

Safety switch - SIDENT Safety door handles – TGY

Production and delivery Termination for new safety-relevant applications

The Machinery Directive 2006/42/EG of the European Parliament lays down a homogeneous level of protection for accident prevention on and around machinery. European harmonisation of legislation supersedes national provisions and applies within the European Economic Area (EEA), in Switzerland and in Turkey.

The standards are intended to further reduce hazards on and around machinery, to prevent personal injury, and to increase the availability of plant and machinery. When assessing products for **SIL** (Safety Integrity Level), probability studies, or **PL** (Performance Level), must be taken into account.

In the classification of risks and safety, **SIL** and **PL** play a central role. Design engineers need these safety data as evidence that plant and machinery comply with safety laws and standards.

SIDENT safety switches are equipped with high switching distance up to 20mm.

Important notes for applications from 2021-01-01

From mid-2021 a proposal by the EU Commission for a revised Machinery Directive (2026/42/EG) is planned. Standards to be revised are also affected (including Norms like DIN EN ISO 13849-1).

This affects the production and delivery of SIDENT safety switches and TGY door handle systems from 2021-01-01.

The validity of the certificates ends on 2020-12-31.

(Installations outside the scope of the Machinery Directive are not affected).

From 2021-01-01, these products may not be used in new safety-relevant applications within the applicable guidelines.

Last-Order-Date: 2020-11-30

For existing and already safety-compliant approved applications for replacement and, if necessary, retrofitting (as well as installations outside the scope of the Machinery Directive), SIDENT Safety switches are available furthermore.

For supporting information please contact us or your vendor / distributor.



SIDENT non-contact safety switches



Certified for control categories 3 and 4 to DIN EN ISO 13849-1

Advantages over mechanical or magnetic safety switches:

- Transponder technology and digital coding make them resistant to tampering
- Easy mounting and adjustment
- Reliable operation with high switching distances up to 20 mm
- High tolerance of vibration
- Robust and maintenance-free in dirty environments
- Can be used to monitor multiple positions

Used for:

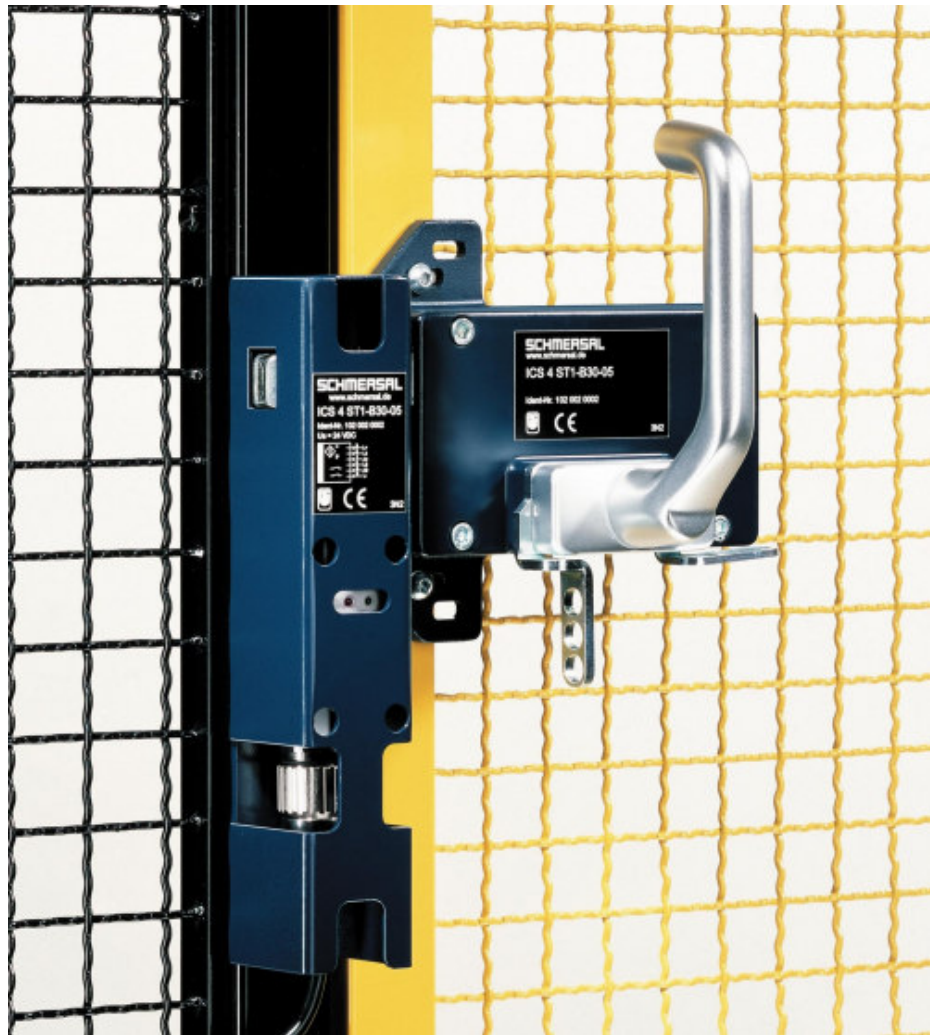
- Monitoring safety fences, doors and roller gates
- Safety guards on plant and machinery
- Monitoring robots' safe positions
- Sawing and processing plant, e. g. for plaster or wood, particularly where there is high humidity
- Grinding and milling plant where deposits of dust and dirt are likely
- Safety door handles with integral SIDENT non-contact safety switches

Level assignment and calculation of failure probability

Parameter from DIN EN 62061 or EN ISO 13849-1		Value	
DC	Diagnostic Coverage	High	
CCF	Common Cause Failure	70 points	
Category		3	4
MTTF _d	Mean Time To Dangerous Failure	74 years	
TM	Mission time	20 years	
SIL CL	SIL Claim Limit;	2	3
PFH _d	Probability of dangerous Failure per Hour	≥ 10 ⁻⁸ bis < 10 ⁻⁷	
PL	Performance Level	d	e

apply for ...		Category 3	Category 4
Ref. no.	Designation		
13.14-33	Safety switch SIDENT/IV-40fv114n20-11Z1C		X
13.14-42	Safety switch SIDENT/III-40fq50n20-11Sh1C	X	
13.14-44	Safety switch SIDENT/III-40fv114n20-11Sh1C	X	
13.14-45	Safety switch SIDENT/IV-40fv114n20-11Sh1C		X
13.14-47	Safety switch SIDENT/IV-40fv-1111ZI1D		X
13.14-49	Safety switch SIDENT/IV-40fq50n20-11Sh1C		X
13.14-65	Safety switch SIDENT/III-40fv114n20-11Z1C	X	

TGY Safety Door Handles



Automated systems with dangerous machine functions require guards to ensure that the operating personnel are not endangered.

Doors in these guards must be equipped with interlocks, which prevent the execution of dangerous machine functions as long as the protective door is open.

Safety door handles with integral SIDENT safety switch perform such specifications. SIDENT switches are certified in accordance with control category 4 to DIN EN 13849-1.

The SIDENT safety switch operates according to the identification principle together with the individually coded actuating element (transponder) fitted to the door handle latch.

Release to the safety circuit of the system only is given in the closed position.

The system is to a very large extent safe from manipulation due to the 6-digit safety code which is issued only once.

- emergency function with panic handle
- protection against inadvertent closing
- mounted on right-hinged doors, modification on left
- extremely high switching distance up to 20 mm
- operational safety with high installation tolerances
- insensitive against shock and vibration
- position indication to locate up to 4 door handles
- optional with position indication to locate up to 4 door handles connected in series

Product overview

Safety switch

Housing	Number of safety-related outputs	Control category according to DIN EN ISO 13849-1	Type	Ref. no.
Short	2	3	SIDENT/III-40fq50n20-11Sh1C	13.14-42
Long	2	3	SIDENT/III-40fv114n20-11Sh1C	13.14-44
Long	2	3	SIDENT/III-40fv114n20-11Z1C	13.14-65
Short	2	4	SIDENT/IV-40fq50n20-11Sh1C	13.14-49
Long	2	4	SIDENT/IV-40fv114n20-11Z1C	13.14-33
Long	2	4	SIDENT/IV-40fv114n20-11Sh1C	13.14-45
Long	2, + 4 position outputs	4	SIDENT/IV-40fv-1111ZI1D	13.14-47

Safety door handles with safety switches

System	Type	Ref. no. Nr.	Control category according to DIN EN ISO 13849-1	Integral Safety Switch Type	Ref. no.	Panic handle	Position output
Schmersal	TGY/r1f-Sid4-1.3	43.20-05	4	SIDENT/IV-40fv114n20-11Z1C	13.14-33	yes	no
Schmersal	TGY/r1f-Sid4m-2.3	43.20-06	4	SIDENT/IV-40fv1111ZI1D	13.14-47	yes	yes
Schmersal	TGY/r1fz-Sid4-1.3R	43.20-11-001	4	SIDENT/IV-40fv114n20-11Z1C	13.14-33	yes	no
Schmersal	TGY/r1fz-Sid4-1.3L	43.20-11-002	4	SIDENT/IV-40fv114n20-11Z1C	13.14-33	yes	no
Schmersal	TGY/r1gz-Sid4-1.3R	43.20-12-001	4	SIDENT/IV-40fv114n20-11Z1C	13.14-33	yes	no
Schmersal	TGY/r1gz-Sid4-1.3L	43.20-12-002	4	SIDENT/IV-40fv114n20-11Z1C	13.14-33	yes	no



(certificates are valid until 2020-12-31)

You will find more product information on safety elements at data sheets for Safety switches SIDENT and Safety door handles TGY.

You will find a large selection of further automation components in the following catalogs:

- ALSEN** Inductive proximity switches, pulse sensors, capacitive and ultrasonic sensors
- ALME** Measuring relays and control units
- ALDIF** Evaluation units for pulse rate, frequency, and direction of rotation

We are certified according DIN EN ISO 9001.

Subject to changes!