



### Precisely fitting attachment systems for each safety switch

In addition to all safety doors, Brühl offers a comprehensive range of attachment systems for safety switches that meets every customer wish. Brühl relies both on high-quality goods from renowned manufacturers and on high-quality components from own production. These products have proven their worth where handling and wear is concerned in thousands of applications in the past

# Attachment systems for safety switches

## Brühl combination overview

This figure provides a first overview of our diverse attachment systems. We provide the precisely fitting attachment system for every door build. We rely on cooperation with renowned manufacturers or our internally developed and produced preparations.



## Overview: Advantages of the Brühl attachment systems for safety switches

### Diverse possible combinations

Thanks to the diversity of attachment systems for safety switch, access doors of all kinds with different closure or opening options can be put together. The right safety switch or the right attachment system for any application will be available.

### Flexible and modular uses

Many accessory elements can be replaced easily at any time thanks to their modular build (e.g. handles or latch). Simple adjustment of the many attachment systems.

### Quality and reliability

The cooperation with renowned manufacturers ensures bet reliability and quality in all products.

### Assembly instructions included

The complete delivery includes an understandable assembly instruction for each product.

### Prevention of mechanical manipulation

Brühl protective facilities with the corresponding attachment systems are designed to avoid mechanical manipulations by users as far as possible.

Combination overview for door attachment systems with door product groups

Product description		Product type/ construction type	GV-F	GV-S	GRK-F®	GRK-FEO®	HP-F®	HP-FEO®	HP-S®	RI-F®	RV-F	SN-F®	SN-S	SV	UER-FR®	UER-FL®	GR-S®
Wing doors	Wing door for handle, latch or deadlock slam lock, opposite sides	FTW	●	×	●	×	●	×	×	●	●	×	×	●	●	●	×
	Wing door for handle, latch or deadlock slam lock, 1600-3000 mm	FT	●	×	●	×	●	×	×	●	●	●	×	●	●	●	×
	Wing door for handle, latch or deadlock slam lock, opposite sides, with skylight	FTWO	●	×	●	×	●	×	×	●	●	×	×	●	●	●	×
	Portal wing door for handle, latch or deadlock slam lock, opposite sides	PFTW	●	×	●	×	●	×	×	●	●	×	×	●	●	●	×
	Wing door for handle, latch or deadlock slam lock, opening inwards	FTEO	×	×	×	●	×	●	×	×	×	×	×	●	●	●	×
	Double wing door for handle, latch or deadlock slam lock	DFT	●	×	●	×	●	×	×	●	●	●	×	●	●	●	×
Swing doors door wing	Double wing door for handle, latch or deadlock slam lock, with skylight	DFTO	●	×	●	×	●	×	×	●	●	×	×	●	●	●	×
	Swing door	PT	×	×	×	×	×	×	×	×	×	●	×	×	×	×	×
	Swing door with high post	HPT	×	×	×	×	×	×	×	×	×	●	×	×	×	×	×
Sliding doors	Door wing for handle, latch or deadlock slam lock	TF®	●	×	●	×	●	×	×	●	●	×	×	●	●	●	×
	Sliding door for handle or hook lock	ST	×	●	×	×	×	×	●	×	×	×	●	●	×	×	●
	Sliding door for handle or hook lock, inner track	STI	×	×	×	×	×	×	●	×	×	×	●	●	×	×	×
	Sliding door for handle or hook lock, with skylight	STO	×	●	×	×	×	×	●	×	×	×	●	●	×	×	●
	Double sliding door for handle or hook lock	DST	×	●	×	×	×	×	●	×	×	×	●	●	×	×	●
	Sliding door for handle or hook lock, opening on both sides	STB	×	●	×	×	×	×	●	×	×	×	●	●	×	×	●
	Double sliding door for handle or hook lock, with skylight	DSTO	×	●	×	×	×	×	●	×	×	×	●	●	×	×	●
Folding doors	Folding wing door for latch	FAFTR	×	×	×	×	×	×	×	×	×	×	×	●	●	●	×
	Double folding wing door for latch	DFAFTR	×	×	×	×	×	×	×	×	×	×	×	●	●	●	×
	Folding sliding door	FASTG	×	×	×	×	×	×	×	×	×	×	×	●	×	×	×
	Double folding sliding door	DFASTG	×	×	×	×	×	×	×	×	×	×	×	●	×	×	×
Telescoping sliding doors	Sliding door for handle or hook lock, telescoping	STT	×	●	×	×	×	×	●	×	×	×	●	●	×	×	●
	Sliding door for handle or hook lock, opening on both sides, telescoping	STBT	×	●	×	×	×	×	●	×	×	×	●	●	×	×	●
	Double sliding door for handle or hook lock, telescoping	DSTT	×	●	×	×	×	×	●	×	×	×	●	●	×	×	●
Self-supported sliding doors	Self-supported sliding door with hook lock	FSTS	×	×	×	×	×	×	●	×	×	×	×	●	×	×	×
	Self-supported sliding door for handle	FSTG	×	●	×	×	×	×	●	×	×	×	×	●	×	×	●
	Self-supported sliding door with hook lock and telescopic guide	FSTST	×	×	×	×	×	×	●	×	×	×	×	●	×	×	×
	Self-supported sliding door for handle, with telescopic guide	FSTGT	×	●	×	×	×	×	●	×	×	×	×	●	×	×	●
	Self-supported sliding door with hook lock, two wings	FSTS-2	×	×	×	×	×	×	×	×	×	×	×	●	×	×	×
	Self-supported sliding door for handle, two wings	FSTG-2	×	●	×	×	×	×	×	×	×	×	×	●	×	×	●

● Possible with adjustment. ● Possible with on-site adjustment. ● Combination is possible. × Combination is not possible. ○ Combination possible optionally.

① Please indicate the complete designation of the safety switch and actuator in your order/request at all times. ② Call us if the attachment system for safety switch chosen by you is not available in our product selection. ③ For product combinations, see p. 185.

Product group/build  
**GV**

MACHINE-SIDE >

Mechanical stop to avoid damage to the door and safety switch

Flight unlatching possible

< OUTSIDE

**Standard for all Brühl-attachment systems:**

- Robust zinc-plated surface  
☞ ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/ DIN right
- Rounded laser canting parts  
☞ ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
☞ ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Handle preparation BRÜHL-GV

The grip system BRÜHL-GV is a precisely fitting preparation for attachment of compact and multifunctional safety holding-shut devices for different safety switchgear manufacturers. Depending on the switch build, the product properties include an additional mechanical stop to

avoid damage to the door and safety switch, robust zinc-plated surfaces and precisely fitting threads for quick installation.

This is how it works:



➤ You have already chosen a safety switch: e.g. Euchner MGB. ☞

☞ DIN EN ISO 14119



➤ We supply the attachment system to match: Grip preparation BRÜHL-GV with matching provision.



➤ You will receive a precisely fitting attachment system for your safety switch.

### Overview of grip preparations BRÜHL-GV for wing doors

Manufacturer	Switch assembly	Item no.
Euchner	<b>EUCHNER</b> MGB	GV-F-V2-MGB-B004
Fortress Interlocks	amGardpro EI-I6	GV-F-V4-EI16-B090
	amGardpro EN-T6	GV-F-V4-EN4T6SL-B085
Jokab Safety	Knox	GV-F-V3-KNOX-B069
Schmersal	AZM200	GV-F-V2-AZM200-B003
	AZM200-SZ200	GV-FR-V2-AZM200-SZ200-B035
	AZ200-SZ200	GV-FR-V2-AZ200-SZ200-B035
	AZM200-SZ200	GV-FL-V2-AZM200-SZ200-B036
	AZ200-SZ200	GV-FL-V2-AZ200-SZ200-B036

### Overview of grip preparations BRÜHL-GV for sliding doors

Manufacturer	Switch assembly	Item no.
Euchner	<b>EUCHNER</b> MGB	GV-S-V2-MGB-B059
Schmersal	<b>SCHMERSAL</b> AZM200	GV-S-V2-AZM200-B060

#### Explanation of attachment situation abbreviations:

FL = wing door DIN left (doors attached on the left),  
FR = wing door DIN right (doors attached on the right),  
F = wing door, S = sliding door

- ☞ Safety switches are **not** enclosed.
- ☞ Screws for switch attachments are **not** enclosed.  
☞ Cf. EN ISO 14119, 7.2 c and table 3.
- ☞ Attachment elements can only be released with tools. Cf. EN ISO 14119, 52 (a).
- ☞ Observe for fence planning: For grip preparations, the attachment system may protrude in one outer corner; at inner corners, you may need to plan for an additional fence element (e.g. Euchner MGB).
- ☞ To prevent reaching over and actuation of the flight unlatching mechanism, we recommend that the door height be at least 1800 mm and a transfer with a diagonal element at low fence heights. ☞ See special elements p. 36 and 46.
- ☞ See combination overview on p. 185.

#### PRODUCT OPTION



Protection against reaching through for safety switch with flight unlatching  
☞ Ordering options s. p. 171.



Product example: Grip preparation with safety switch by Fortress



Product example: Protection against reaching through

Product group/build  
**GRK®**

MACHINE-SIDE >

Mechanical stop to avoid damage to the door and safety switch

Switch protection thanks to coverage by the grip system

Bullet crossbow for fastening of the door wing

Stable PA-handle

< OUTSIDE

Standard for all Brühl-attachment systems:

- Robust zinc-plated surface  
☞ ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/DIN right
- Rounded laser canting parts  
☞ ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
☞ ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Handle system with bullet crossbow BRÜHL-GRK®

The attachment system BRÜHL-GRK® is the standard attachment system for the precisely fitting attachment of safety switches at Brühl-wing doors. The safety switch is attached from the outside of the machine at the height of the stable plastic handle. The system is characterised by an optional bullet crossbow that is used accord-

ing to the Brühl product recommendation for safety switches with a latching force below 30 N. The attachment system can be used for doors attached on the right or on the left. The Brühl grip system can be combined with different manufacturer-comprehensive safety switches.

This is how it works:

- You have already chosen a safety switch, e.g. Siemens 3SE5.☞
- We supply the attachment system to match: Grip system with bullet crossbow BRÜHL-GRK® with matching provision.
- You will receive a precisely fitting attachment system for your safety switch.

☞ DIN EN ISO 14119

### Overview grip system with bullet crossbow BRÜHL-GRK® for wing doors

Manufacturer	Switch assembly	Item no.
Bernstein	SK	GRK-F-V4-SK-B001
	SKC	GRK-F-V4-SKC-B001
Honeywell	GKN	GRK-F-V4-GKN-B001
ABB	Magne	GRK-F-V2-MAGNE-B071
Pilz	PSENme2	GRK-F-V4-PSENME2-B001
	PSENme3	GRK-F-V4-PSENME3-B001
	PSENslock	GRK-F-V2-PSENSL-B043
	MZM100	GRK-FEO-V1-MZM100-B005
Schmersal	AZ15	GRK-F-V4-AZ15-B001
	AZ16	GRK-F-V4-AZ16-B001
	AZ300	GRK-F-V2-AZ300-B078
	AZM161	GRK-F-V4-AZM161-B002
	AZM170	GRK-F-V4-AZM170-B055
	AZM300	GRK-F-V2-AZM300-B078
	EX-AZ16	GRK-F-V4-EX-AZ16-B001
	EX-AZM161	GRK-F-V4EX-AZM161-B002
	MZM100	GRK-F-V2-MZM100-B006
	BNS-B20	GRK-F-V3-BNS-B20-B007
Sick	i16	GRK-F-V4-i16-B001
	i17	GRK-F-V4-i17-B001
Siemens	3SE2	GRK-F-V4-3SE2-B001
	3SE5	GRK-F-V2-3SE5-B040
Rockwell Automation	440K-T	GRK-F-V4-440K-T-B001

Explanation of attachment situation abbreviations: F = wing door, FEO = wing door opening inwards

- ☞ Safety switches are **not** enclosed.
- ☞ Screws for switch attachments are **not** enclosed.  
Cf. EN ISO 14119, 7.2 c and table 3.
- ☞ Attachment elements can only be released with tools. Cf. EN ISO 14119, 52 (a).
- ☞ See combination overview on p. 185.



ATTACHMENT SYSTEMS FOR SAFETY SWITCHES



Product group/build  
**HP-F®**

MACHINE-SIDE

Simple adjustability of the switch and actuator plate

Mechanical stop to avoid damage to the door and safety switch in handle, grip or latch system

OUTSIDE

Standard for all Brühl-attachment systems:

- Robust zinc-plated surface  
ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/DIN right
- Rounded laser cutting parts  
ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
ISO 14119, 5.2(i)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Retaining plate system BRÜHL-HP-F® for wing doors

The retaining plate system BRÜHL-HP-F® is supplemented according to access comfort with a handle set, a handle or latch. The safety switch is attached with the Brühl retaining plate system in the upper area of the door wing on the machine side. The system can be used for doors attached on the left or right equally. Aluminium plugs serve

manipulation protection. The retaining plate system BRÜHL-HP-F® can be combined easily with safety switches of build 2 (with or without safety holding-shut device).

This is how it works:

- You have already chosen a safety switch, e.g. SchmersalAZM161.®
- We supply the attachment system to match: Retaining plate system BRÜHL-HP-F® for wing doors with matching provision.
- You will receive a precisely fitting attachment system for your safety switch.

DIN EN ISO 14119

### Overview of retaining plate system BRÜHL-HP-F® for wing doors

Manufacturer	Switch assembly	Item no.	Manufacturer	Switch assembly	Item no.				
Bernstein	BERNSTEIN	SK	Pilz	PILZ	PSENme1				
		SKC			HP-F-V1-PSENME1-B012				
		SLK			HP-F-V1-PSENME2-B052				
Comitronic-BTI	AMX	HP-F-V1-AMX-B067	Rockwell Automation	440K-T	HP-F-V1-PSENME3-B052				
Euchner	EUCHNER	CET			HP-F-V1-CET-B049	Schmersal	SCHMERSAL	PSENslock	HP-F-V2-PSENSL-B041
		GP			HP-F-V1-GP-B013			AZ15	HP-F-V1-AZ15-B052
		NZ	HP-F-V1-NZ-B011	AZ16	HP-F-V1-AZ16-B052				
		SGP	HP-F-V1-SGP-B013	AZ17	HP-F-V1-AZ17-B058				
		STA	HP-F-V1-STA-B013	AZ300	HP-F-V1-AZ300-B079				
		STP	HP-F-V1-STP-B013	AZM161	HP-F-V1-AZM161-B038				
		TP	HP-F-V1-TP-B013	AZM170	HP-F-V1-AZM170-B038				
TZ	HP-F-V1-TZ-B030	AZM300	HP-F-V1-AZM300-B079						
Honeywell	Honeywell	GKN	HP-F-V1-GKN-B052	BNS16	HP-F-V1-BNS16-B052				
		GKS	HP-F-V1-GKS-B013	BZ16	HP-F-V1-BZ16-B052				
Leuze electronic	Leuze electronic	L200	HP-F-V1-L200-B013	EX-AZ16	HP-F-V1-EX-AZ16-B052				
		S20	HP-F-V1-S20-B058	EX-AZM161	HP-F-V1-EX-AZM161-B038				
Omron Electronics	OMRON	D4NL	HP-F-V1-D4NL-B046	XCS-A	HP-F-V1-XCS-A-B011				
		D4NS	HP-F-V1-D4NS-B058						

### Overview of retaining plate system BRÜHL-HP-FEO® for wing doors opening inwards

Manufacturer	Switch assembly	Item no.	Manufacturer	Switch assembly	Item no.		
Rockwell Automation	440K-T	HP-FEO-V1-440K-T-B008	Telemecanique Sensors	Telemecanique Sensors	XCS-B		
Bernstein	BERNSTEIN	SK			HP-FEO-V1-SK-B008	XCS-C	HP-F-V1-XCS-C-B011
		SKC			HP-FEO-V1-SKC-B008	XCS-E	HP-F-V1-XCS-E-B030
Honeywell	Honeywell	GKN			HP-FEO-V1-GKN-B008	XCS-PA	HP-F-V1-XCS-PA-B052
		Pilz			PILZ	PSENme2	HP-FEO-V1-PSENME2-B008
PSENme3	HP-FEO-V1-PSENME3-B008					XCS-TE	HP-F-V1-XCS-TE-B030
AZ15	HP-FEO-V1-AZ15-B008					i10	HP-F-V1-i10-B013
Schmersal	SCHMERSAL	AZ16			HP-FEO-V1-AZ16-B008	i12	HP-F-V1-i12-B058
		AZM161			HP-FEO-V1-AZM161-B009	i16	HP-F-V1-i16-B052
		AZ16			HP-FEO-V1-EX-AZ16-B008	i17	HP-F-V1-i17-B052
Sick	SICK	AZM161	HP-FEO-V1-EX-AZM161-B009	3SE2	HP-F-V1-3SE2-B052		
		i16	HP-FEO-V1-i16-B008	3SE5	HP-F-V1-3SE5-B010		
		i17	HP-FEO-V1-i17-B008	3SE5	HP-F-V1-3SE5-B051		
Siemens	SIEMENS	3SE22	HP-FEO-V1-3SE2-B008				

Explanation of attachment situation abbreviations: F = wing door, FEO = wing door opening inwards

- Safety switches are not enclosed.
- Screws for switch attachments are not enclosed. Cf. EN ISO 14119, 7.2 c and table 3.
- Attachment elements can only be released with tools. Cf. EN ISO 14119, 5.2 (a).
- See combination overview on p. 185.

ATTACHMENT SYSTEMS FOR SAFETY SWITCHES



Product group/build  
**HP-S®**

MACHINE-SIDE

Adjustability of the switch and actuator plate

Mechanical stop to avoid damage to the door and safety switch by stopper in the aluminium profile

Optimal run-in of actuator and switch guaranteed

OUTSIDE

Standard for all Brühl-attachment systems:

- Robust zinc-plated surface  
ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/DIN right
- Rounded laser cutting parts  
ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Retaining plate system BRÜHL-HP-S® for sliding doors

The retaining plate system BRÜHL-HP-S® is supplemented with a handle set or handle according to the access comfort and can be used for doors attached on the left or right. A mechanical stop in the aluminium profile avoids damage to the safety switch and actuator. The position of the safety switches depends on the door build and

wing availability. The retaining plate system BRÜHL-HP-S® can be combined easily with safety switches of build 2 (with or without safety holding-shut device).

This is how it works:



You have already chosen a safety switch: e.g. Euchner TZ.®

DIN EN ISO 14119



We supply the attachment system to match: Retaining plate system BRÜHL-HP-S® for sliding doors with matching provision.



You will receive a precisely fitting attachment system for your safety switch.

### Overview of the retaining plate system BRÜHL-HP-S® for sliding doors

Manufacturer	Switch assembly	Item no.	Manufacturer	Switch assembly	Item no.		
Bernstein	BERNSTEIN	SK	Schmersal	SCHMERSAL	AZ15		
		SKC			AZ16		
		SLK+ENK			AZ17		
		SLK			AZM161		
Comitronic-BTI		AMX		AZM170			
Euchner	EUCHNER	NZ	Telemecanique Sensors	Telemecanique Sensors	BNS16		
		STA			BZ16		
		STP			AZM400		
		TP			XCS-A		
		TZ			XCS-B		
		CET			XCS-C		
Honeywell	Honeywell	GKN	Sick	SICK	XCS-E		
		GKS			XCS-PA		
Jokab Safety		EDEN			Siemens	SIEMENS	XCS-TA
Leuze electronic	Leuze electronic	L200					i10
		S20					i12
Omron Electronics	OMRON	D4NS					i16
		PSENme1	i17				
Pilz	PILZ	PSENme2	T400-DNA				
		PSENme3	3SE2				
		PSENslook	3SE5				
		PSENcs3	3SE5				
		PSENcs4					
		PSENma1					
		PSENma2					
		Rockwell Automation		440G-T			
		440K					

Explanation of attachment situation abbreviations: S = sliding door

- ① Safety switches are not enclosed.
- ② Screws for switch attachments are not enclosed. Cf. EN ISO 14119, 7.2 c and table 3.
- ③ Attachment elements can only be released with tools. Cf. EN ISO 14119, 52 (a).
- ④ See combination overview on p. 185.



Product example: Retaining plate with safety switch by Euchner



Standard for all Brühl-attachment systems:

- Robust zinc-plated surface  
☞ ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/ DIN right
- Rounded laser cutting parts  
☞ ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
☞ ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Latch system BRÜHL-RI® for wing doors

The latch bolt mechanically guides the actuator when it moves into the safety switch. The BRÜHL-RI® latch system has an integrated protection against falling shut; a pressure spring holds the latch tab in the position "latch closed" without actuation. Aluminium plugs serve manipulation protection. This system is very robust, requires little

maintenance and cleaning and has proven its worth in the industrial environment for more than 30 years. The attachment system BRÜHL-RI® can be combined easily with safety switches of build 2 (with or without safety holding-shut device).

This is how it works:

➤ You have already chosen a safety switch: e.g. Euchner TP. ☞

☞ DIN EN ISO 14119

➤ We supply the attachment system to match: Latch system BRÜHL-RI® for wing doors with matching provision.

➤ You will receive a precisely fitting attachment system for your safety switch.

### Overview of the latch system BRÜHL-RI® for wing doors

Manufacturer	Switch assembly	Item no.
Bernstein	SLK	RI-F-V1-SLK-B016
	SK	RI-F-V5-SK-B021
	SKC	RI-F-V5-SKC-B021
Euchner	CTP	RI-F-V1-CTP-B017
	NZ	RI-F-V1-NZ-B054
	STA	RI-F-V1-STA-B017
	STP	RI-F-V1-STP-B017
	TP	RI-F-V1-TP-B017
	TZ	RI-F-V1-TZ-B018
Honeywell	GKS	RI-F-V1-GKS-B017
	GKN	RI-F-V5-GKN-B021
Leuze electronic	L200	RI-F-V1-L200-B017
Pilz	PSENme1	RI-F-V1-PSENME1-B016
	PSENme2	RI-F-V5-PSENME2-B021
	PSENme3	RI-F-V5-PSENME3-B021
Rockwell Automation	440K-C	RI-F-V1-440K-C-B054
	440K-C	RI-F-V5-440K-C-B021
	440K-T	RI-F-V5-440K-T-B021
Schmersal	AZ15	RI-F-V5-AZ15-B021
	AZ16	RI-F-V5-AZ16-B021
	AZM161	RI-F-V5-AZM161-B022
	AZM190	RI-F-V5-AZM190-B057
	BNS16	RI-F-V5-BNS16-B021
	TZK	RI-F-V5-TZK-B057
Telemecanique Sensors	XCS-E	RI-F-V1-XCS-E-B018
Sick	i10	RI-F-V1-i10-B017
	i16	RI-F-V5-i16-B021
	i17	RI-F-V5-i17-B021
Siemens	3SE5	RI-F-V1-3SE5-B015
	3SE2	RI-F-V5-3SE2-B021

Explanation of attachment situation abbreviations: F = wing door

- ☞ Safety switches are not enclosed.
- ☞ Screws for switch attachments are not enclosed. Cf. EN ISO 14119, 7.2 c and table 3.
- ☞ Attachment elements can only be released with tools. Cf. EN ISO 14119, 5.2 (a).
- ☞ See combination overview on p.185.



Product example: Latch system with safety switch by Pilz



Product example: Latch system with safety switch by Euchner in attachment situation

ATTACHMENT SYSTEMS FOR SAFETY SWITCHES





Product group/build  
**RV**

MACHINE-SIDE >

Escape unlatching device as switch preparation (SV) possible

Can be combined with many safety switches

Mechanical stop to avoid damage to the door and safety switch

< OUTSIDE

Standard for all Brühl-attachment systems:

- Robust zinc-plated surface  
☞ ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/ DIN right
- Rounded laser cutting parts  
☞ ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
☞ ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Latch preparation BRÜHL-RV for wing doors

This system is a preparation for safety switches that is made of a combination of safety switch, attachment plates/elements and latches of many different safety switchgear manufacturers. The BRÜHL-RV-system is used to install the safety switch precisely to ensure long-lived

latching function. A high assembly effort is avoided by using standard hole patterns at Brühl wing doors.

This is how it works:



➤ You have already chosen a safety switch, e.g. Fortress Interlocks AMS1STOP. ☞

☞ DIN EN ISO 14119



➤ We supply the attachment system to match: Latch preparation BRÜHL-RV for wing doors with matching provision.



➤ You will receive a precisely fitting attachment system for your safety switch.

### Overview of latch preparation BRÜHL-GV for wing doors

Manufacturer	Switch assembly	Item no.
Dold	<b>DOLD</b>	STS RV-F-V4-STS3-B063
Euchner	<b>EUCHNER</b>	CTP RV-F-V3-CTP-B020
		GP RV-F-V3-GP-B020
		NZ RV-F-V3-NZ-B020
		SGP RV-F-V3-SGP-B020
		STA RV-F-V3-STA-B020
		STP RV-F-V3-STP-B020
		TP RV-F-V3-TP-B020
		TX RV-F-V3-TX-B020
TZ RV-F-V3-TZ-B020		
Fortress Interlocks	<b>Fortress Interlocks</b>	AMA1STOP RV-F-V2-AMA1STOP-B019
		AMS1STOP RV-F-V2-AMS1STOP-B019
		DM1 RV-F-V4-DM1-B033
		DM2 RV-F-V4-DM2-B033
Pilz	<b>PILZ</b>	PSEncs1 RV-F-V3-PSENCs-B032
		PSEncs2 RV-F-V3-PSENCs-B032
		PSEnme1 RV-F-V3-PSENME1-B032
		PSEnsgate RV-F-V6-PSENSG-B064
Telemecanique Sensors	<b>Telemecanique Sensors</b>	XCS-A RV-F-V2-XCS-A-B066
		XCS-B RV-F-V2-XCS-B-B066
		XCS-C RV-F-V2-XCS-C-B066
		XCS-E RV-F-V2-XCS-E-B066

Explanation of attachment situation abbreviations: F = wing door

- ☞ Safety switches are not enclosed.
- ☞ Screws for switch attachments are not enclosed.  
Cf. EN ISO 14119, 7.2 c and table 3.
- ☞ Attachment elements can only be released with tools. Cf. EN ISO 14119, 52 (a).
- ☞ To prevent reaching over and actuation of the flight unlatching mechanism, we recommend that the door height be at least 1800 mm and a transfer with a diagonal element at low fence heights.
- ☞ See special elements p. 36 and 46.
- ☞ See combination overview on p. 185.



Product example: Latch preparation with safety switch by Dold

ATTACHMENT SYSTEMS FOR SAFETY SWITCHES



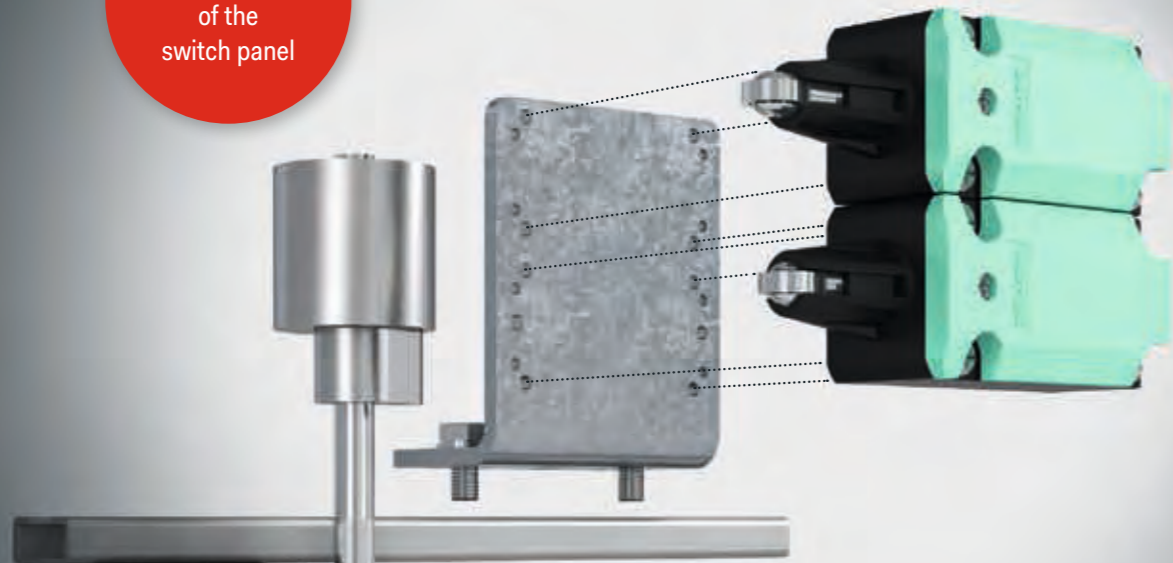


Product group/build  
**SN-F**

MACHINE-SIDE >

Two-channel  
signal emission of the  
safety switch

Simple  
adjustability  
of the  
switch panel



< OUTSIDE

Standard for all Brühl-attachment systems:

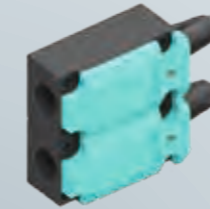
- Robust zinc-plated surface  
☞ ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/ DIN right
- Rounded laser cutting parts  
☞ ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
☞ ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Switching cam system BRÜHL-SN-F for wing doors

The switching cam system BRÜHL-SN-F is used only on pendulum and wing doors due to the effective principle. This attachment system is highly beneficial when a very fast system access is desired. It is combined with two roller plunger switches (Build 1) that permit safe

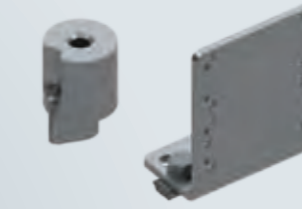
two-channel signal query that can have a positive effect on the Performance-Level or the safety category in the scope of risk assessment.

This is how it works:



➤ You have already chosen a safety switch: e.g. Siemens 3SE5 (2x).<sup>①</sup>

☞ DIN EN ISO 14119



➤ We supply the attachment system to match: Switching cam system BRÜHL-SN-F for wing doors with matching provision.



➤ You will receive a precisely fitting attachment system for your safety switch.

### Overview of the switching cam system BRÜHL-SN-F for wing doors

Manufacturer	Switch assembly	Item no.	
Bernstein	BERNSTEIN	ENK	SN-F-V1-ENK-B034
Euchner	EUCHNER	NZ	SN-F-V1-NZ-B034
Rockwell Automation		440P-MR	SN-F-V1-440P-B034
Schmersal	SCHMERSAL	332ZR	SN-F-V1-332-B034
		335TR	SN-F-V1-335-B034
Siemens	SIEMENS	3SE5	SN-F-V1-3SE5-B034

Explanation of attachment situation abbreviations: F = Wing door

- ① Safety switches are not enclosed.
- ② Screws for switch attachments are not enclosed.  
Cf. EN ISO 14119, 7.2 c and table 3.
- ③ Attachment elements can only be released with tools. Cf. EN ISO 14119, 52 (a).
- ☞ See combination overview on p. 185.



Product example: Hinge switch with Schmersal TV10 on a swing door



Product example: Switching cam system with safety switch by Euchner

ATTACHMENT SYSTEMS FOR SAFETY SWITCHES



Product group/build  
**SN-S**

MACHINE-SIDE >

Simple adjustability of the switch and actuator plate

Mechanical stop to avoid damage to the door and safety switch by stopper in the aluminium profile

Two-channel signal emission of the safety switch

< OUTSIDE

Standard for all Brühl-attachment systems:

- Robust zinc-plated surface  
☞ ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/ DIN right
- Rounded laser cutting parts  
☞ ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
☞ ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Switching cam system BRÜHL-SN-S for sliding doors

The attachment panels of the switching cam system BRÜHL-SN-S are rounded laser-edge parts that are made of robust, zinc-plated steel. The switching cam profile has a powder-coated surface in wing colour. Two roller lever switches (build 1) can be installed on the switching

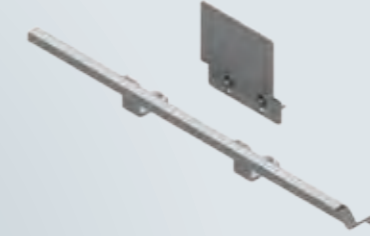
cam system across manufacturers and precisely fitting for safe two-channel signal query; they can have a positive effect on the Performance-Level or the safety category in the scope of risk assessment.

This is how it works:

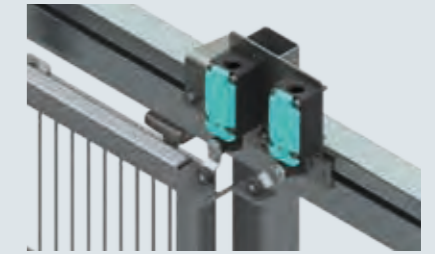


➤ You have already chosen a safety switch: e.g. Siemens 3SE5 (2x).<sup>①</sup>

☞ DIN EN ISO 14119



➤ We supply the attachment system to match: Switching cam system BRÜHL-SN-S for sliding doors with matching provision.



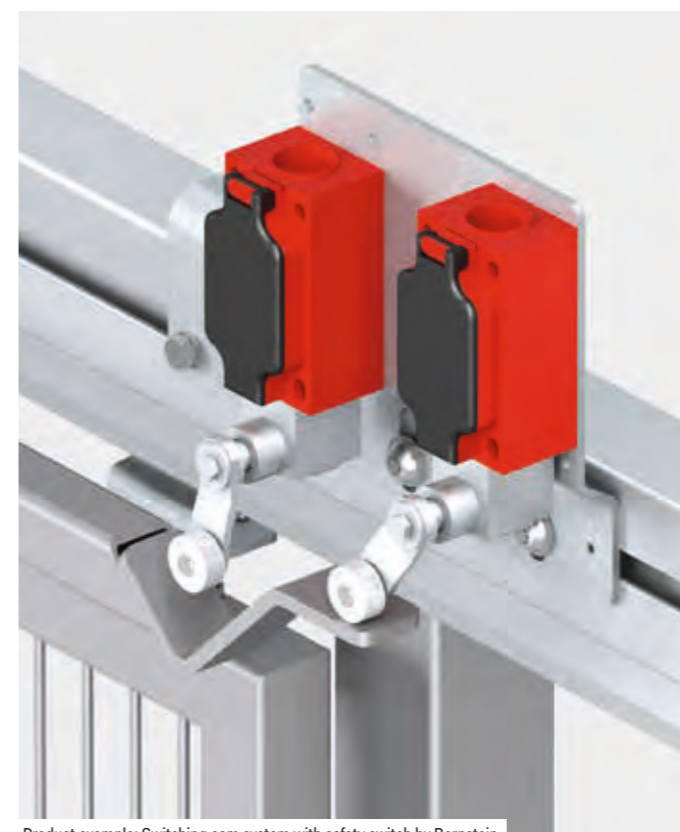
➤ You will receive a precisely fitting attachment system for your safety switch.

### Overview of the switching cam system BRÜHL-SN-S for sliding doors

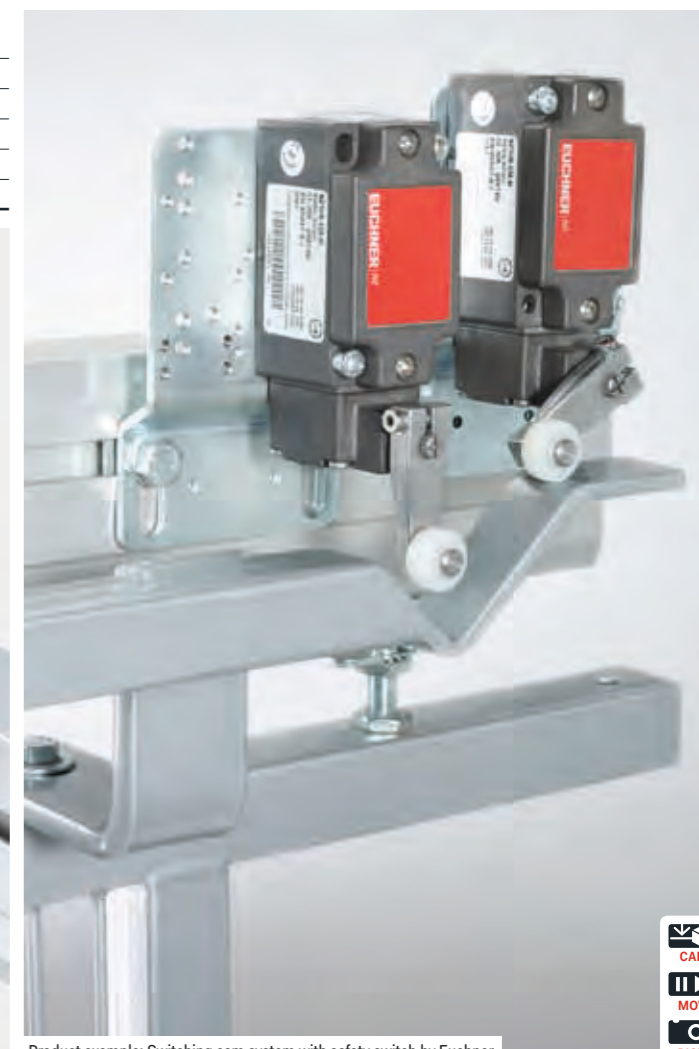
Manufacturer		Switch assembly	Item no.
Bernstein	<b>BERNSTEIN</b>	ENK	SN-S-V1-ENK-B023
Euchner	<b>EUCHNER</b>	NZ	SN-S-V1-NZ-B023
Rockwell Automation		440P-M	SN-S-V1-440P-B023
Schmersal	<b>SCHMERSAL</b>	Z4VH332	SN-S-V1-332-B023
		T4VH335	SN-S-V1-335-B023
		Z4VH336	SN-S-V1-336-B023
Sick	<b>SICK</b>	i110R	SN-S-V1-i110P-B023
Siemens	<b>SIEMENS</b>	3SE5	SN-S-V1-3SE5-B023

Explanation of attachment situation abbreviations: S = sliding door

- ① Safety switches are not enclosed.
- ② Screws for switch attachments are not enclosed.  
Cf. EN ISO 14119, 7.2 c and table 3.
- ③ Attachment elements can only be released with tools. Cf. EN ISO 14119, 52 (a).
- ☞ See combination overview on p.185.



Product example: Switching cam system with safety switch by Bernstein



Product example: Switching cam system with safety switch by Euchner

Product group/build  
**SV**

MACHINE-SIDE

Factory-side switch preparation for special switches or flight/emergency unlatching

Hinge switches are prepared optimally, e.g. with attachment plates and welded parts

Flight unlatching preparation by hole pattern adjustment at the post or door wing

OUTSIDE

Standard for all Brühl-attachment systems:

- Robust zinc-plated surface  
☞ ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/DIN right
- Rounded laser canting parts  
☞ ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
☞ ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Safety switch preparation BRÜHL-SV

The switch preparation BRÜHL-SV is mostly used in any Brühl-doors when safety switches are prepared precisely fitting in the factory (for quick installation on site). With this system preparation, the safety switch is function-dependent and may take the form of, e.g., hole

pattern adjustment at the post/door wing as preparation of a flight unlatching, special hole pattern and welding substructure adjustment.

This is how it works:



➤ You have already chosen a safety switch: e.g. Pilz PSENcode. ①

☞ DIN EN ISO 14119



➤ We supply the attachment system to match with door adjustment: Safety switch preparation BRÜHL-SV e.g. by supporting the post and/or wing preparation.



➤ You will receive a precisely fitting attachment system for your safety switch.

### Overview of safety switch preparation BRÜHL-SV for wing doors

Manufacturer	Switch assembly	Item no.
ABB	EDEN	SV-F-V5-EDEN-B077
Bernstein	SLK+ENK	SV-F-V4-SLK+ENK-B044
	MAK	SV-F-V5-MAK-B077
Euchner	CES	SV-F-V5-CES-B077
	CMS	SV-F-V5-CMS-B077
	MGB-PN	SV-F-V6-MGB-PN
Fortress Interlocks	SBILOKIR	SV-F-V7-SBILOKIR-B076
	SBNLOCK	SV-F-V7-SBNLOCK-B076
	SBSLOCK	SV-F-V7-SBSLOCK-B076
	tGard THE-RX/RZ	SV-F-V7-THE-B084
	tGard THH-RX/RZ	SV-F-V7-THH-B084
Leuze electronic	MC336	SV-F-V5-MC3-B077
	MC336	SV-F-V5-MC3-B077
Omron Electronics	F3S-TGR	SV-F-V5-F3S-TGR-B077
Pilz	PSEN1.1	SV-F-V5-PSENMA-B077
	PSEN2.1	SV-F-V5-PSENMA-B077
	PSENcode	SV-F-V5-PSENCs-B077
	PSENcs3	SV-F-V5-PSENCs-B077
	PSENcs4	SV-F-V5-PSENCs-B077
	PSENmagg	SV-F-V5-PSENMA-B077
Rockwell Automation	440N-S	SV-F-V5-440N-S-B077
	440N-Z	SV-F-V5-440N-Z-B077
Schmersal	AZM161-ST530	SV-F-V1-AZM161-ST530-01
		(...)
		SV-F-V1-AZM161-ST530-08
	AZM415-ST530	SV-F-V1-AZM415-ST530-01
		(...)
		SV-F-V1-AZM415-ST530-08
	AZM161-ST530	SV-F-V1-EX-AZM161-ST530-01
		(...)
		SV-F-V1-EX-AZM161-ST530-08
	AZM415-ST530	SV-F-V1-EX-AZM415-ST530-01
		(...)
		SV-F-V1-EX-AZM415-ST530-08

### Overview of safety switch preparation BRÜHL-SV for wing doors opening inwards

Manufacturer	Switch assembly	Item no.
ABB	EDEN	SV-FEO-V5-EDEN-B077
Bernstein	MAK	SV-FEO-V5-MAK-B077
Euchner	CES-A-LNN	SV-FEO-V5-CES-B077
	CMS-R-B	SV-FEO-V5-CMS-B077
Leuze electronic	MC336	SV-FEO-V5-MC3-B077
Omron Electronics	F3S-TGR	SV-FEO-V5-FEO3S-TGR-B077
Pilz	PSEN1.1	SV-FEO-V5-PSENMA-B077
	PSEN2.1	SV-FEO-V5-PSENMA-B077
	PSENcode	SV-FEO-V5-PSENCs-B077
	PSENcs3	SV-FEO-V5-PSENCs-B077
	PSENcs4	SV-FEO-V5-PSENCs-B077
	PSENmagg	SV-FEO-V5-PSENMA-B077
Rockwell Automation	440N-S	SV-FEO-V5-440N-S-B077
	440N-Z	SV-FEO-V5-440N-Z-B077
Schmersal	BNS250	SV-FEO-V5-BNS250-B077
	BNS250	SV-FEO-V5-BNS250-B077

Explanation of attachment situation abbreviations: FEO = wing door opening inwards, F = wing door

- ① Safety switches are not enclosed.
- ② Screws for switch attachments are not enclosed.  
Cf. EN ISO 14119, 7.2 c and table 3.
- ③ Attachment elements can only be released with tools. Cf. EN ISO 14119, 52 (a).
- ④ To prevent reaching over and actuation of the flight unlatching mechanism, we recommend that the door height be at least 1800 mm and a transfer with a diagonal element at low fence heights.
- ⑤ See special elements p. 36 and 46.
- ⑥ See combination overview on p. 185.



Product group/build  
**UER®**

MACHINE-SIDE >

< OUTSIDE

Latch with ball knob and centring mandrel

Protection against pushing through of the door wing at folding or double wing doors

Mechanical stop to avoid damage to the door and safety switch

Standard for all Brühl-attachment systems:

- Robust zinc-plated surface  
☞ ISO 14120, 5.6
- Symmetrical construction for door stop device DIN left/ DIN right
- Rounded laser canting parts  
☞ ISO 14120, 5.3.7
- Precisely fitting threads for switch attachment  
☞ ISO 14119, 5.2/(j)
- Precisely fitting provisions for safety switch
- All screw-connections are manipulation-proof

## Overroll latch system BRÜHL-UER®

The overroll latch system BRÜHL-UER® prevents pushing through of the wings at folding or double folding wing doors, which permits compliance with the safety distances of the risk and danger assessment. This system is very robust, requires little maintenance and cleaning

and has proven its worth in the industrial environment for many years. Combinations are available with many safety switches – Brühl recommends the combination of safety switch and a contact free principle of effect.

This is how it works:



➤ You have already chosen a safety switch: e.g. Schmersal MZM100. ☞

☞ DIN EN ISO 14119



➤ We supply the attachment system to match: Overroll latch system BRÜHL-UER® with matching provision.



➤ You will receive a precisely fitting attachment system for your safety switch.

### Overview of the overroll latch system BRÜHL-UER®

Manufacturer	Switch assembly	Item no.
Euchner	<b>EUCHNER</b> TZ	UER-FR-V1-TZ-B028
	TZ	UER-FL-V1-TZ-B025
Schmersal	<b>SCHMERSAL</b> MZM100	UER-FL-V2-MZM100-B073
	MZM100	UER-FR-V2-MZM100-B073

Explanation of attachment situation abbreviations: FL = wing door DIN left (doors with left attachment)  
FR = wing door DIN right (doors with right attachment)

- ☞ Safety switches are not enclosed.
- ☞ Screws for switch attachments are not enclosed.  
Cf. EN ISO 14119, 7.2 c and table 3.
- ☞ Attachment elements can only be released with tools. Cf. EN ISO 14119, 52 (a).
- ☞ See combination overview on p. 185.



Product example: Overroll latch system with safety switch by Schmersal



Product example: Overroll latch system without safety switch

ATTACHMENT SYSTEMS FOR SAFETY SWITCHES

