



Sliding door with intruder protection

SECURITY AND CONVENIENCE INTELLIGENTLY COMBINED

A high level of security is essential for public buildings. However, also many shop owners are aware of the importance of preventive vandalism and burglary protection.

This is where DORMA's new ST FLEX and FST FLEX SECURE comes into play, as this system unites the convenience of an automatic door with effective burglary and vandalism protection. Furthermore, the elegant, automatic sliding door solution provides facility operators with a high level of security.

SECURE stands for maximum protection

Despite its elegant design, DORMA's ST FLEX and FST FLEX SECURE sliding door system provides maximum and at the same time invisible intruder and vandalism protection according to VDS (Association of German Property Insurers) resistance class WK2/RC2.

Your benefit: Compared to similar security systems, there are no visible barriers so that your display windows remain as transparent and inviting as ever without any negative effect on their advertising space characteristics.

Technical details of ST FLEX SECURE at a glance:

 A continuous floor guide rail at the bottom of the door and an operator-integrated anti-tamper protection avoid that the door is levered out

- Four-point hook locking device with automatic locking action at the main closing edge and lateral door profiles
- Special burglary-protection glazing is adhered to the door profile with the aid of a special adhesive

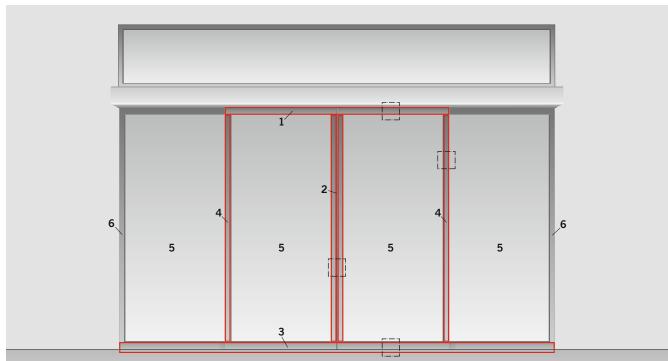
Furthermore, the door may be equipped with any product from the comprehensive range of accessories for our standard sliding door systems.

If requested, ST FLEX and FST FLEX SECURE may be fitted with DIN 18650 and EN 16005 compliant safety equipment – depending on the prevailing structural conditions and risk assessment.

Features and benefits

- Prefabricated door panels
- Flexible system: may be combined with ES 200 and ES 200-2D
- The automatic sliding door is tested from European Standard ENV 1627 to 1630
- Glazing tested to DIN EN 356, resistance class P4A:
 - Security double-glazing (22 mm LSG)
 - Mono safety glazing (10 mm LSG)

Security-relevant components



- 1 DORMA operator-integrated protection against levering-out over the full passage width
- 2 DORMA SECURE 4-point locking device
- 3 DORMA SECURE floor guide over the full door width
- 4 Continuous interlocking profiles at the secondary closing edge
- 5 Burglary-resistant laminated safety glass (resistance class WK2) P4A (10 mm) or laminated safety glass P4A (22 mm) adhered to the frame with special adhesive
- **6** Special anchoring to meet the requirements of resistance class WK2/RC2 (1. anchoring 270 mm from upper edge of operator then every 400 mm)
- ☐ See page 9 for corresponding cross sections.

Evidence of performance

Burglar resistance

Expert statement 10-001167-PR02 dated 18. October 2011 (GAS01-C01-05-en-01)

Translation of Expert Statement 10-001167-PR02 dated 6 October 2011

Client DORMA GmbH + Co. KG **DORMA Platz 1** 58256 Ennepetal Germany

Burglar resistant sliding door system, WK2 (RC2)

Designation ST FLEX SECURE / FST FLEX SECURE

Clear opening di-(see type list) mensions (W x H) Aluminium, DORMA profile system ST FLEX (Frame)

DORMA operator profiles ES200 Material

External face Attack side

different

Two leaf / single leaf sliding, with / without glazed side panels.

with / without glazed top light 1 -/ 2 - / 3-part Type of opening

Glazing DIN EN 356 Klasse P4A

Multipoint lock Fuhr Type 3 pivoted bold lock with 4 pivoted bolts as per DIN 18251 Class 4; Profile cylinder as per DIN 18252 P2BZ; continuous strike plate; continuous coupling rim ST FLEX; continuous disengagement protection in drive; continuous DORMA floor

guide track Hardware

As per installation instructions from company Installation DORMA GmbH + Co. KG

Burglar resistance



Resistance Class RC 2*)

*) on the basis of the mentioned test reports and the complementary, changerelated specifications

ift Rosenheim 18. October 2011

Robert Krippahl, Dipl.-Ing. (FH) Deputy Head of Testing Department

Building Components



ift Rosenheim GmbH

Geschäftsführer: Dipl.-Ing. (FH) Ulrich Sieberath Dr. Jochen Peichl

Jens Pickelmann **Operating Testing Officer** Mechanics

-Gietl-Str. 7 - 9

Sitz: 83026 Rosenheim AG Traunstein, HRB 14763 Sparkasse Rosenheim (to. 3822 3LZ 711 500 00



Basis

DIN EN 1627: 2011 Windows, doors, shutters ¬ - Burglar resistance - Requirements and classification

DIN EN 1628 : 2011 DIN EN 1629: 2011 DIN EN 1630: 2011

Test report 10-001154-PB01-C01-05-de-01 dated 20 December 2010

Result protocol 10-001209-PR01 (EP01-C01-05-de-01) dated 06 July 2011

Result protocol 10-001209-PR02 (EP01-C01-05-de-01) dated 06 July 2011

Design sheets Annex 1, pp 1 to 13 Annex 2, pp 1 to 36

Validity

Testing for burglar resistance does not allow any statement to be made on any further characteristics regarding performance and quality of the construction submitted.

Validity of the expert statement expires with expiry of any one of the above items referred to as basis (standards or test reports).

Notes on publication

The ift Guidance Sheet "Conditions and Guidance for the Use of ift Test Reports" applies.

The cover sheet including the type list can be used as an abstract.

Contents

The expert statement comprises a total of 56 pages

Cover sheet Type list Expert Statement

- 1 Order
- 2 Basis of evaluation
- 3 Evaluation
- 4 Results and statement

Annex 1 (1 page) Annex 2 (36 pages)

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Expert statement

10-001167-PR02-(GAS01-C01-05-de-01) dated 18. October 2011

Client

DORMA GmbH + Co. KG, 58256 Ennepetal, Germany



TYPE LIST

No.	Tested type	Design variants approved by expert statement	Evidence / reports requirements
1.	Single-panel and	Single-panel and double-panel sliding door systems	Test report
	double-panel siding	available:	10-001154-PB01-C01-05-de-01
	door systems with	with and without side screens	dated 20 December 2010
	glazed side screens	with and without fanlight	Result protocol
	and fanlight	(glazed in one-piece / two-part / 3-part version)	10-001209-PR01
			(EP01-C01-05-de-01)
			and 10-001209-PR02
			(EP01-C01-05-de-01)
			dated 06 July 2011
			Expert statement
			10-001167-PR02
			dated 18 October 2011
2.	Single-panel and	Use of	Test report
۷.	double-panel sliding	P4A double-glazing	10-001154-PB01-C01-05-de-01
		with a thickness of 22 mm	dated 20 December 2010
	door systems with		Result protocol
	P4A double-glazing,	P4A single-glazing with a thickness of 10 years.	•
	a thickness of 20 mm	with a thickness of 10 mm	10-001209-PR01
	and single-glazing		(EP01-C01-05-de-01) and
			10-001209-PR02
			(EP01-C01-05-de-01)
			dated 06 July 2011
			Expert statement
			10-001167-PR02
			dated 18 October 2011
3.	Single-panel and	Single-panel and double-panel sliding door systems	Test report
	double-panel sliding	with various clear opening dimensions:	10-001154-PB01-C01-05-de-01
	door systems with		dated 20 December 2010
	a clear passage width	Double-panel version:	Result protocol
	of 2500 mm x 3000 mm	Width 800 mm – 3000 mm	10-001209-PR01
	or 700 mm x 2800 mm	Height 2100 mm – 3100 mm	(EP01-C01-05-de-01) and
		Single-panel version:	10-001209-PR02
		Width 700 mm – 3000 mm	(EP01-C01-05-de-01)
		Height 2100 mm – 3100 mm	dated 06 July 2011
			Expert statement
		FST-Türen (double-panel and single-panel version):	10-001167-PR02
		Width 900 mm – 3000 mm	dated 18 October 2011
		Height 2100 mm – 3100 mm	
4.	Single-panel and	Single-panel and double-panel sliding door systems	Test report
	double-panel sliding	 with and without side screens 	10-001154-PB01-C01-05-de-01
	door systems with	• for mounting in mullion and transom construction	dated 20 December 2010
	glazed side screens	 tested as a burglar-resistant component to resistance 	Result protocol
	for mounting at solid	class WK2 or higher	10-001209-PR01
	surrounding walls	 with location of profiles/screws in the mullion 	(EP01-C01-05-de-01) and
	Samounding Walls	res. transom area	10-001209-PR02
		ics. Hallsulli alea	
			(EP01-C01-05-de-01)
			dated 06 July 2011

Preparation of adjacent walls by	others	ST FLEX SECURE	FST FLEX SECURE		
The adjacent walls must have the following properties to meet the requirements of resistance class WK2/RC2:					
Masonry to DIN 1053-1	Nominal thicknessCrushing resistance of brickworkMortar group	≥ 11 ≥ 12	5 mm		
Steel concrete to DIN 1045	Nominal thicknessStrength class	≥ 10 B1	0 mm 5		

Door parameters		ST FLEX SECURE	FST FLEX SECURE
Double-panel sliding door	– Clear passage width (LW)	800 – 3,000 mm	900 – 3,000 mm
	– Clear passage height (LH)	2,100 – 3,100 mm	2,100 – 3,100 mm
	– Door panel weight	max. 2 x 160 kg	max. 2 x 130 kg
Single-panel sliding door	– Clear passage width (LW)	700 – 3,000 mm	900 – 3,000 mm
	– Clear passage height (LH)	2,100 – 3,100 mm	2,100 – 3,100 mm
	– Door panel weight	max. 1 x 200 kg	max. 1 x 150 kg

Versions		ST FLEX SECURE	E FST FLEX SECURE	
Profile systems	Universal profile system with security glazing to DIN EN 356 category P4A	•	•	
	Universal profile system with security double-glazing	0	0	
	With side screens	0	0	
	Combined sensors to DIN 18650 and EN 16005	•	•	
	Continuous floor-integrated guide rail The floor guide rail is always required and has to be provided by others!	•	•	
Elevation height and depth of operator 150 mm x 180 mm		•	•	
Fanlight in one-piece / two-part / 3-part version		0	0	
ST FLEX safety screen		0	0	

CURE FST FLEX SECURE
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ullet standard \circ optional - no

Additional equipment		ST FLEX SECURE	FST FLEX SECURE	
Manual lock release for	DORMA SECURE locking device	•	•	
Light barriers		0	0	
Rechargeable battery pa	nck (emergency opening/closing)	0	•	
Coupling module for con	nection to EIB or LON building management systems	0	0	
Function module (FM)	 3 door status contacts Safeguarding of main closing edge & secondary closing edges Panic closing (Observe corresponding regulations!) Bell contact Airlock control Synchronous operation 	0	0	
DIN 18650 and EN 16005 function module The DIN 18650 and EN 16005 function module provides tested monitoring of the secondary closing edges for compliance with the German Industrial Standard DIN 18650 and EN 16005		0	0	

Technical operator data	ST FLEX SECURE	FST FLEX SECURE	
DORMA SECURE locking device	•	•	
Suitable for application in emergency exits and escape routes	-	∏ ₹	
Height	150 mm	150 mm	
Overall depth	180 mm	180 mm	
Max. opening and closing force 150 N	•	•	
Opening speed (incremental setting)	10 - 70 cm/s	10 – 70 cm/s	
Closing speed (incremental setting)	10 - 50 cm/s	10 - 50 cm/s	
Hold-open time	0 – 180 s	0 – 180 s	
Supply voltage, frequency	230 V, 50/60 Hz	230 V, 50/60 Hz	
Power consumption	250 W	250 W	
Class of protection	IP 20	IP 20	
Admissible temperature	- 20 - + 60 °C	- 20 – + 60 °C	
Admissible humidity (relative)	max. 93 % (non condensing)	max. 93 % (non condensing)	
Tested according to Low Voltage Directive and EMC guidelines	•	•	
Manufactured to ISO 9001	•	•	

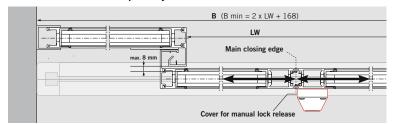
ullet standard \circ optional - no

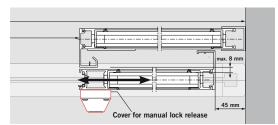
HORIZONTAL SECTIONS

Door is closed

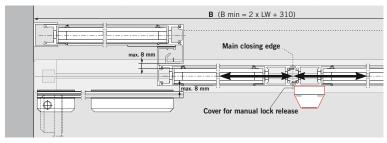
Door is open

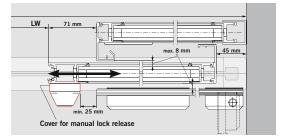
Corridor-mounted double-panel systems with side screens



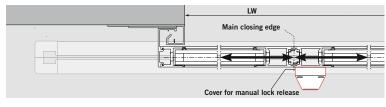


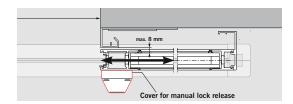
Corridor-mounted double-panel systems with side screens - security screens on the inside



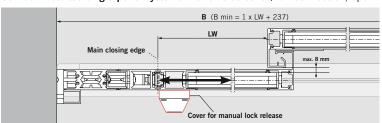


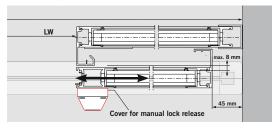
Lintel-mounted double-panel systems with side screens



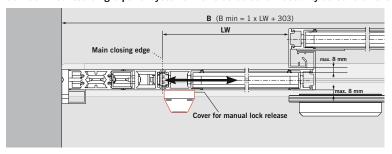


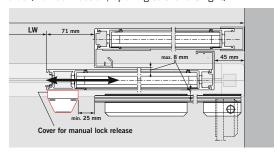
Corridor-mounted single-panel systems with side screens (wall connection, opening to the left/right)



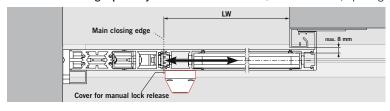


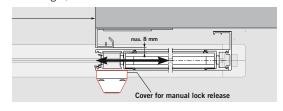
Corridor-mounted single-panel systems with side screens – security screens on the inside (wall connection, opening to the left/right)





Lintel-mounted single-panel systems with side screens (wall connection, opening to the left/right)

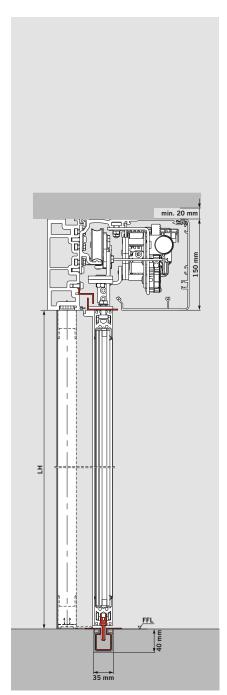




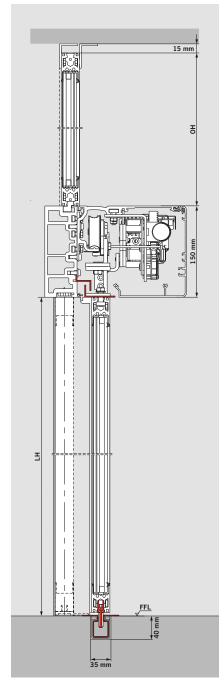
LW = Clear passage width B = System width

VERTICAL SECTIONS

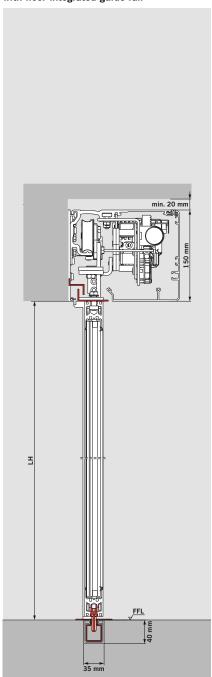
Corridor-mounted systems with floor-integrated guide rail



Corridor-mounted systems with floor-integrated guide rail and fanlight



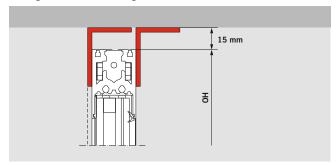
Lintel-mounted systems for connection to façade (by others) with floor-integrated guide rail



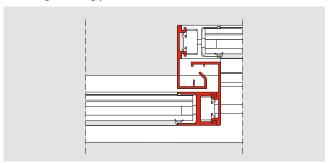
ОН	Fanlight height		
LH	Clear passage height		
В	Clear passage width		
LW	Clear passage width		
FFL	Finished floor level		

DETAILED CROSS SECTIONS

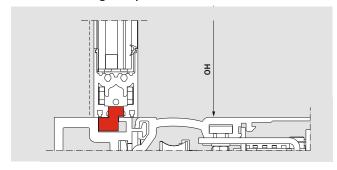
Ceiling connection of fanlight



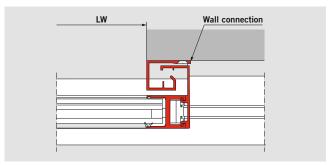
Unlocking of sliding panel



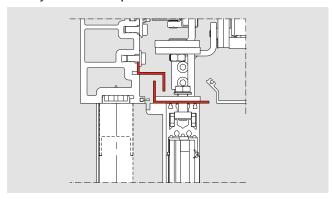
Connection of fanlight to operator



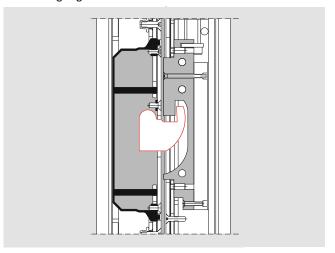
Wall connection



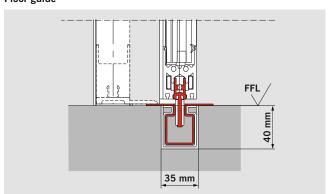
Security feature inside operator



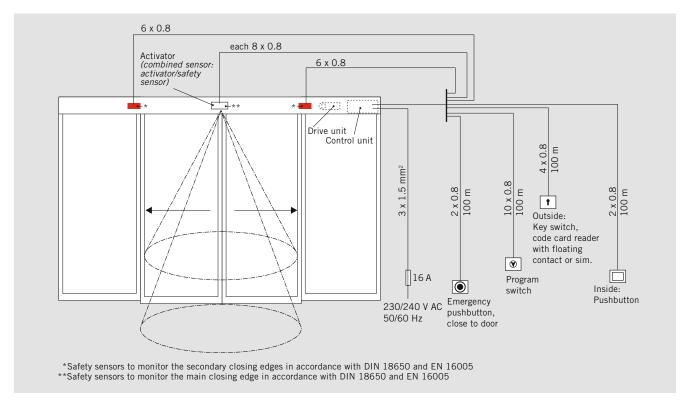
Main closing edge - door is closed



Floor guide



CONNECTIONS



SWITCHES

_	_	_	_	_

 Designation	Specification	Installation system	Order No.
On/Off switch	White, aluminium, flush-mounting, 80 x 80 mm	Gira S-Color	19135403150
Radar switch	"MAGIC SWITCH", proximity-type radar switch responds to movement, for flush-mounting, 80 x 80 mm		05076831332

PROGRAM SWITCHES

A program switch from DORMA's broad range of accessories allows the automatic door system to meet individual requirements and provides easy handling.

The corresponding 3-position program switches are available in various designs and suitable for all kinds of applications.

They offer various options, from a mechanical to a full-electronic version, alternatively also lockable via profile half-cylinder or in a full-electronic way via code..

- Up to 5 different functions:
 Off, Automatic, Exit Only,
 Partial Open, Permanent Open
- Electronic program switches in System 55 design to meet the highest aesthetical demands

For sliding door operators	Designation	Specification	Installation system	Order No.
[6.7] [7.1] [6.7] [6.7]	PG-S1	5-position, aluminium, white, flush-mounted version, 80 x 80 x 40 mm	Gira S-Color	19135401150
F-1 2 ● 2 MM	PG-S2	5-position, lockable, aluminium, white, flush-mounted version, 80 x 80 x 40 mm	Gira S-Color	19135602150
	EPS-S	Full-electronic program switch in System 55 design, 5-position, lockable via code or additional TL-ST S55 key switch, membrane keypad aluminium-coloured, white, flush-mounted version, 80 x 80 mm	System 55	16556901150
For sliding door operators in emergency exits and escape routes (FST)	Designation	Specification	Installation system	Order No.
	PG-FST1	5-position, lockable, aluminium, white, flush-mounted version, 80 x 80 mm	Gira S-Color	19135603150
⊕ • ⊕ ⊕ • ⊕ •	PG-FST2	5-position, lockable via profile half-cylinder, aluminium, white, flush-mounted version, 105 x 80 x 65 mm, Box for surface-mounting: 19142201170	Deutsche Solenoid	19142001170
**************************************	EPS-FST	Full-electronic program switch in System 55 design, 5-position, lockable via code or additional TL-ST S55 key switch, membrane keypad, aluminium-coloured, white, flush-mounted version, 80 x 80 mm	System 55	16556801150

PUSHBUTTON

Palm pushbutton	Designation	Specification	Installation system	Order No.
		Single-pole changeover contact, single-type frame, white, flush-mounted version	System 55	19144701170
Key switches	Designation	Specification	Installation system	Order No.
•	KT 3-1	1 NO contact with profile half-cylinder, may be replaced for any profile half-cylinder of a master key system, key only retractable in neutral position, aluminium, metal, 75 x 75 x 60 mm		
Bonnad D	KT 3-1 UP KT 3-1 AP	flush-mounted version surface-mounted version		05054531332 05054631332
ZU AUF	KT 8	Lettering "Auf, Zu" (German for "Open/Closed") 2 NO contacts, with profile half-cylinder, may be replaced for any profile half-cylinder of a master key system, key only retractable in neutral position, aluminium, metal, 75 x 75 x 60 mm	е	
	KT 8 UP KT 8 AP	flush-mounted version surface-mounted version		05054831332 05054931332
Bonnad D	TL-ST S55	Switch with single-pole changeover contact, for profile half-cylinder by others to DIN 18252, locking cam centre 30 – 32.5 mm, overall length 40.5 – 43,5 mm, locking cam position left (90°), incl. cover for System 55, not suitable for box for surface-mounting, not including profile half-cylinder, not including frame		
	TL-ST S55 W TL-ST S55 S TL-ST S55 A	White Silver-coloured Anthracite	System 55 System 55 System 55	56330710 56330701 56330715
DOMA S S S S S S S S S S S S S S S S S S S	KT 3-2	1 NO contact with profile half-cylinder, may be replaced for any profile half-cylinder of a master key system, key only retractable in neutral position, exchange cover, "Ein/Aus" lettering (German for "On/Off"), aluminium,		

flush-mounted version: 125 x 100 mm, surface-mounted version: 70 x 90 mm

05054731332

EMERGENCY PUSHBUTTONS

	Designation	Specification	Installation system	Order No.
	NAT	Designed to interrupt the automatic movement of the door, emergency pushbutton (function: Emergency Off) for automatic door operators, manufactured to ZH 1/494 or BGR 232, DIN 18650 and EN 16005, red knob with yellow centre insert, max. load current: 10 A at 230 V AC		
•••	NAT 1	NO contact: 1, NC contact: 1, white frame, flush-mounted version, 80 x 80 mm	System 55	90400025
	NAT 2 no picture	Function "Emergency Opening" with green knob, NO contact: 1, NC contact: 1, max. load current: 10 A at 230 V AC, white frame, flush-mounted version, 80 x 80 mm	System 55	90400035
	NAT 4	NO contact: 1, NC contact: 1, surface-mounted version, 68 x 68 mm		05027031332
	TL-N S55	Highly-illuminated emergency pushbutton environment with visual locking status indication, optical and acoustic alarm via yellow flashlight and integrated alarm siren, sabotage-proof, behind glass not including frame NO contact: 1, NC contact: 1, max. load current: 1 A at 24 V DC, flush-mounted version, 80 x 80 mm		56330500

ACTIVE INFRARED DETECTOR

Safety sensors	Designation	Specification	Colour	Order No.
4	Prosecure Opti Scan	The active infrared curtain according EN 16005 ensures optimum protection of the area at the side of the door. It protects people in the danger area of the opening door panel.	black silver coloured white	86301100 86302100 86303100
	Prosecure Opti Scan 1	The active infrared curtain according DIN 18650 and EN 16005 ensures optimum protection of the area at the side of the door. It protects people in the danger area of the opening door panel.	black silver coloured white	86301101 86302101 86303101
Combi sensors	Designation	Specification	Colour	Order No.
	Prosecure Opti Combi	Quick and easy to install, wide field can be used as a light barrier substitute, LCDDisplay, Precise positioning of the AIR curtain thanks to inclination angle display on a clear scale, direction recognition (DIN 18650 and EN 16005)	black silver coloured white	86711400 86712400 86713400
	Prosecure Opti Combi 1	Very flexible field settings, active infrared curtain is self-monitoring, crossing traffic optimization, precise positioning of the AIR curtain thanks to inclination angle display on a clear scale, direction recognition. (DIN 18650 and EN 16005)	black silver coloured white	86711401 86712401 86713401

MOTION DETECTORS

	Designation	Specification	Order No.
THE STATE OF THE S	Prosecure Easy Motion Mono	Full-automatic access on pulse activation; adjustable inclination angle, inclined field of view and field size, LED status indicator Ambient temperature –20 °C to 60 °C	
		Black Silver-coloured White	86001000 86002000 86003000
	Prosecure Easy Motion Stereo	Adjustable inclination angle, inclined field of view and field size, direction recognition, cross-traffic suppression, immunity, LED status indicator Ambient temperature –20 °C to 60 °C	
		Black Silver-coloured White	86011000 86012000 86013000
Chr.	Prosecure Opti Motion Mono	Adjustable inclination angle, inclined field of view and field size, direction recognition, immunity, LED status indicator Ambient temperature –20 °C to 60 °C	
		Black Silver-coloured White	86101000 86102000 86103000
	Prosecure Opti Motion Stereo	Adjustable inclination angle, inclined field of view and field size, direction recognition, cross-traffic suppression, Slow Motion function, immunity, LED status indicator Ambient temperature –20 °C to 60 °C	
		Black Silver-coloured White	86111000 86112000 86113000
Accessories	Designation	Specification	Order No.
	Rain protection cover	For Easy Motion detectors	86031900
	Rain protection cover/ ceiling angle bracket	For Opti Motion detectors	86131900
	Prosecure Remote Control	Remote control for programming Prosecure Opti motion detectors or products from other brands; for the convenient and exact adjustment of high-mounted sensors; self-explaining menu navigation, LCD display Ambient temperature –20 °C to 60 °C	86991900

AUTOSWITCH TRANSPONDER

	Designation	Specification	Order No.
122	AutoSwitch	The active transponder system activates the control unit of the automatic door when entering the receiver range. Receiver range: approximately 2.5 m; especially suitable for areas where no manual access is desired and as access control system for door systems used by wheelchair users	
		Receiver/control unit, surface-mounted version, white Programming/transponder key, yellow Standard/transponder key, blue	16571101175 16571201175 16571301175

TRIMS AND BOXES FOR SURFACE-MOUNTED PUSHBUTTONS AND SWITCHES

Designation	Specification	Dimensions in mm (W x H x D)	Installation system	Order No.
System 55	Cover frame (Programm STA)			
FR-S55 1	Single-type trim, Standard 55, white	80.7 x 80.7	System 55	56391110
FR-S55 2	Double-type trim, Standard 55, white	151.8 x 80.7	System 55	56391210
FR-S55 3	Triple-type trim, Standard 55, white	223.3 x 80.7	System 55	56391310
FR-E2W 1	Single-type trim, E2 55, white	80.8 x 80.8	System 55	56392110
FR-E2W 2	Double-type trim, E2 55, white	151.9 x 80.8	System 55	56392210
FR-E2W 3	Triple-type trim, E2 55, white	223.4 x 80.8	System 55	56392310
FR-E2S 1	Single-type trim, E2 55, silver	80.8 x 80.8	System 55	56392101
FR-E2S 2	Double-type trim, E2 55, silver	151.9 x 80.8	System 55	56392201
FR-E2S 3	Triple-type trim, E2 55, silver	223.4 x 80.8	System 55	56392301
FR-E2A 1	Single-type trim, E2 55, anthracite	80.8 x 80.8	System 55	56392115
FR-E2A 2	Double-type trim, E2 55, anthracite	151.9 x 80.8	System 55	56392215
FR-E2A 3	Triple-type trim, E2 55, anthracite	223.4 x 80.8	System 55	56392315

Please see STA price list for further trims and versions.





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