 unit	102	
• Universal radius actuators ( $r_{min} = 45$ mm), length 34 mm	A	3SX3 228		1	1 unit	102	
• Radius actuators, adjustable radius, length 34 mm	D	3SX3 256		1	1 unit	102	
• Ball locating, force adjustable up to 100 N by 2 screws, length 28 mm	A	3SX3 217		1	1 unit	102	
• Actuators, length 34 mm, with dust protection and slit cover	D	3SX3 234		1	1 unit	102	

## 3SE5, 3SE2 Position Switches With Interlocking

### General data

Switches with interlocking are exceptional safety-redundant components which prevent an unforeseen or intentional opening of doors, protective grills or other covers as long as a safety situation is present (i.e. follow-on power supply to the switched off machine).



with interlocking

Position switches with interlocking are comprised of both electromechanical interlock and a mechanical lock. It has to be ordered separately.

and protective devices that enable the greatest safety for man and machine.

Position switches with interlocking are offered in plastic or metal housings.

(W x H x D):

160 mm x 185 mm x 43.5 mm,

160 mm x 100 mm (+ head 41.3 mm) x 45 mm.

The actuator is included in the scope of supply. For actuators with different directions it can be adjusted through  $4 \times 90^\circ$ . The switch can also be approached from above.

Accessories are not included in the scope of supply of the position switches. They must be ordered separately from a choice of six accessories for the application (see page 9/67).

Actuation speed  $v_{\max} = 1.5 \text{ m/s}$

Deceleration speed  $v_{\min} = 0.4 \text{ mm/s}$

Force in the direction of actuation  $F_{\min} = 30 \text{ N}$

Encoders. Simple overruling by hand or auxiliary contacts is possible.

#### Locking devices

A high-grade steel locking device for attaching up to eight padlocks is available for even more safety (see page 9/67).

#### Dust protection

A rubber cap to protect the twist actuator from contamination is available for operation in dusty environments (see page 9/67).

#### Interlocking

There are two versions for locking the actuator:

- Spring-actuated lock (closed-circuit principle) with various release mechanisms
- Solenoid lock (open-circuit principle)

The spring-actuated switch is equipped with an auxiliary release for emergency situations or setup mode. Available as options:

- Escape release or
- Emergency release

#### Contact blocks

The position switches with interlocking have one switching block each for:

- Monitoring the actuator or the position of the protective door
- Monitoring the position of the solenoid

The mechanical design of the switch corresponds to the requirements of the failsafe principle according to EN 1088.

#### Optical signaling equipment

The position switches with interlocking are available with an optional optical signaling device.

The signaling device indicates the switch position of the lock and the protective device optically by means of 2 LEDs on the front.

Protective device	Solenoid interlocking	Display	Meaning
Closed	Released		Actuator to be pulled
Closed	Locked		Actuator locked
Open	Released		Actuator pulled

#### Note:

The voltage of the LEDs at the monitored contacts must be the same as the operational voltage of the solenoid (same potential).



## 5, 3SE2 Position Switches locking

ation of 3SE5 3 position switches offers:

through higher locking forces:

a molded-plastic enclosure

a metal enclosure

se mechanisms: lock release, escape release  
ency release

blocks each with three contacts as standard  
ence fewer versions needed

sions for all enclosure variants:

l or with integrated ASIsafe

range of actuators

ED status display 24 V DC, 115 V AC or 230 V AC  
versions

ASIsafe electronics integrated in the enclosure

94).

itches with interlocking are exceptional safety-re-  
which prevent an unforeseen or intentional open-  
e doors, protective grills or other covers as long  
s situation is present (i.e. follow-on motion of the  
chine).

tion switches with interlocking have the following

machine or process with closed and locked  
vice

machine or process with opened protective

toring of the protective device and interlocking

omply with the standards IEC 60947-1  
witchgear and Controlgear, General) and  
(Electromechanical Control Circuit Devices).

l design of the switch corresponds to the require-  
lsafe principle according to EN 1088.

re approved for use with locking devices accord-  
and EN 292, Parts 1 and 2.

n switches with interlocking bear the VDE test  
according to GS-ET19 (Test Principles of the  
Association for Locking Devices with Electromag-  
).

nclosed position switches with interlocking have  
a test certificate from the BIA  
enschaftliches Institut für Arbeitssicherheit).

ording to ISO 13849-1 (EN 954-1) can be at-  
position switch with interlocking if the correspond-

There are two versions of locking:

### Spring-actuated lock (closed-circuit principle)

- In the standard version, the position switch locks by means of spring force and releases by means of electromagnetic force. In the case of voltage failure, it reliably prevents the protective device from opening when machine parts are still moving.
- The switch is equipped with an auxiliary release for emergency situations or setup mode.
- An auxiliary release which can be secured with a lock to prevent misuse is available as a version.

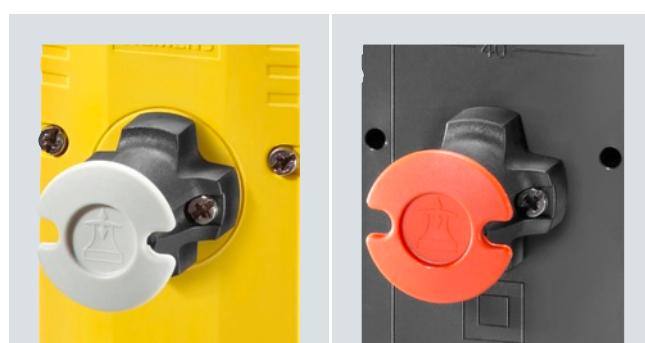


Auxiliary release

Auxiliary release with lock

The new 3SE5 3 position switches are also available with an es-  
cape release or emergency release.

- Personnel working inside the hazard zone can use the escape release feature to manually release the interlocking without tools from the escape side (hazardous area side) so that they can exit the hazard area. An intentional act (in this case pulling the gray actuator) is required to release the locking mechanism and restore the normal operating state.
- The emergency release enables someone in an emergency sit-  
uation to manually release the interlock without tools from the access side (outside the hazardous area). Releasing the lock and restoring the normal operating state must require effort which is comparable to repair activity, in this case disassembly of the red actuator and resetting the mechanical lock.



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## 3SE5, 3SE2 Position Switches With Interlocking

### General data

#### Door interlocking



locking from Axelent



Door interlocking from Brühl

uses of the manufacturers see Chapter 13  
"External Partners".

#### Specifications

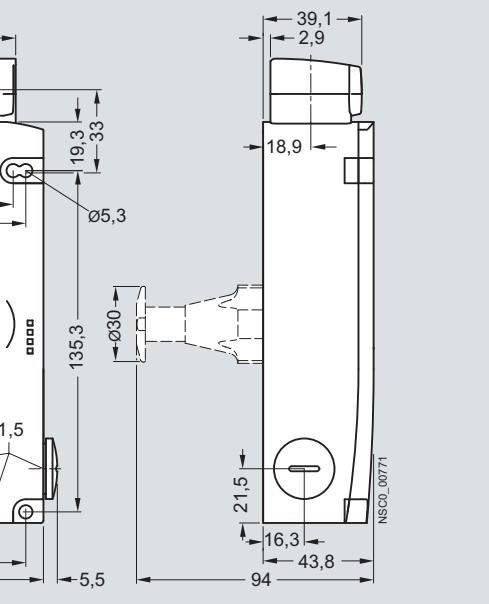
	3SE5 322	3SE5 312	3SE2 83, 3SE2 84
IEC 60947-5-1, EN 60947-5-1			
voltage $U_i$ acc. to EN 60664-1	V 250 Class 3		
Withstand voltage $U_{imp}$	kV 4		6
Insulation voltage $U_e$	V 24 V 230		24 110 ... 130 230
Normal current $I_{th}$	A 6		10
Normal current $I_e$ current 50/60 Hz	$I_e$ /AC-15 or B300 A 6 A 3 A 1.5	$I_e$ /AC-12 10 10 10	$I_e$ /AC-15 4 4 4
Current	$I_e$ /DC-13 or Q300 A 3 A 0.55 A 0.27 -- -- --	$I_e$ /DC-12 10 -- -- 5 2.5 1	$I_e$ /DC-13 3 -- -- 1.5 0.7 0.3
max. according to GS-ET 19 reaction at $U_c$	N 1300 N 1000 W 3.5	2600 2000	1820 1400 5.2
Protection <sup>1)</sup> base links,	A 6		6



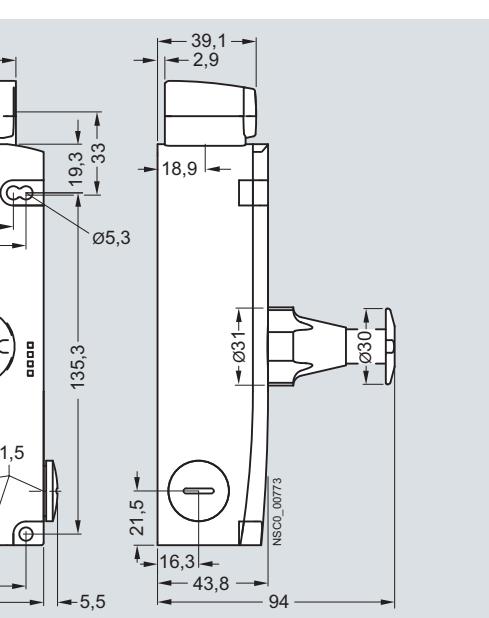
## 5, 3SE2 Position Switches locking

### Operation

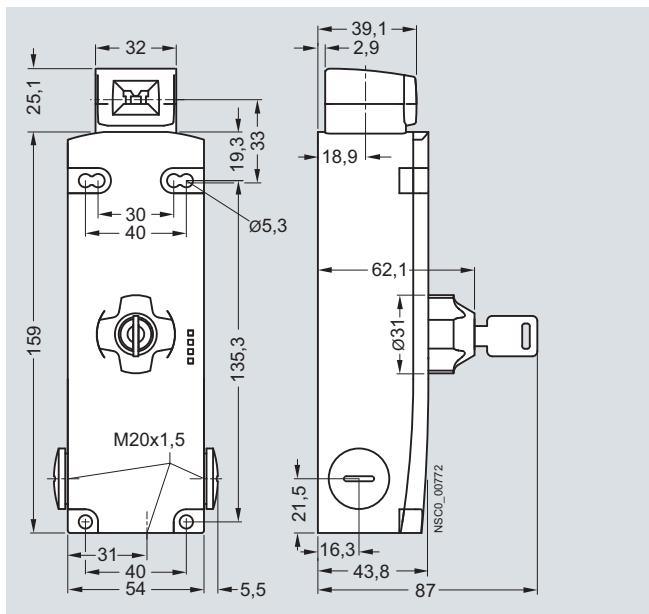
**lock, with auxiliary release**  
**3SE5 322-SG2., 3SE5 322-SJ2.,**  
**3SE5 312-SG1., 3SE5 312-SJ1.**



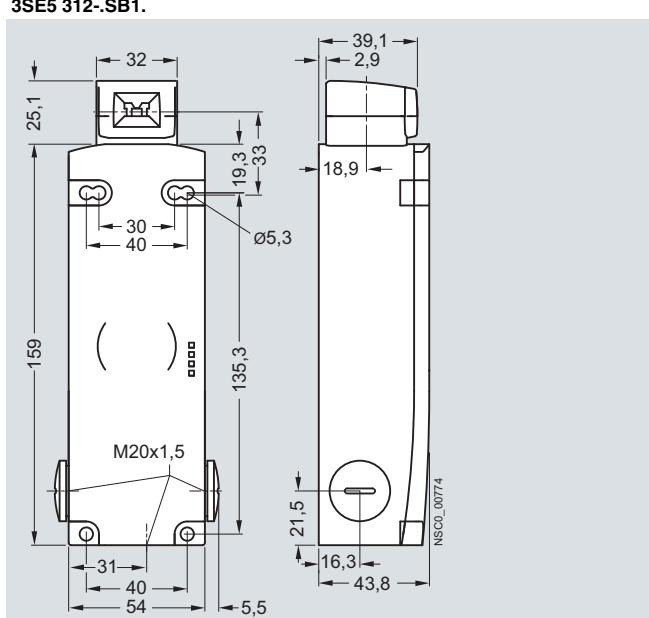
**lock, with escape release**



**Spring-actuated lock, with auxiliary release with lock**  
**3SE5 322-SE2.,**  
**3SE5 312-SE1.**



**Solenoid lock**  
**3SE5 322-SB2.,**  
**3SE5 312-SB1.**



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## 3SE5, 3SE2 Position Switches With Interlocking

3SE5, molded-plastic enclosures  
With locking force up to 1200 N

### Ordering data

contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 3 × M20 × 1.5  
300 N (1000 N according to GS-ET 19)

Interlock <sup>1)</sup>	LEDs	Solenoid, rated operational voltage	DT	<b>Complete units</b> Position monitoring: Actuators: 1 NO + 2 NC Solenoid: 1 NO + 2 NC	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
				V				

### force · Enclosure width 54 mm

#### Spring-actuated locks

• With auxiliary release	--	24 DC	⊕ ▶	<b>3SE5 322-0SD21</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 322-0SD22</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 322-0SD23</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ A	<b>3SE5 322-1SD21</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 322-2SD22</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 322-3SD23</b>	1	1 unit	102
• With auxiliary release With lock	--	24 DC	⊕ B	<b>3SE5 322-0SE21</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 322-0SE22</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 322-0SE23</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 322-1SE21</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 322-2SE22</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 322-3SE23</b>	1	1 unit	102
• With escape release from the front	--	24 DC	⊕ B	<b>3SE5 322-0SF21</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 322-0SF22</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 322-0SF23</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 322-1SF21</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 322-2SF22</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 322-3SF23</b>	1	1 unit	102
• With escape release from the front and emergency release from the back	--	24 DC	⊕ B	<b>3SE5 322-0SL21</b>	1	1 unit	102
• With escape release from the back and auxiliary release from the front	--	24 DC	⊕ B	<b>3SE5 322-0SG21</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 322-0SG22</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 322-0SG23</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 322-1SG21</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 322-2SG22</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 322-3SG23</b>	1	1 unit	102
• With escape release from the back and auxiliary release with lock from the front	--	24 DC	⊕ B	<b>3SE5 322-0SH21</b>	1	1 unit	102
• With emergency release from the back and auxiliary release from the front	--	24 DC	⊕ B	<b>3SE5 322-0SJ21</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 322-0SJ22</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 322-0SJ23</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 322-1SJ21</b>	1	1 unit	102



# 5, 3SE2 Position Switches

## locking

enclosures  
force up to 2000 N

### ordering data

contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 3 × M20 × 1.5  
600 N (2000 N according to GS-ET 19)

Interlock <sup>1)</sup>	LEDs	Solenoid, rated operational voltage	DT	<b>Complete units</b> Position monitoring: Actuators: 1 NO + 2 NC Solenoid: 1 NO + 2 NC	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
				V				

### force · Enclosure width 54 mm

#### Spring-actuated locks

• With auxiliary release	--	24 DC	⊕ ▶	<b>3SE5 312-0SD11</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 312-0SD12</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 312-0SD13</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 312-1SD11</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 312-2SD12</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 312-3SD13</b>	1	1 unit	102
• With auxiliary release With lock	--	24 DC	⊕ B	<b>3SE5 312-0SE11</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 312-0SE12</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 312-0SE13</b>	1	1 unit	102
		48 AC/DC	⊕ C	<b>3SE5 312-0SE14</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 312-1SE11</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 312-2SE12</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 312-3SE13</b>	1	1 unit	102
• With escape release from the front	--	24 DC	⊕ B	<b>3SE5 312-0SF11</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 312-0SF12</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 312-0SF13</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 312-1SF11</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 312-2SF12</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 312-3SF13</b>	1	1 unit	102

• With escape release from the back and auxiliary release from the front	--	24 DC	⊕ B	<b>3SE5 312-0SG11</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 312-0SG12</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 312-0SG13</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 312-1SG11</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 312-2SG12</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 312-3SG13</b>	1	1 unit	102

• With escape release from the back and auxiliary release with lock from the front	--	24 DC	⊕ B	<b>3SE5 312-0SH11</b>	1	1 unit	102
---	----	-------	-----	-----------------------	---	--------	-----

• With emergency release from the back and auxiliary release from the front	--	24 DC	⊕ B	<b>3SE5 312-0SJ11</b>	1	1 unit	102
	--	115 AC	⊕ B	<b>3SE5 312-0SJ12</b>	1	1 unit	102
	--	230 AC	⊕ B	<b>3SE5 312-0SJ13</b>	1	1 unit	102
	Yellow/Green	24 DC	⊕ B	<b>3SE5 312-1SJ11</b>	1	1 unit	102
	Yellow/Green	115 AC	⊕ B	<b>3SE5 312-2SJ12</b>	1	1 unit	102
	Yellow/Green	230 AC	⊕ B	<b>3SE5 312-3SJ13</b>	1	1 unit	102

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## 3SE5, 3SE2 Position Switches With Interlocking

### Accessories

#### ordering data

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>3SE5</b>						
<b>Standard actuators</b>						
• Length 75.6 mm	►	<b>3SE5 000-0AV01</b>		1	1 unit	102
• With vertical fixing, length 53 mm	A	<b>3SE5 000-0AV02</b>		1	1 unit	102
• With transverse fixing, length 47 mm	A	<b>3SE5 000-0AV03</b>		1	1 unit	102
<b>Radius actuators, length 51 mm</b>						
• Direction of approach from the left	A	<b>3SE5 000-0AV04</b>		1	1 unit	102
• Direction of approach from the right	A	<b>3SE5 000-0AV06</b>		1	1 unit	102
<b>Universal radius actuators, length 77 mm</b>						
<b>Universal radius actuators, heavy-duty</b>						
• Length 67 mm	A	<b>3SE5 000-0AV07-1AK2</b>		1	1 unit	102
• Length 77 mm	A	<b>3SE5 000-0AV07</b>		1	1 unit	102
<b>Accessories for 3SE5</b>						
Protective caps made of black rubber for the actuator head, to protect the actuator openings from contamination	B	<b>3SE5 000-0AV08-1AA2</b>		1	1 unit	102
<b>1AA2</b>						
Blocking inserts, high-grade steel, for actuator head, for up to 8 padlocks	C	<b>3SE5 000-0AV08-1AA3</b>		1	1 unit	102
<b>1AA3</b>						
<b>3SE5</b>						
Spare keys	B	<b>3SX5 100-1F</b>		1	1 unit	102
<b>or 3SE5, 3SE2</b>						
Connector sockets (4-pole), M12, fixed for M20 x 1.5 For max. 250 V, 4 A With 0.25 mm <sup>2</sup> connecting cable, plastic, degree of protection IP67, ambient temperature -40 to +85 °C	B	<b>3SY3 127</b>		1	1 unit	102



## 5, 3SE2 Position Switches

Switches have the same enclosures as the standard series (see page 9/1).



### Benefits

The 3SE5 hinge switches differ from the previous series through the following new characteristics:

- All actuators can be turned around the axis in increments of 22.5° (see picture on page 9/5).
- The new three-pole contact block 1 NO + 2 NC is available for all enclosure sizes (see picture on page 9/5).
- The molded-plastic enclosure with a width of 31 mm has simple and fast wiring equipment which makes it possible to save from approx. 20 to 25 % of the time when connecting (see picture on page 9/5).
- The ASI-safe electric component is integrated for the versions with the AS-Interface connection (see page 9/82); an additional adapter is not required.

### Application

The hinge switches are used in those areas where the position of swivelable protective devices such as doors or flaps must be monitored. The position of the doors and hinge switches is converted into electric signals with the switches. The switches allows shutdown and signaling without delay in the event of a small opening angle through the snap-action contacts with an operating angle of 10°.

Devices are available with enclosure versions to suit the particular ambient conditions. Different control tasks can be performed with the best contact blocks suited for the particular purpose. Dimensions and fixing points of the enclosures are in accordance with EN 50041 or EN 50047 standards.

The devices are suitable for use in any climate.

### Standards

IEC 60947-5-1 or EN 60947-5-1.

The protective measure of "total insulation" by the molded-plastic enclosure is guaranteed by the use of molded-plastic screw-glands.

### Safety position switches

For controls according to IEC 60204-1 or EN 60204-1 the devices can be used as a safety position switch. To secure position switches against changes in their position, keyed techniques must be employed on installation.

### Safety circuits

IEC 60947-5-1 and EN 60947-5-1 require positive opening of the NC contacts, i.e. for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to IEC 60947-5-1 with the symbol ⊖.

Category 4 according to EN 954-1 can be attained with the 3SE5 hinge switches with ⊖ if the corresponding failsafe evaluation units are selected and correctly installed, e.g. the 3TK28 safety relays or matching devices from the ASI-safe, SIMATIC or SIMUMERIK series.

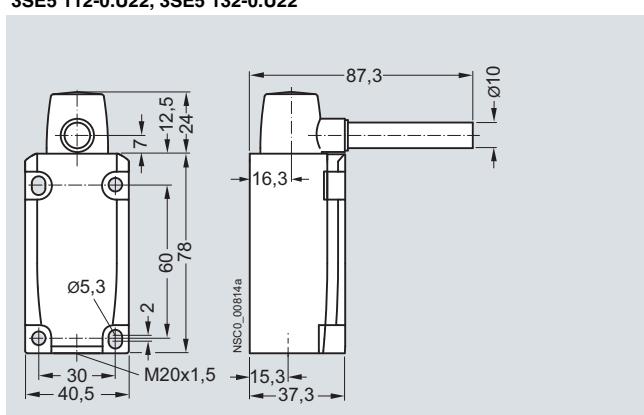
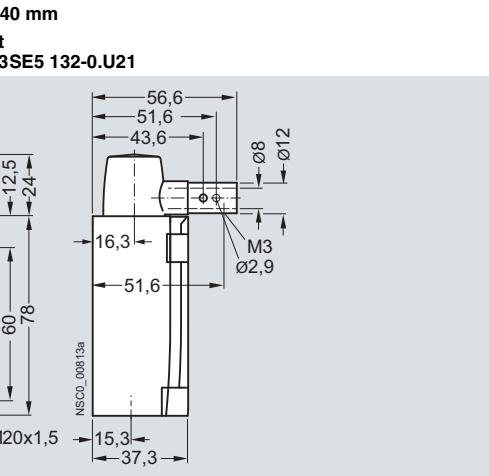
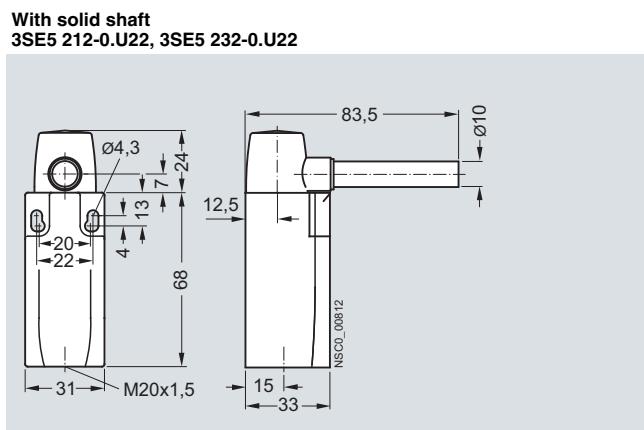
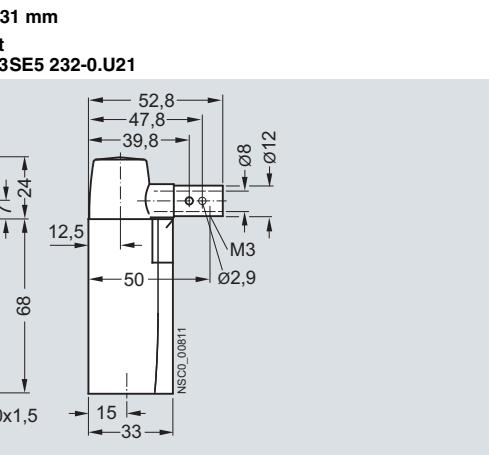
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## **3SE5, 3SE2 Position Switches**

## General data

### **Specifications**

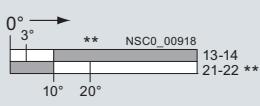
specifications are the same as for the standard page 9/7).



el of the shaft

ucts

nt. No. 11



Part No. 12



## 5, 3SE2 Position Switches

**ed-plastic enclosures  
width 31 mm / 40 mm**

## ordering data

5

- Degree of protection IP65 (31 mm) or IP67/IP68 (40 mm) · Cable entry M20 x 1.5

Version	Snap-action contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			
<b>ures · Enclosure width 31 mm according to EN 50047</b>							
<b>With hollow shaft</b>							
Operating angle 10°	1 NO + 1 NC	⊕ B	<b>3SE5 232-0HU21</b>		1	1 unit	102
Operating angle 10°	1 NO + 2 NC	⊕ B	<b>3SE5 232-0LU21</b>		1	1 unit	102
<b>ures · Enclosure width 40 mm according to EN 50041</b>							
<b>With hollow shaft</b>							
Operating angle 10°	1 NO + 2 NC	⊕ B	<b>3SE5 132-0LU21</b>		1	1 unit	102
Operating angle 10°							
<b>With solid shaft</b>							
Operating angle 10°	1 NO + 2 NC	⊕ B	<b>3SE5 132-0LU22</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K.

### **pare parts**

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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## 3SE5, 3SE2 Position Switches Hinge Switches

3SE5, metal enclosures  
Enclosure width 31 mm / 40 mm

### ordering data

s

degree of protection IP66/IP67 · Cable entry M20 x 1.5

Version	Snap-action contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU		

#### • Enclosure width 31 mm according to EN 50047

##### With hollow shaft

Operating angle 10°

1 NO + 2 NC



B

**3SE5 212-0LU21**

1

1 unit

102

##### With solid shaft

Operating angle 10°

1 NO + 2 NC



B

**3SE5 212-0LU22**

1

1 unit

102

#### • Enclosure width 40 mm according to EN 50041

##### With hollow shaft

1 NO + 2 NC



B

**3SE5 112-0LU21**

1

1 unit

102

##### With solid shaft

Operating angle 10°

1 NO + 2 NC



B

**3SE5 112-0LU22**

1

1 unit

102

g according to IEC 60947-5-1, Appendix K.

### pare parts

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
---------	----	-----------	--------------	-------------------	-----	----

## 5, 3SE2 Position Switches

## **Plastic enclosures luted hinge**

Hinge switches are particularly suitable for use in doors of machines that must be closed to ensure the safety of personnel. Their thin profile and compact design allows them to be directly mounted on a hinged protective metal frame.

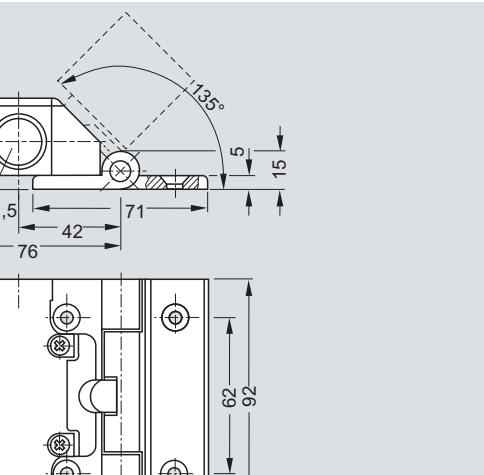
## Benefits

- Easy mounting through use of versions with integrated hinge
  - Versions with small operating angle of 4°
  - Protection against personal injury provided by positively driven NC contacts according to IEC 60947-5-1
  - Simultaneous shutdown and reporting by 1 NO + 2 NC contacts

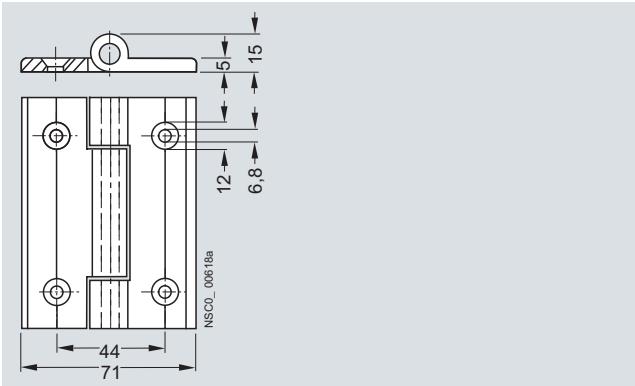
### Specifications

3SE2 283		
voltage $U_i$	V	250
ormal current $I_{th}$	A	2.5
al current $I_e$	A	4.2
	A	2
	A	1
capacity	> 5 V / 1 mA	
tection		
ss gG	A	2
rance	> 1 x 10 <sup>6</sup> operating cycles	
ncy	1200 operating cycles/hour	
	2 mm after opening point	
al	Plastic	
tion	IP65	
ture	°C	-25 ... +65
e	30 g/18 ms	
orations	20 g/10 ... 200 Hz	
	2 x (M20 x 1.5)	
	0.5 ... 1.5 mm <sup>2</sup> /AWG 15	

#### **hinge switch with hinge**



### **3SX3 225 additional hinge**



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## 3SE5, 3SE2 Position Switches Hinge Switches

3SE2, molded-plastic enclosures  
With integrated hinge

### ordering data

degree of protection IP65 · Cable entry 2 × (M20 × 1.5)

Version	Slow-action contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			
<b>enclosures with integrated hinge</b>							
<b>With integrated hinge</b>							
(Delivery includes additional hinge and fixing accessories)							
• Aluminum hinge							
- Operating angle 4°	1 NO + 2 NC	⊕ A	<b>3SE2 283-0GA43</b>		1	1 unit	102
- Operating angle 4°	3 NC	⊕ B	<b>3SE2 283-6GA43</b>		1	1 unit	102
- Operating angle 8°	1 NO + 2 NC	⊕ C	<b>3SE2 283-0GA53</b>		1	1 unit	102
- Operating angle 8°	3 NC	⊕ C	<b>3SE2 283-6GA53</b>		1	1 unit	102
• High-grade steel hinge							
- Operating angle 4°	1 NO + 2 NC	⊕ B	<b>3SE2 283-0GA44</b>		1	1 unit	102
- Operating angle 4°	3 NC	⊕ C	<b>3SE2 283-6GA44</b>		1	1 unit	102

g according to IEC 60947-5-1, Appendix K.

### pare parts

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>Additional hinges</b>						
(delivered with fixing accessories)						
• Made of aluminum	⊕ D	<b>3SX3 225</b>		1	1 unit	102
• Made of high-grade steel	⊕ D	<b>3SX3 231</b>		1	1 unit	102

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## 5, 3SE2 Position Switches

Intrinsically Safe Protection (ATEX)

enclosures

width 31 mm / 40 mm / 56 mm



according to ATEX with grounding screw

es in a metal enclosure including the hinge switch  
with a separate actuator are also available in ver-  
tion in areas with combustible dust.

are not suitable for operation in areas with gas  
d. An exception is the type of protection intrinsic  
"simple electrical equipment" is possible (see  
2849).

maximum possible safety in these areas, the  
ost countries have drawn up requirements in the  
regulations and standards which these switches  
the letter.

comply with Directive 94/9/EC II2D (ATEX 95) of  
Union and are approved for Zone 21/22.  
[www.siemens.com/industrial-controls/atex](http://www.siemens.com/industrial-controls/atex).

rounding screw on the outside of the enclosure but  
wise identical with the standard enclosures. The  
openings are closed with protective caps upon

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## 3SE5, 3SE2 Position Switches For Explosion Protection (ATEX)

3SE5, metal enclosures  
Enclosure width 31 mm according to EN 50047

### ordering data

m

- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version	Contacts	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU		

• Enclosure width 31 mm according to EN 50047  
plunger<sup>1)</sup>)

#### With M20 x 1.5 connecting thread

Slow-action contacts	1 NO + 1 NC	⊕ B	3SE5 212-0BC05-1DA0	1	1 unit	102
Snap-action contacts	1 NO + 1 NC	⊕ B	3SE5 212-0CC05-1DA0	1	1 unit	102
Slow-action contacts	1 NO + 2 NC	⊕ B	3SE5 212-0KC05-1DA0	1	1 unit	102
Snap-action contacts	1 NO + 2 NC	⊕ B	3SE5 212-0LC05-1DA0	1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC	⊕ B	3SE5 212-0MC05-1DA0	1	1 unit	102
Slow-action contacts	2 NO + 1 NC	⊕ B	3SE5 212-0PC05-1DA0	1	1 unit	102

according to IEC 60947-5-1, Appendix K, or actuator, necessary in safety circuits.

width 31 mm the basic switch is a complete unit with r.

Note: For selection aid, see page 9/12.

Version	Diameter	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
	mm		Order No.	Price per PU		

#### Mechanisms

##### Plain plungers

High-grade steel plungers	10	⊕ A	3SE5 000-0AB01	1	1 unit	102
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##### Roller plungers, type C acc. to EN 50047

Plastic rollers	10	⊕ A	3SE5 000-0AD03	1	1 unit	102
High-grade steel rollers	10	⊕ B	3SE5 000-0AD04	1	1 unit	102

##### Roller plungers with central fixing

Plastic rollers	10	⊕ B	3SE5 000-0AD10	1	1 unit	102
High-grade steel rollers	10	⊕ B	3SE5 000-0AD11	1	1 unit	102



# 5, 3SE2 Position Switches

## Position Protection (ATEX)

enclosures  
width 31 mm according to EN 50047

Version	Diameter mm	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			
<b>Mechanisms</b>							
<b>Roller levers, type E acc. to EN 50047</b>							
Metal lever, plastic roller	13	Ⓐ A	<b>3SE5 000-OAE10</b>		1	1 unit	102
Metal lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-OAE11</b>		1	1 unit	102
High-grade steel lever, plastic roller	13	Ⓑ B	<b>3SE5 000-OAE12</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-OAE13</b>		1	1 unit	102
<b>Angular roller levers</b>							
Metal lever, plastic roller	13	Ⓐ A	<b>3SE5 000-OAF10</b>		1	1 unit	102
Metal lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-OAF11</b>		1	1 unit	102
High-grade steel lever, plastic roller	13	Ⓐ A	<b>3SE5 000-OAF12</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	13	Ⓑ B	<b>3SE5 000-OAF13</b>		1	1 unit	102
<b>Spring rods</b> (for switches with snap-action contacts only)							
Plastic plunger:							
• Length 142.5 mm (spring 50 mm, plunger 50 mm)		B	<b>3SE5 000-OAR01</b>		1	1 unit	102
• Length 76 mm (spring 23.5 mm, plunger 10 mm)		B	<b>3SE5 000-OAR03</b>		1	1 unit	102
• Length 242.5 mm (spring 150 mm, plunger 50 mm)		B	<b>3SE5 000-OAR04</b>		1	1 unit	102
High-grade steel plunger:							
• Length 142.5 mm (spring 50 mm, plunger 50 mm)		B	<b>3SE5 000-OAR02</b>		1	1 unit	102
<b>Levers</b>							
<b>Twist actuators</b> , plastic (without lever)							
Switching right and/or left, adjustable		Ⓐ A	<b>3SE5 000-OAK00</b>		1	1 unit	102
<b>Levers for twist actuators</b>							
<b>Twist levers, straight, type A acc. to EN 50047</b>							
Metal lever 21 mm, plastic roller	19	Ⓐ A	<b>3SE5 000-OAA21</b>		1	1 unit	102
Metal lever 21 mm, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA22</b>		1	1 unit	102
Metal lever 21 mm, roller with ball bearing	19	Ⓑ B	<b>3SE5 000-OAA23</b>		1	1 unit	102
Metal lever 21 mm, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA25</b>		1	1 unit	102
High-grade steel lever 21 mm, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA31</b>		1	1 unit	102
High-grade steel lever 21 mm, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA32</b>		1	1 unit	102
<b>Twist levers 30 mm, straight<sup>1)</sup></b>							
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA24</b>		1	1 unit	102
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA26</b>		1	1 unit	102
<b>Twist levers, adjustable length, with grid hole</b>							
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA60</b>		1	1 unit	102
Metal lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA61</b>		1	1 unit	102
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-OAA67</b>		1	1 unit	102
Metal lever, rubber roller	50	Ⓑ B	<b>3SE5 000-OAA68</b>		1	1 unit	102
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA62</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA63</b>		1	1 unit	102
<b>Twist levers, adjustable length</b>							
Metal lever, plastic roller	19	A	<b>3SE5 000-OAA50</b>		1	1 unit	102
Metal lever, high-grade steel roller	19	B	<b>3SE5 000-OAA51</b>		1	1 unit	102
Metal lever, plastic roller	30	B	<b>3SE5 000-OAA55</b>		1	1 unit	102
Metal lever, plastic roller	50	B	<b>3SE5 000-OAA57</b>		1	1 unit	102
Metal lever, rubber roller	50	B	<b>3SE5 000-OAA58</b>		1	1 unit	102

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## 3SE5, 3SE2 Position Switches For Explosion Protection (ATEX)

3SE5, metal enclosures  
Enclosure width 31 mm according to EN 50047

### Position switches with separate actuator · Complete units

Approach · 3 contacts · Degree of protection IP66/IP67 · Cable entry M20 x 1.5

Version <sup>1)</sup>	Contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
Order No. Price per PU							
<b>With 31 mm according to EN 50047</b>							
<b>With M20 x 1.5 connecting thread</b>							
Slow-action contacts	1 NO + 2 NC	⊖ B	<b>3SE5 212-0QV40-1DA0</b>		1	1 unit	102

Approach according to IEC 60947-5-1, Appendix K.

Actuator. Please order separately ([see page 9/59](#)).

### Position switches · Complete units

Degree of protection IP66/IP67 · Cable entry M20 x 1.5

Version	Snap-action contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
Order No. Price per PU							
<b>With 31 mm according to EN 50047</b>							
<b>With hollow shaft, Ø 8/12 mm</b>	1 NO + 2 NC	⊖ B	<b>3SE5 212-0LU21-1DA0</b>		1	1 unit	102
Operating angle 10°							
<b>With solid shaft, Ø = 10 mm</b>	1 NO + 2 NC	⊖ B	<b>3SE5 212-0LU22-1DA0</b>		1	1 unit	102
Operating angle 10°							

Approach according to IEC 60947-5-1, Appendix K, or  
actuator, usable in safety circuits.



## 5, 3SE2 Position Switches

### Position Protection (ATEX)

enclosures  
width 40 mm acc. to EN 50041/56 mm

#### ordering data

s

degree of protection IP66/IP67 · Cable entry M20 x 1.5

Version	Snap-action contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			

#### Width 40 mm according to EN 50041

##### With M20 x 1.5 connecting thread

Snap-action contacts	1 NO + 1 NC						
• Rounded plungers, high-grade steel, with 3 mm overtravel		⊕ B	3SE5 112-0CC02-1DA0		1	1 unit	102
• Roller plungers, high-grade steel roller, with 3 mm overtravel		⊕ B	3SE5 112-0CD02-1DA0		1	1 unit	102
• Roller levers, high-grade steel lever, plastic roller		⊕ B	3SE5 112-0CE03-1DA0		1	1 unit	102
• Angular roller levers, high-grade steel lever, plastic roller		⊕ B	3SE5 112-0CF03-1DA0		1	1 unit	102
• Spring rods, length 142.5 mm Plastic plunger		B	3SE5 112-0CR01-1DA0		1	1 unit	102
• Twist levers, high-grade steel lever, plastic roller		⊕ B	3SE5 112-0CH11-1DA0		1	1 unit	102
• Twist levers, adjustable length High-grade steel lever, plastic roller		B	3SE5 112-0CH52-1DA0		1	1 unit	102
• Fork levers, high-grade steel lever, plastic roller		⊕ B	3SE5 112-0CT13-1DA0		1	1 unit	102
• Rod actuators, aluminum rod, length 200 mm		B	3SE5 112-0CH80-1DA0		1	1 unit	102
• Rod actuators, plastic rod, length 200 mm		B	3SE5 112-0CH82-1DA0		1	1 unit	102

#### Width 56 mm

##### With 3 x M20 x 1.5 connecting thread

Snap-action contacts	1 NO + 1 NC						
• Rounded plungers, high-grade steel, with overtravel		⊕ B	3SE5 122-0CC02-1DA0		1	1 unit	102
• Roller plungers, high-grade steel roller		⊕ B	3SE5 122-0CD02-1DA0		1	1 unit	102
• Roller levers, high-grade steel lever, plastic roller		⊕ B	3SE5 122-0CE03-1DA0		1	1 unit	102
• Angular roller levers, high-grade steel lever, plastic roller		⊕ B	3SE5 122-0CF03-1DA0		1	1 unit	102
• Spring rods, length 142.5 mm Plastic plunger		B	3SE5 122-0CR01-1DA0		1	1 unit	102
• Twist levers, high-grade steel lever, plastic roller		⊕ B	3SE5 122-0CH11-1DA0		1	1 unit	102

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## 3SE5, 3SE2 Position Switches For Explosion Protection (ATEX)

**3SE5, metal enclosures**  
**Enclosure width 40 mm acc. to EN 50041/56 mm**

m

- Degree of protection IP66/IP67
- Cable entry M20 x 1.5

Version	Contacts	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU		

### • Enclosure width 40 mm acc. to EN 50041

#### With M20 x 1.5 connecting thread

Slow-action contacts	1 NO + 1 NC	⊕ B	<b>3SE5 112-0BA00-1DA0</b>	1	1 unit	102
Snap-action contacts	1 NO + 1 NC	⊕ B	<b>3SE5 112-0CA00-1DA0</b>	1	1 unit	102
Slow-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 112-0KA00-1DA0</b>	1	1 unit	102
Snap-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 112-0LA00-1DA0</b>	1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC	⊕ B	<b>3SE5 112-0MA00-1DA0</b>	1	1 unit	102
Slow-action contacts	2 NO + 1 NC	⊕ B	<b>3SE5 112-0PA00-1DA0</b>	1	1 unit	102

### • Enclosure width 56 mm

#### With 3 x M20 x 1.5 connecting thread

Slow-action contacts	1 NO + 1 NC	⊕ B	<b>3SE5 122-0BA00-1DA0</b>	1	1 unit	102
Snap-action contacts	1 NO + 1 NC	⊕ B	<b>3SE5 122-0CA00-1DA0</b>	1	1 unit	102
Slow-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 122-0KA00-1DA0</b>	1	1 unit	102
Snap-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 122-0LA00-1DA0</b>	1	1 unit	102
Slow-action contacts with make-before-break	1 NO + 2 NC	⊕ B	<b>3SE5 122-0MA00-1DA0</b>	1	1 unit	102
Slow-action contacts	2 NO + 1 NC	⊕ B	<b>3SE5 122-0PA00-1DA0</b>	1	1 unit	102

### • Enclosure width 56 mm, XL

#### With 3 x M20 x 1.5 connecting thread

Slow-action contacts	2 × (1 NO + 1 NC)	⊕ B	<b>3SE5 162-0BA00-1DA0</b>	1	1 unit	102
Snap-action contacts	2 × (1 NO + 1 NC)	⊕ B	<b>3SE5 162-0CA00-1DA0</b>	1	1 unit	102
Slow-action contacts with make-before-break	2 × (1 NO + 2 NC)	⊕ B	<b>3SE5 162-0DA00-1DA0</b>	1	1 unit	102

ing according to IEC 60947-5-1, Appendix K, or  
actuator, necessary in safety circuits.

*Note: For selection aid, see page 9/12.*



Version	Diameter	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU		
<b>Mechanisms</b>						
<b>Plain plungers</b>						
High-grade steel plungers	⊕ A	<b>3SE5 000-0AB01</b>	1	1 unit	102	
<b>Rounded plungers, type B, acc. to EN 50041</b>						
High-grade steel plungers, with 3 mm overtravel	⊕ B	<b>3SE5 000-0AC02</b>	1	1 unit	102	
<b>Roller plungers, type C acc. to EN 50041</b>						
High-grade steel roller, with 3 mm overtravel	13	⊕ B	<b>3SE5 000-0AD02</b>	1	1 unit	102

# 5, 3SE2 Position Switches

## Position Protection (ATEX)

**enclosures**  
width 40 mm acc. to EN 50041/56 mm

Version	Diameter mm	DT	<b>Modular system</b>		PU (UNIT, SET, M)	PS*	PG							
<b>Mechanisms</b>														
<b>Spring rods</b> (for switches with snap-action contacts only)														
Plastic plunger:														
• Length 142.5 mm (spring 50 mm, plunger 50 mm)	B	3SE5 000-OAR01			1	1 unit	102							
• Length 76 mm (spring 23.5 mm, plunger 10 mm)	B	3SE5 000-OAR03			1	1 unit	102							
• Length 242.5 mm (spring 150 mm, plunger 50 mm)	B	3SE5 000-OAR04			1	1 unit	102							
High-grade steel plunger:														
• Length 142.5 mm (spring 50 mm, plunger 50 mm)	B	3SE5 000-OAR02			1	1 unit	102							
<b>Twist actuators</b> , metal (without lever)														
• For twist levers and rod actuators, switching right and/or left, adjustable														
- For enclosure width 40 and 56 mm	Ⓐ A	3SE5 000-OAH00			1	1 unit	102							
• For fork levers, latching	Ⓑ B	3SE5 000-OAT10			1	1 unit	102							
<b>Levers for twist actuators</b>														
<b>Twist levers 27 mm, offset, type A, acc. to EN 50041</b>														
Metal lever, plastic roller	19	Ⓐ A	3SE5 000-OAA01		1	1 unit	102							
Metal lever, high-grade steel roller	19	Ⓐ A	3SE5 000-OAA02		1	1 unit	102							
Metal lever, roller with ball bearing	19	Ⓑ B	3SE5 000-OAA03		1	1 unit	102							
Metal lever, 2 plastic rollers	19	Ⓑ B	3SE5 000-OAA04		1	1 unit	102							
Metal lever, plastic roller	30	Ⓑ B	3SE5 000-OAA05		1	1 unit	102							
Metal lever, rubber roller	50	Ⓑ B	3SE5 000-OAA08		1	1 unit	102							
High-grade steel lever, plastic roller	19	Ⓑ B	3SE5 000-OAA11		1	1 unit	102							
High-grade steel lever, high-grade steel roller	19	Ⓑ B	3SE5 000-OAA12		1	1 unit	102							
<b>Twist levers 35 mm, offset</b>														
Metal lever, plastic roller	19	Ⓑ B	3SE5 000-OAA15		1	1 unit	102							
<b>Twist levers 30 mm, straight<sup>1)</sup></b>														
Metal lever, plastic roller	19	Ⓑ B	3SE5 000-OAA24		1	1 unit	102							
Metal lever, plastic roller	30	Ⓑ B	3SE5 000-OAA26		1	1 unit	102							
<b>Twist levers, adjustable length, with grid hole</b>														
Metal lever, plastic roller	19	Ⓑ B	3SE5 000-OAA60		1	1 unit	102							
Metal lever, high-grade steel roller	19	Ⓑ B	3SE5 000-OAA61		1	1 unit	102							
Metal lever, rubber roller	50	Ⓑ B	3SE5 000-OAA68		1	1 unit	102							
High-grade steel lever, plastic roller	19	Ⓑ B	3SE5 000-OAA62		1	1 unit	102							
High-grade steel lever, high-grade steel roller	19	Ⓑ B	3SE5 000-OAA63		1	1 unit	102							
<b>Twist levers, adjustable length</b>														
Metal lever, plastic roller	19	A	3SE5 000-OAA50		1	1 unit	102							
Metal lever, high-grade steel roller	19	B	3SE5 000-OAA51		1	1 unit	102							
Metal lever, plastic roller	30	B	3SE5 000-OAA55		1	1 unit	102							
Metal lever, rubber roller	50	B	3SE5 000-OAA58		1	1 unit	102							
High-grade steel lever, plastic roller	19	B	3SE5 000-OAA52		1	1 unit	102							
High-grade steel lever, high-grade steel roller	19	B	3SE5 000-OAA53		1	1 unit	102							
<b>Fork levers</b> (for switches with snap-action contacts only)														
2 metal levers, 2 plastic rollers	19	Ⓑ B	3SE5 000-OAT01		1	1 unit	102							
2 metal levers, 2 high-grade steel rollers	19	Ⓑ B	3SE5 000-OAT02		1	1 unit	102							
2 metal levers, 1 plastic roller, 1 high-grade steel roller	19	Ⓑ B	3SE5 000-OAT03		1	1 unit	102							

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## 3SE5, 3SE2 Position Switches For Explosion Protection (ATEX)

3SE5, metal enclosures  
Enclosure width 40 mm acc. to EN 50041/56 mm

### Position switches with separate actuator · Complete units

Approach · 3 contacts · Degree of protection IP66/IP67 · Cable entry M20 x 1.5

Version <sup>1)</sup>	Contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
Order No. Price per PU							
<b>With 40 mm according to EN 50041</b>							
<b>With M20 x 1.5 connecting thread</b> Slow-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 112-0QV10-1DA0</b>		1	1 unit	102
<b>With 56 mm</b>							
<b>With 3 x M20 x 1.5 connecting thread</b> Slow-action contacts	1 NO + 2 NC	⊕ B	<b>3SE5 122-0QV10-1DA0</b>		1	1 unit	102

Approach according to IEC 60947-5-1, Appendix K.

Without actuator. Please order separately ([see page 9/59](#)).

### Position switches · Complete units

Approach · Degree of protection IP66/IP67 · Cable entry M20 x 1.5

Version	Snap-action contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
Order No. Price per PU							
<b>With hollow shaft, Ø 8/12 mm</b>							
Operating angle 10°	1 NO + 2 NC	⊕ B	<b>3SE5 112-0LU21-1DA0</b>		1	1 unit	102
<b>With solid shaft, Ø = 10 mm</b>							
Operating angle 10°	1 NO + 2 NC	⊕ B	<b>3SE5 112-0LU22-1DA0</b>		1	1 unit	102



# I AS-Interface Position Switches

on switches with safety-oriented communication connected using the AS-Interface bus system. Options no longer have to be conventionally wired

position switches the ASIsafe electronics are integrated in the switch enclosure.



ction options in the modular system

m

Switches of the 3SF1 1.4 and 3SF1 2.4 series are built from a modular system comprising different versions of the basic switch and an actuator which must be ordered separately. Thanks to the modular design of the switch the end user can find the right solution for his application from numerous variants and install it himself in a very short time.

Switches are available in four different enclosure sizes: metal enclosures according to EN 50047, 31 mm wide, with M12 connector socket

plastic and metal enclosures according to EN 50041, 31 mm wide, with M12 connector socket

plastic enclosures, 50 mm wide, with M12 plug and

M12 socket, 56 mm wide, with M12 plug and M12 socket

Switches have a status display with three LEDs:

(green): F-IN1

(yellow): F-IN2

(red): AS-i/FAULT

## Benefits

The new generation of 3SF1 position switches offers:

- ASIsafe Electronics integrated in the enclosure, with low power consumption < 60 mA
- An extensive range of actuators
- Status display with three LEDs

## Application

With the standard position switches, mechanical positions of moved machine parts are converted into electrical signals. Through their modular and uniform design and large number of variants, the devices can meet practically all requirements in industry.

Devices are available with enclosure versions to suit the particular ambient conditions. Different control tasks can be performed with the best contact blocks suited for the particular purpose. And many different actuator variants are available to match the mechanical configuration of the moved machine parts. Dimensions, fixing points and characteristics are largely in accordance with the EN 50041 or EN 50047 standards.

The devices are suitable for use in any climate.

## Standards

The switches comply with the standards IEC 60947-1 (Low-Voltage Switchgear and Controlgear, General) and IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The mechanical design of the switch corresponds to the requirements of the failsafe principle according to EN 1088.

## Approvals

AS-Interface according to EN 50295 and IEC 62026-2.

With a 3SF1 position switch it is possible to achieve category 2 according to ISO 13849-1 (EN 954-1) or SIL 1 according to IEC 61508.

Categories 3 or 4 according to ISO 13849-1 (EN 954-1) or SIL 2 or 3 according to IEC 61508 can be achieved by using a second 3SE5 position switch.

The 3SF1 position switches are approved according to UL 508, UL 50 and UL 746-C.

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## 3SF1 AS-Interface Position Switches

### General data

on

3SF1 1.., 3SF1 2..		
IEC 60947-5-1, EN 60947-5-1, EN 1088		
<b>AS-Interface specification</b>		
Pin / ID configuration	7/B	
Node (Hex)	F/F	
Current, overall	mA	≤ 60
	Contact open	
	Contact closed, $I_{in}$ dynamic ( $I_{peak} \geq 5$ mA)	
	Green/red dual LED	
<b>Withstand voltage <math>U_{imp}</math></b>	kV	0.6
	kV	4
	V/m	10
(VB)	kV	1 / 2
<b>Reliability</b>		
Actuator, 3SF1 ....V..	$15 \times 10^6$ operating cycles $1 \times 10^6$ operating cycles	
Failure rate upon request of the safety function per hour and		
Actuator, 3SF1 ....V..	$4 \times 10^{-9}$ 1/h	
3SF1 ....U..	$2 \times 10^{-9}$ 1/h	
	$2 \times 10^{-9}$ 1/h	
	acc. to IEC 60068-2-27	
	30 g/11 ms	

	3SF1 234	3SF1 134	3SF1 244	3SF1 214	3SF1 114	3SF1 124
Material	Ultramid A3X2G7			Zinc diecasting GD Zn Al4 Cu1		
Dimensions	mm	31	40	50	31	40
		EN 50047	EN 50041	--	EN 50047	EN 50041
Protection acc. to EN 60529		IP65	IP66/IP67 <sup>1)</sup>			
Temperature range	°C	-25 ... +60				
Storage	°C	-40 ... +80				
Mounting		Any				

Actuators with spring rod and rod actuators: IP65/IP67.



### Assignment

M12 socket, 4-pole	LEDs	Status display (operating state)
 NSCO_00824	<b>LEDs</b> No voltage on AS-Interface chip ASI/Fault (GN/RD)	Communication OK  Communication failed  Slave has address "0" 

## I AS-Interface Position Switches

**Plastic enclosures  
width 31 mm acc. to EN 50047/50 mm**

### Ordering data

**m**

version of the position switch, the basic switch  
must be ordered separately.

- 3 LEDs
- Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm)
- M12 connector socket

Version	Contacts	LEDs	DT	Modular system	PU (UNIT, SET, M)	PS*	PG		
				Order No.	Price per PU				
<b>With teflon plunger<sup>1)</sup>.</b> <b>Width 31 mm according to EN 50047</b>									
<b>With teflon plunger</b>									
With M12 connector socket, 4-pole, channel 1 on NC contact, channel 2 on NC contact									
Slow-action contacts	2 NC	24 V DC	⊕ B	<b>3SF1 234-1KC05-1BA1</b>	1	1 unit	121		
Snap-action contacts	2 NC	24 V DC	⊕ B	<b>3SF1 234-1LC05-1BA1</b>	1	1 unit	121		
<b>With teflon plunger<sup>1)</sup>.</b> <b>Width 50 mm</b>									
<b>With teflon plunger</b>									
With M12 connector socket, 4-pole, channel 1 on NC contact, channel 2 on M12 socket, right									
Slow-action contacts	1 NC	24 V DC	⊕ B	<b>3SF1 244-1KC05-1BA2</b>	1	1 unit	121		
Snap-action contacts	1 NC	24 V DC	⊕ B	<b>3SF1 244-1LC05-1BA2</b>	1	1 unit	121		

ch

**With teflon plunger<sup>1)</sup>.**

**Width 50 mm**

**With teflon plunger**

With M12 connector socket, 4-pole,  
channel 1 on NC contact,  
channel 2 on M12 socket, right

- |                      |      |         |     |                            |   |        |     |
|----------------------|------|---------|-----|----------------------------|---|--------|-----|
| Slow-action contacts | 1 NC | 24 V DC | ⊕ B | <b>3SF1 244-1KC05-1BA2</b> | 1 | 1 unit | 121 |
| Snap-action contacts | 1 NC | 24 V DC | ⊕ B | <b>3SF1 244-1LC05-1BA2</b> | 1 | 1 unit | 121 |

g according to IEC 60947-5-1, Appendix K, or  
an actuator, usable in safety circuits.

Widths 31 mm and 50 mm the basic switch is a complete unit  
with plunger.

*Note: For selection aid, see page 9/12.*

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## 3SF1 AS-Interface Position Switches

Molded-plastic enclosures  
Enclosure width 31 mm acc. to EN 50047/50 mm

Version	Roller diameter	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
	mm		Order No.	Price per PU			
<b>Mechanisms</b>							
<b>Roller plungers, type C acc. to EN 50047</b>							
Plastic rollers	10	⊖ A	<b>3SE5 000-0AD03</b>		1	1 unit	102
High-grade steel rollers	10	⊖ B	<b>3SE5 000-0AD04</b>		1	1 unit	102
<b>Roller plungers with central fixing</b>							
Plastic rollers	10	⊖ B	<b>3SE5 000-0AD10</b>		1	1 unit	102
High-grade steel rollers	10	⊖ B	<b>3SE5 000-0AD11</b>		1	1 unit	102
<b>Roller levers, type E acc. to EN 50047</b>							
Metal lever, plastic roller	13	⊖ A	<b>3SE5 000-0AE10</b>		1	1 unit	102
Metal lever, high-grade steel roller	13	⊖ B	<b>3SE5 000-0AE11</b>		1	1 unit	102
High-grade steel lever, plastic roller	13	⊖ B	<b>3SE5 000-0AE12</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	13	⊖ B	<b>3SE5 000-0AE13</b>		1	1 unit	102
<b>Angular roller levers</b>							
Metal lever, plastic roller	13	⊖ A	<b>3SE5 000-0AF10</b>		1	1 unit	102
Metal lever, high-grade steel roller	13	⊖ B	<b>3SE5 000-0AF11</b>		1	1 unit	102
High-grade steel lever, plastic roller	13	⊖ A	<b>3SE5 000-0AF12</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	13	⊖ B	<b>3SE5 000-0AF13</b>		1	1 unit	102
<b>Levers with lever</b>							
<b>Twist actuators</b> , plastic (without lever)		⊖ A	<b>3SE5 000-0AK00</b>		1	1 unit	102
Switching right or left, adjustable							
<b>Levers for twist actuators</b>							
<b>Twist levers, type A acc. to EN 50047</b>							
Metal lever, plastic roller	19	⊖ A	<b>3SE5 000-0AA21</b>		1	1 unit	102
Metal lever, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA22</b>		1	1 unit	102
Metal lever, roller with ball bearing	19	⊖ B	<b>3SE5 000-0AA23</b>		1	1 unit	102
Metal lever, plastic roller	30	⊖ B	<b>3SE5 000-0AA25</b>		1	1 unit	102
High-grade steel lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA31</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA32</b>		1	1 unit	102
<b>Twist levers 30 mm, straight<sup>1)</sup></b>							
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA24</b>		1	1 unit	102
Metal lever, plastic roller	30	⊖ B	<b>3SE5 000-0AA26</b>		1	1 unit	102
<b>Twist levers, adjustable length, with grid hole</b>							
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA60</b>		1	1 unit	102
Metal lever, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA61</b>		1	1 unit	102
Metal lever, plastic roller	50	⊖ B	<b>3SE5 000-0AA67</b>		1	1 unit	102
Metal lever, rubber roller	50	⊖ B	<b>3SE5 000-0AA68</b>		1	1 unit	102
High-grade steel lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA62</b>		1	1 unit	102
High-grade steel lever, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA63</b>		1	1 unit	102



# AS-Interface Position Switches

ures  
width 31 mm according to EN 50047

## ordering data

m

version of the position switch, the basic switch  
ust be ordered separately.

LEDs · Degree of protection IP66/IP67 · M12 connector socket

Version	Contacts	LEDs	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU			
With plunger <sup>1)</sup> . width 31 mm according to EN 50047								
<b>With plunger</b> With M12 connector socket, 4-pole, channel 1 on NC contact, channel 2 on NC contact				<b>3SF1 214-1KC05-1BA1</b>		1	1 unit	121
Slow-action contacts      2 NC      24 V DC  B				<b>3SF1 214-1LC05-1BA1</b>		1	1 unit	121
Snap-action contacts      2 NC      24 V DC  B								

*Note: For selection aid, see page 9/12.*

g according to IEC 60947-5-1, Appendix K, or  
actuator, usable in safety circuits.

width 31 mm the basic switch is a complete unit with  
r.

## 3SF1 AS-Interface Position Switches

**Metal enclosures**  
**Enclosure width 31 mm according to EN 50047**

Version	Plunger or roller diameter	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
	mm		Order No.	Price per PU		
<b>Mechanisms</b>						
<b>Plain plungers</b>						
High-grade steel plungers	10	⊖ A	<b>3SE5 000-0AB01</b>		1	1 unit
						102
<b>Roller plungers, type C acc. to EN 50047</b>						
Plastic rollers	10	⊖ A	<b>3SE5 000-0AD03</b>		1	1 unit
High-grade steel rollers	10	⊖ B	<b>3SE5 000-0AD04</b>		1	1 unit
						102
<b>Roller plungers with central fixing</b>						
Plastic rollers	10	⊖ B	<b>3SE5 000-0AD10</b>		1	1 unit
High-grade steel rollers	10	⊖ B	<b>3SE5 000-0AD11</b>		1	1 unit
						102
<b>Roller levers, type E acc. to EN 50047</b>						
Metal lever, plastic roller	13	⊖ A	<b>3SE5 000-0AE10</b>		1	1 unit
Metal lever, high-grade steel roller	13	⊖ B	<b>3SE5 000-0AE11</b>		1	1 unit
High-grade steel lever, plastic roller	13	⊖ B	<b>3SE5 000-0AE12</b>		1	1 unit
High-grade steel lever, high-grade steel roller	13	⊖ B	<b>3SE5 000-0AE13</b>		1	1 unit
						102
<b>Angular roller levers</b>						
Metal lever, plastic roller	13	⊖ A	<b>3SE5 000-0AF10</b>		1	1 unit
Metal lever, high-grade steel roller	13	⊖ B	<b>3SE5 000-0AF11</b>		1	1 unit
High-grade steel lever, plastic roller	13	⊖ A	<b>3SE5 000-0AF12</b>		1	1 unit
High-grade steel lever, high-grade steel roller	13	⊖ B	<b>3SE5 000-0AF13</b>		1	1 unit
						102
<b>Levers with lever</b>						
<b>Twist actuators</b> , plastic (without lever)						
Switching right or left, adjustable		⊖ A	<b>3SE5 000-0AK00</b>		1	1 unit
						102
<b>Levers for twist actuators</b>						
<b>Twist levers, type A acc. to EN 50047</b>						
Metal lever, plastic roller	19	⊖ A	<b>3SE5 000-0AA21</b>		1	1 unit
Metal lever, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA22</b>		1	1 unit
Metal lever, roller with ball bearing	19	⊖ B	<b>3SE5 000-0AA23</b>		1	1 unit
Metal lever, plastic roller	30	⊖ B	<b>3SE5 000-0AA25</b>		1	1 unit
High-grade steel lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA31</b>		1	1 unit
High-grade steel lever, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA32</b>		1	1 unit
						102
<b>Twist levers 30 mm, straight<sup>1)</sup></b>						
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA24</b>		1	1 unit
Metal lever, plastic roller	30	⊖ B	<b>3SE5 000-0AA26</b>		1	1 unit
						102
<b>Twist levers, adjustable length, with grid hole</b>						
Metal lever, plastic roller	19	⊖ B	<b>3SE5 000-0AA60</b>		1	1 unit
Metal lever, high-grade steel roller	19	⊖ B	<b>3SE5 000-0AA61</b>		1	1 unit
Metal lever, plastic roller	50	⊖ B	<b>3SE5 000-0AA67</b>		1	1 unit
						102



# I AS-Interface Position Switches

**Enclosures**  
Width 40 mm acc. to EN 50041/56 mm

## Ordering data

**Basic switch**

version of the position switch, the basic switch  
must be ordered separately.

- 3 LEDs
- Degree of protection IP66/IP67
- M12 connector socket

Version	Contacts	LEDs	DT	Modular system	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU		
<b>· Enclosure width 40 mm according to EN 50041</b>							

With M12 connector socket, 4-pole,  
channel 1 on NC contact,  
channel 2 on NO contact

Slow-action contacts	2 NC	24 V DC	⊕ B	<b>3SF1 114-1KA00-1BA1</b>	1	1 unit	121
Snap-action contacts	2 NC	24 V DC	⊕ B	<b>3SF1 114-1LA00-1BA1</b>	1	1 unit	121

## Enclosure width 56 mm

With M12 connector socket, 4-pole,  
channel 1 on NC contact,  
channel 2 on M12 socket, right

Slow-action contacts	1 NC	24 V DC	⊕ B	<b>3SF1 124-1KA00-1BA2</b>	1	1 unit	121
Snap-action contacts	1 NC	24 V DC	⊕ B	<b>3SF1 124-1LA00-1BA2</b>	1	1 unit	121

*Note:* For selection aid, see page 9/12.

Version	Plunger or roller diameter	DT	Modular system	PU (UNIT, SET, M)	PS*	PG	
				Order No.	Price per PU		
<b>Mechanisms</b>							

### Plain plungers

High-grade steel plungers	10	⊕ A	<b>3SE5 000-0AB01</b>	1	1 unit	102
---------------------------	----	-----	-----------------------	---	--------	-----

### Rounded plungers, type B, acc. to EN 50041

High-grade steel plungers, with 3 mm overtravel	10	⊕ B	<b>3SE5 000-0AC02</b>	1	1 unit	102
---	----	-----	-----------------------	---	--------	-----

### Roller plungers, type C acc. to EN 50041

High-grade steel roller, with 3 mm overtravel	13	⊕ B	<b>3SE5 000-0AD02</b>	1	1 unit	102
---	----	-----	-----------------------	---	--------	-----

## 3SF1 AS-Interface Position Switches

**Metal enclosures**  
Enclosure width 40 mm acc. to EN 50041/56 mm

Version	Roller diameter mm	DT	<b>Modular system</b>	 PU (UNIT, SET, M)	PS*	PG								
							Order No.	Price per PU						
<b>Mechanisms</b>														
<b>Roller levers</b>														
Metal lever, plastic roller	22	Ⓐ A	<b>3SE5 000-OAE01</b>		1	1 unit	102							
Metal lever, high-grade steel roller	22	Ⓑ B	<b>3SE5 000-OAE02</b>		1	1 unit	102							
High-grade steel lever, plastic roller	22	Ⓑ B	<b>3SE5 000-OAE03</b>		1	1 unit	102							
High-grade steel lever, high-grade steel roller	22	Ⓑ B	<b>3SE5 000-OAE04</b>		1	1 unit	102							
<b>Angular roller levers</b>														
Metal lever, plastic roller	22	Ⓐ A	<b>3SE5 000-OAF01</b>		1	1 unit	102							
Metal lever, high-grade steel roller	22	Ⓑ B	<b>3SE5 000-OAF02</b>		1	1 unit	102							
High-grade steel lever, plastic roller	22	Ⓑ B	<b>3SE5 000-OAF03</b>		1	1 unit	102							
High-grade steel lever, high-grade steel roller	22	Ⓑ B	<b>3SE5 000-OAF04</b>		1	1 unit	102							
<b>Levers with lever</b>														
<b>Twist actuators</b> , metal (without lever)														
• For twist levers, switching right or left, adjustable - For enclosure width 40 and 56 mm		Ⓐ A	<b>3SE5 000-OAH00</b>		1	1 unit	102							
• For fork levers, latching		Ⓑ B	<b>3SE5 000-OAT10</b>		1	1 unit	102							
<b>Levers for twist actuators</b>														
<b>Twist levers 27 mm, offset, type A, acc. to EN 50041</b>														
Metal lever, plastic roller	19	Ⓐ A	<b>3SE5 000-OAA01</b>		1	1 unit	102							
Metal lever, high-grade steel roller	19	Ⓐ A	<b>3SE5 000-OAA02</b>		1	1 unit	102							
Metal lever, roller with ball bearing	19	Ⓑ B	<b>3SE5 000-OAA03</b>		1	1 unit	102							
Metal lever, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-OAA04</b>		1	1 unit	102							
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA05</b>		1	1 unit	102							
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-OAA07</b>		1	1 unit	102							
Metal levers, rubber roller	50	Ⓑ B	<b>3SE5 000-OAA08</b>		1	1 unit	102							
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA11</b>		1	1 unit	102							
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA12</b>		1	1 unit	102							
<b>Twist levers 35 mm, offset</b>														
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA15</b>		1	1 unit	102							
<b>Twist levers 30 mm, straight<sup>1)</sup></b>														
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA24</b>		1	1 unit	102							
Metal lever, plastic roller	30	Ⓑ B	<b>3SE5 000-OAA26</b>		1	1 unit	102							
<b>Twist levers, adjustable length, with grid hole</b>														
Metal lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA60</b>		1	1 unit	102							
Metal lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA61</b>		1	1 unit	102							
Metal lever, plastic roller	50	Ⓑ B	<b>3SE5 000-OAA67</b>		1	1 unit	102							
Metal lever, rubber roller	50	Ⓑ B	<b>3SE5 000-OAA68</b>		1	1 unit	102							
High-grade steel lever, plastic roller	19	Ⓑ B	<b>3SE5 000-OAA62</b>		1	1 unit	102							
High-grade steel lever, high-grade steel roller	19	Ⓑ B	<b>3SE5 000-OAA63</b>		1	1 unit	102							
<b>Fork levers</b> (for switches with snap-action contacts only)														
Metal lever, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-OAT01</b>		1	1 unit	102							
Metal lever, 2 high-grade steel rollers	19	Ⓑ B	<b>3SE5 000-OAT02</b>		1	1 unit	102							
High-grade steel lever, 2 plastic rollers	19	Ⓑ B	<b>3SE5 000-OAT03</b>		1	1 unit	102							



# AS-Interface Position Switches

## with Separate Actuator

Position switches with safety-oriented communication are connected using the AS-Interface bus system. The connections no longer have to be conventionally wired.

In addition to standard position switches the ASIsafe electronics are integrated in the separate actuator.



Position switches with head for separate actuator and with ASIsafe Electronics

Position switches with separate actuator have the same dimensions as standard switches.

The actuator head is included in the scope of supply. For actuators with different mounting directions it can be adjusted through  $4 \times 90^\circ$ . The actuator must therefore be approached from above.

Position switches are not included in the scope of supply of the position switch. They must be ordered separately from a choice of six different types depending on the application.

Position switches are encoded. Simple overruling by hand or auxiliary devices is also possible.

A steel blocking insert for attaching up to eight pads is available for even more safety.

A fine mesh filter protects the metal enclosure from contamination during operation in dusty environments.

Position switches have a status display with three LEDs:

Green: F-IN1

Yellow: F-IN2

Red: AS-i/FAULT

### Benefits

The new generation of 3SF1 position switches with separate actuator offers:

- ASIsafe Electronics integrated in the enclosure, with low power consumption < 60 mA
- An extensive range of actuators
- Status display with three LEDs

### Application

Position switches with separate actuator are used where the position of doors, covers or protective grills must be monitored for safety reasons.

The position switch can only be operated with the matching coded actuator. Simple overruling by hand or auxiliary devices is impossible.

Devices are available with enclosure versions to suit the particular ambient conditions. Different control tasks can be performed with the best contact blocks suited for the particular purpose. Dimensions, fixing points of the enclosure are in accordance with EN 50041 or EN 50047 standards.

The devices are suitable for use in any climate.

### Standards

The switches comply with the standards IEC 60947-1 (Low-Voltage Switchgear and Controlgear, General) and IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The mechanical design of the switch corresponds to the requirements of the failsafe principle according to EN 1088.

### Approvals

AS-Interface according to EN 50295 and IEC 62026-2.

With a 3SF1 position switch it is possible to achieve Category 3 according to ISO 13849-1 (EN 954-1) or SIL 2 according to IEC 61508.

Category 4 according to ISO 13849-1 (EN 954-1) or SIL 3 according to IEC 61508 can be achieved by using a second 3SE5 position switch.

The 3SF1 position switches are approved according to UL 508, UL 50 and UL 746-C.

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## 3SF1 AS-Interface Position Switches With Separate Actuator

Molded-plastic enclosures  
Enclosure width 31 mm / 50 mm

or 2 slow-action contacts  
y with 3 LEDs 24 V DC;  
-IN2, 3: AS-i/FAULT

- Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm)

### ordering data

Version <sup>1)</sup>	Contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
Order No. Price per PU							
<b>With 31 mm according to EN 50047</b>							
<b>5 directions of approach</b> With M12 connector socket, 4-pole; channel 1 on NC contact, channel 2 on NC contact Slow-action contacts	2 NC	⊕ B	<b>3SF1 234-1QV40-1BA1</b>		1	1 unit	121
<b>With 50 mm</b>							
<b>5 directions of approach</b> With M12 connector socket, 4-pole; channel 1 on NC, channel 2 on M12 socket, right Slow-action contacts	1 NC	⊕ B	<b>3SF1 244-1QV40-1BA2</b>		1	1 unit	121

g according to IEC 60947-5-1, Appendix K.  
nt actuator. Please order separately.

# SI AS-Interface Position Switches

## Separate Actuator

Measures  
Width 31 mm / 40 mm / 56 mm

or 2 slow-action contacts  
Supply with 3 LEDs 24 V DC;  
1:IN1, 2:IN2, 3:AS-i/FAULT

- Degree of protection IP66/IP67

### Ordering data

Version <sup>1)</sup>	Contacts	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
				Order No.	Price per PU		
<b>Width 31 mm according to EN 50047</b>							
<b>5 directions of approach</b> With M12 connector socket, 4-pole; channel 1 on NC contact, channel 2 on NC contact Slow-action contacts	2 NC	⊕ B	<b>3SF1 214-1QV40-1BA1</b>		1	1 unit	121
<b>Width 40 mm according to EN 50041</b>							
<b>5 directions of approach</b> With M12 connector socket, 4-pole; channel 1 on NC contact, channel 2 on NC contact Slow-action contacts	2 NC	⊕ B	<b>3SF1 114-1QV10-1BA1</b>		1	1 unit	121
<b>Width 56 mm</b>							
<b>5 directions of approach</b> With M12 connector socket, 4-pole; channel 1 on NC, channel 2 on M12 socket, right Slow-action contacts	1 NC	⊕ B	<b>3SF1 124-1QV10-1BA2</b>		1	1 unit	121

according to IEC 60947-5-1, Appendix K.  
Actuator. Please order separately.

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## 3SF1 AS-Interface Position Switches With Separate Actuator

### Accessories

Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
<b>Standard actuators</b>						
• Length 75.6 mm	►	<b>3SE5 000-0AV01</b>		1	1 unit	102
• With vertical fixing, length 53 mm	A	<b>3SE5 000-0AV02</b>		1	1 unit	102
• With transverse fixing, length 47 mm	A	<b>3SE5 000-0AV03</b>		1	1 unit	102
<b>Radius actuators,</b> length 51 mm						
• Direction of approach from the left	A	<b>3SE5 000-0AV04</b>		1	1 unit	102
• Direction of approach from the right	A	<b>3SE5 000-0AV06</b>		1	1 unit	102
<b>Universal radius actuators,</b> length 77 mm						
<b>Universal radius actuators, heavy-duty</b>						
• Length 67 mm	A	<b>3SE5 000-0AV07-1AK2</b>		1	1 unit	102
• Length 77 mm	A	<b>3SE5 000-0AV07</b>		1	1 unit	102
<b>Accessories</b>						
Protective caps made of black rubber for the actuator head, to protect the actuator openings from contamination (Only for enclosure width 40 or 56 mm)	B	<b>3SE5 000-0AV08-1AA2</b>		1	1 unit	102
Blocking inserts, high-grade steel, for actuator head, for up to 8 padlocks	C	<b>3SE5 000-0AV08-1AA3</b>		1	1 unit	102

# AS-Interface Position Switches with Solenoid Interlocking

on switches with safety-oriented communication  
are connected using the AS-Interface bus system.  
Switches no longer have to be conventionally wired

In position switches the ASIsafe electronics are integrated in the switch enclosure.



Position switch with interlocking and ASIsafe electronics

The actuator head is included in the scope of supply. For actuators with different mounting directions it can be adjusted through  $4 \times 90^\circ$ . The actuator can also be approached from above.

Actuators are not included in the scope of supply of the position switches. They must be ordered separately from a choice of six different types for the application.

Actuators are encoded. Simple overruling by hand or auxiliary contacts is also possible.

A steel blocking insert for attaching up to eight pads is available for even more safety.

To protect the enclosure from contamination is a filter for operation in dusty environments.

There are three versions for locking the actuator:  
• Electromechanical lock (closed-circuit principle) with various release mechanisms  
• Mechanical lock (open-circuit principle)  
For further information see page 9/62.

Position switches have a status display with four LEDs:

## Benefits

The new generation of 3SF1 3 position switches with solenoid interlocking offers:

- More safety through higher locking forces:
  - 1300 N for the plastic version
  - 2600 N for the metal version
- Various release mechanisms: lock release, escape release and emergency release
- ASIsafe Electronics integrated in the enclosure; connected through 4-pole M12 connector socket
- Current consumption of the solenoid max. 170 mA
- Two contact blocks as standard equipment, hence fewer variants needed
- Same dimensions for all enclosure variants:  
Plastic, metal
- An extensive range of actuators
- Status display with four LEDs

## Application

The position switches with interlocking are exceptional safety-related devices which prevent an unforeseen or intentional opening of protective doors, protective grills or other covers as long as a dangerous situation is present (i.e. follow-on motion of the machine which has been switched off).

The safety position switches with interlocking have the following functions:

- Enabling the machine or process with closed and locked protective device
- Locking the machine or process with opened protective device
- Position monitoring of the protective device and solenoid interlocking

## Standards

The switches comply with the standards IEC 60947-1 (Low-Voltage Switchgear and Controlgear, General) and IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The mechanical design of the switch corresponds to the requirements of the failsafe principle according to EN 1088.

## Approvals

AS-Interface according to EN 50295 and IEC 62026-2.

The switches are approved for use with locking devices according to EN 1088 and EN 292, Parts 1 and 2.

3SE5 3 position switches with interlocking bear the VDE test mark.

With a 3SF1 3 position switch with interlocking it is possible to achieve category 3 according to ISO 13849-1 (EN 954-1) or SIL 2 according to IEC 61508.

# 3SF1 AS-Interface Position Switches

## With Interlocking

Molded-plastic enclosures  
With locking force greater than 1200 N

### approach · Degree of protection IP66/IP67

#### contacts:

A1: ASI-safe channel 1 on 1 NC contact from the actuator and channel 2 on 1 NC contact from the solenoid<sup>1)</sup>  
A3: ASI-safe channel 1 on the first NC contact from the actuator and channel 2 on the second NC contact from the actuator

A4: ASI-safe channel 1 on 2 NC contacts from the actuator and channel 2 on 1 NC contact from the solenoid. A gap between the two contacts of the actuator will be already in the switch.

Rated operational voltage 24 V DC

Locking force 1300 N (1000 N according to GS-ET 19)

Supply with 4 LEDs 24 V DC;  
ULT, 3: F-IN1, 4: F-IN2

#### versions

	Contacts Actuator / magnet	Achievable safety level	Diagnostics Feedback from the solenoid	Reclose condition After unlocking the solenoid (depending on the type of evaluation)
BA1	1 NC/1 NC	SIL 1 / PL c	✓	Door does <u>not</u> have to be opened
	1 NC/1 NC	SIL 2 / PL d	✓	Door must be opened
BA3	2 NC	SIL 2 / PL d	--	Door does <u>not</u> have to be opened
BA4	2 NC/1 NC	SIL 2 / PL d	✓	Door does <u>not</u> have to be opened

### ordering data

Interlock <sup>1)</sup>	Contacts Actuators/ Solenoids	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			

#### force · Enclosure width 54 mm

##### Spring-actuated locks

• With auxiliary release	1 NC/1 NC	⊕ B	<b>3SF1 324-1SD21-1BA1</b>	1	1 unit	121
	2 NC/-	⊕ B	<b>3SF1 324-1SD21-1BA3</b>	1	1 unit	121
	2 NC/1 NC	⊕ B	<b>3SF1 324-1SD21-1BA4</b>	1	1 unit	121
• With auxiliary release with lock	1 NC/1 NC	⊕ B	<b>3SF1 324-1SE21-1BA1</b>	1	1 unit	121

• With escape release from the front	1 NC/1 NC	⊕ B	<b>3SF1 324-1SF21-1BA1</b>	1	1 unit	121
	2 NC/1 NC	⊕ B	<b>3SF1 324-1SF21-1BA4</b>	1	1 unit	121
• With escape release from the back and auxiliary release from the front	1 NC/1 NC	⊕ B	<b>3SF1 324-1SG21-1BA1</b>	1	1 unit	121
	2 NC/1 NC	⊕ B	<b>3SF1 324-1SG21-1BA4</b>	1	1 unit	121
• With emergency release from the back and auxiliary release from the front	1 NC/1 NC	⊕ B	<b>3SF1 324-1SJ21-1BA1</b>	1	1 unit	121

<b>Solenoid locks</b>	1 NC/1 NC	⊕ B	<b>3SF1 324-1SB21-1BA1</b>	1	1 unit	121
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# AS-Interface Position Switches

## Interlocking

Measures  
Force greater than 2000 N

### Approach · Degree of protection IP66/IP67

Contacts:

- 1: ASI-safe channel 1 on 1 NC contact from the channel 2 on 1 NC contact from the solenoid
- Rated operational voltage 24 V DC
- Force 2600 N (2000 N according to GS-ET 19)
- Supply with 4 LEDs 24 V DC;
- 1: F-OUT, 3: F-IN1, 4: F-IN2

### Safety level

See page 9/95.

### Ordering data

Interlock <sup>1)</sup>	Contacts Actuators/ Solenoids	DT	Complete units	<input type="checkbox"/>	PU (UNIT, SET, M)	PS*	PG
			Order No.	Price per PU			
<b>Force · Enclosure width 54 mm</b>							
<b>Spring-actuated locks</b>							
• With auxiliary release	1 NC/1 NC	⊕ B	<b>3SF1 314-1SD11-1BA1</b>		1	1 unit	121
• With auxiliary release with lock	1 NC/1 NC	⊕ B	<b>3SF1 314-1SE11-1BA1</b>		1	1 unit	121
...							
• With escape release from the front	1 NC/1 NC	⊕ B	<b>3SF1 314-1SF11-1BA1</b>		1	1 unit	121
• With escape release from the back and auxiliary release from the front	1 NC/1 NC	⊕ B	<b>3SF1 314-1SG11-1BA1</b>		1	1 unit	121
• With emergency release from the back and auxiliary release from the front	1 NC/1 NC	⊕ B	<b>3SF1 314-1SJ11-1BA1</b>		1	1 unit	121
<b>Solenoid locks</b>	1 NC/1 NC	⊕ B	<b>3SF1 314-1SB11-1BA1</b>		1	1 unit	121

according to IEC 60947-5-1, Appendix K.  
Without actuator. Please order separately.

For actuators and optional accessories see page 9/93.

## 3SF1 AS-Interface Position Switches Hinge Switches

Molded-plastic enclosures  
Enclosure width 31 mm / 50 mm

These switches with safety-oriented communication are connected using the AS-Interface bus system. Installation no longer have to be conventionally wired. In the position switches the ASIsafe electronics are integrated in the switch enclosure.

Switches are provided for mounting on hinges. There are two variants here:  
inner diameter 8 mm, outer 12 mm  
inner diameter 10 mm

For the ASIsafe version of the hinge switch, the basic switch and twist actuator must be ordered separately. The basic switches correspond to the position switches of the standard version (only use versions with snap-action contacts).

The standards and approvals are the same as for the 3SF1 standard switches ([see page 9/82](#)).

### Ordering data

#### General

- 3 LEDs
- Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm)
- M12 connector socket

Version	Contacts	LEDs	DT	Modular system		PU (UNIT, SET, M)	PS*	PG
				Order No.		Price per PU		

#### Enclosure width 31 mm according to EN 50047

With teflon plunger, with M12 connector socket, 4-pole, channel 1 on NC contact, channel 2 on NC contact	Snap-action contacts	2 NC	24 V DC	 B	<b>3SF1 234-1LC05-1BA1</b>	1	1 unit	121
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#### Enclosure width 50 mm

With teflon plunger, with M12 connector socket, 4-pole, channel 1 on NC contact, channel 2 on M12 socket, right	Snap-action contacts	1 NC	24 V DC	 B	<b>3SF1 244-1LC05-1BA2</b>	1	1 unit	121
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#### With hollow shaft

Operating angle 10°	B	<b>3SE5 000-0AU21</b>	1	1 unit	102
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#### With solid shaft

Operating angle 10°	B	<b>3SE5 000-0AU22</b>	1	1 unit	102
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# 3SF1 AS-Interface Position Switches

**Enclosures**  
Width 31 mm / 40 mm / 56 mm

These switches with safety-oriented communication are connected using the AS-Interface bus system. Connections no longer have to be conventionally wired.

In these position switches the ASIsafe electronics are integrated in the switch enclosure.

Two variants are provided for mounting on hinges. There are two variants here:  
inner diameter 8 mm, outer 12 mm  
inner diameter 10 mm

For the ASIsafe version of the hinge switch, the basic switch and twist actuator must be ordered separately. The basic switches correspond to the position switches of the standard version (only use versions with snap-action contacts).

The standards and approvals are the same as for the 3SF1 standard switches ([see page 9/82](#)).

## Ordering data

### Dimensions

- 3 LEDs
- Degree of protection IP66/IP67
- M12 connector socket

Version	Contacts	LEDs	DT	Modular system	PU (UNIT, SET, M)	PS*	PG	
				Order No.	Price per PU			
<b>· Enclosure width 31 mm according to EN 50047</b>								
<b>With plunger</b> With M12 connector socket, 4-pole, channel 1 on NC contact, channel 2 on NC contact	Snap-action contacts	2 NC	24 V DC	 B	<b>3SF1 214-1LC05-1BA1</b>	1	1 unit	121
<b>· Enclosure width 40 mm according to EN 50041</b>								
<b>With M12 connector socket</b> , 4-pole, channel 1 on NC contact, channel 2 on NC contact	Snap-action contacts	2 NC	24 V DC	 B	<b>3SF1 114-1LA00-1BA1</b>	1	1 unit	121
<b>· Enclosure width 56 mm</b>								
<b>With M12 connector socket</b> , 4-pole, channel 1 on NC contact, channel 2 on M12 socket, right	Snap-action contacts	1 NC	24 V DC	 B	<b>3SF1 124-1LA00-1BA2</b>	1	1 unit	121

## 3SE6 Magnetically Operated Switches

### Magnetic monitoring systems

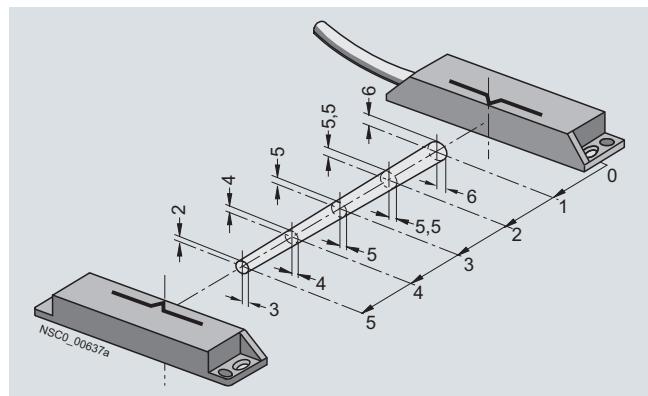


ts and contact blocks

operated switch is comprised of a coded magnet and a switching element (sensor unit). It fires a safety relay or connection to a bus system.

#### Safety relays

active devices (sensors) can be connected to the



Enabling range (example)

The device has six current-sourcing semiconductor outputs (Y1 ... Y6) which signal the state of the connected protective devices.

The 3SE6 806 safety relay has two floating enabling circuits (safe circuits) as NO contact circuits and one floating signaling circuit as a NC circuit. The number of enabling circuits can be increased by adding one or more 3TK28 30 expansion modules.

Magnetically operated switches are designed for removable protective guards (hoods, hinge switches, etc.). Evaluation can be performed by means of a safety relay or connection to a bus system.

No-contact, magnetically operated safety switches benefit from their enclosed design with degree of protection IP67. They are particularly suitable therefore for areas exposed to dust, cleaning or disinfecting.

#### of monitoring units and magnetically operated switches

A magnetic monitoring system comprises one or more magnetically operated switches and an evaluation unit, e.g. a safety relay. When contact blocks 1 NO + 1 NC are used the 3SE6 806 safety relay provides a high degree of protection against manipulation and can be installed in safety circuits up to Category 3 according to ISO 13849-1 (EN 954-1).



	Magnetically operated switches (contact block + switching magnet)					Achievable category (EN 954-1)/ Performance level (EN ISO 13849-1)
	1 NC + 1 NO 3SE6 605-1BA 3SE6 704-1BA	3SE6 605-2BA 3SE6 704-2BA	3SE6 605-3BA 3SE6 704-3BA	3SE6 604-2BA 3SE6 704-2BA		
ys,	3SE6 806-2CD00	✓	✓	✓	--	Cat. 3
ys	3TK28 26	✓	✓	✓	✓	Cat. 4/e
nts	3TK28 40	--	--	--	✓	Cat. 3/d
ys	3TK28 41, 3TK28 42, 3TK28 45	--	--	--	✓	Cat. 4/e
ys with	3TK28 50, 3TK28 51, 3TK28 52	--	--	--	✓	Cat. 3/d
	3TK28 53	--	--	--	✓	Cat. 4/e
safety modules	3RK1 205, 3RK1 405	--	--	--	✓	Cat. 4

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## Monitoring systems

## ordering data

Version	Size	Contacts	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
mm								
<b>units</b>								
<b>Switching magnets (coded)</b>	M30		A	<b>3SE6 704-1BA</b>			1	1 unit
<b>Contact blocks</b>								
• With cable, 3 m	M30	1 NO + 1 NC	A	<b>3SE6 605-1BA</b>			1	1 unit
• With M12 plug, 4-pole	M30	1 NO + 1 NC	C	<b>3SE6 605-1BA02</b>			1	1 unit
<b>sensor units</b>								
<b>Switching magnets (coded)</b>	25 × 88		A	<b>3SE6 704-2BA</b>			1	1 unit
<b>Contact blocks</b>								
• With cable, 3 m	25 × 88	1 NO + 1 NC	A	<b>3SE6 605-2BA</b>			1	1 unit
		2 NC	A	<b>3SE6 604-2BA</b>			1	1 unit
• With M8 plug, 4-pole	25 × 88	1 NO + 1 NC	C	<b>3SE6 605-2BA01</b>			1	1 unit
		2 NC	C	<b>3SE6 604-2BA01</b>			1	1 unit
<b>Switching magnets (coded)</b>	25 × 33		A	<b>3SE6 704-3BA</b>			1	1 unit
<b>Contact blocks</b> with cable, 3 m	25 × 33	1 NO + 1 NC	A	<b>3SE6 605-3BA</b>			1	1 unit
<b>Spacers</b>								
<b>Spacers</b>	25 × 88		D	<b>3SX3 260</b>			1	1 unit
<b>Spacers</b>	25 × 33		D	<b>3SX3 261</b>			1	1 unit

Version	Number of sensors	Enabling/ signalling circuits	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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