ECO ETS
Electromotive drive

ECO

1. Force - up to 250 kg / EN 7 (up to 400 kg / EN 4)

The ECO ETS has a strong power unit that safely opens and closes door leafs up to 250 kg in weight and up to 1.600 mm in width (EN 7)

This provides secure automation for external doors that may experience strong wind loads as well as heavy fire protection doors

With its integrated, high-performance switching power supply (24 V, 2 A output power) several external operating and safety elements, and even motorised locks, can be supplied. This way external power supplies can be omitted in many applications.

In addition to these parameters, the ETS, with its new electromotive power unit, is extremely quiet and has a well engineered, harmonious movement. It is these properties that make the ETS such an all-rounder for public buildings, hospitals, elderly homes and clinics.

2. Model with slide rail on hinge side and hinge-opposite side / also fire protection!

The ETS can be combined as follows:

Lintel installation with standard arm, hinge-opposite side push

Lintel installation with slide rail, hinge-opposite side push

Lintel installation with slide rail, hinge side pull

All mounting options are available in both standard and fire protection variations.

This gives planners and architects a comprehensive range of design options with sliding rails for all assembly applications, whether that is hinge side or hinge-opposite side, T0 or fire or smoke protection!

For door manufacturers it also opens up new possibilities for the production of fire or smoke protection doors.
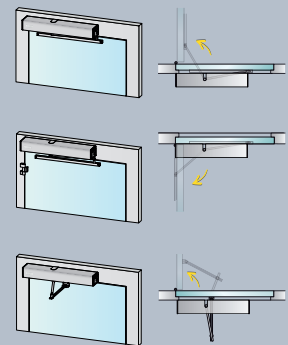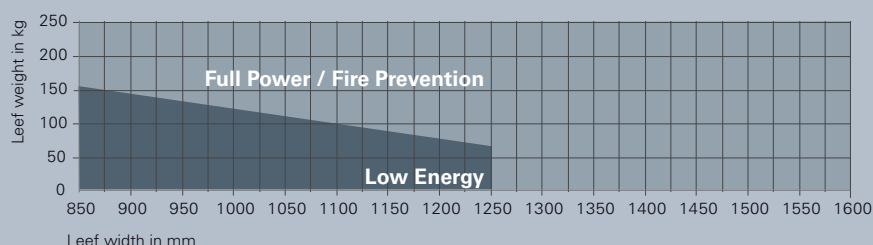
3. Low energy and full power in a single power unit

The ETS can be set for two functions on site with one and the same drive. An additional upgrade card is not necessary.

Low energy and full power
The Full Power setting enables automation in heavy, highly frequented public doors, for example, with quick movement sequences. To do this, a surveillance of the movement area with safety sensors is necessary.

The Low Energy setting is specially developed for private households or office and work areas with limited public frequency. Safety sensors can be dispensed with here, there are limitations, however, on door weights and movement speed.

Graph: Leef weight in kg (vertical axis, 0–250) vs Leef width in mm (horizontal axis, 850–1600), showing regions labeled **Full Power / Fire Prevention** and **Low Energy**

4. Fire and smoke protection / Inverse function / Interlock function

The ETS model ETS 64-R is approved as a hold-open device for fire and smoke protection doors. In combination with a lintel switch it triggers the fire protection closer in the case of an alarm (smoke activated) or power failure.

The inverse function has been specially developed for smoke extraction from buildings. The fire/smoke protection function is reversed here when the alarm is triggered, which means that the door is opened by spring force to enable a smoke extraction. This is also ensured with a power cut, so an emergency power supply is not necessary. This inverse function has already been pre-installed at ETS and is consequently also adjustable on site.

The interlock function regulates the complex automation sequences of double doors in safety areas (controlled and directional flow control).

5. Wind load compensation

The wind load control is there to adapt the smooth operation of outer doors to different air pressure conditions (to wind force 9, for example (or 320 Pa) / with a door size of 900 x 2,400 mm). A briefly occurring increased wind load (e.g. a strong gust) is recognised by the drive. The control now calculates the additional motor performance for amplifying or retarding the drive, so the door can operate in a virtually unimpeded way.
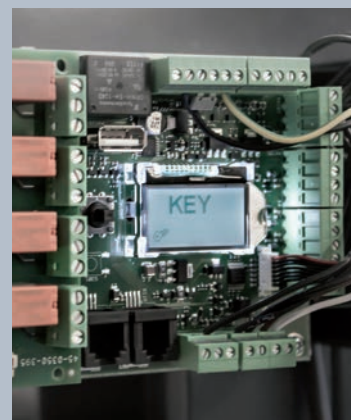
The strength of the wind load depends on the size of the door and the type of arm deployed. For doors that open outwards in areas with regularly increased wind loads (in coastal areas for example) the normal arm (pushing on the opposite hinge side) should be used as far as possible.
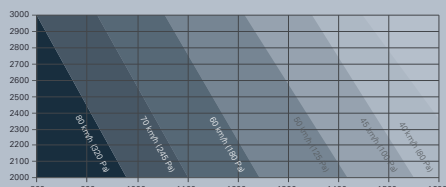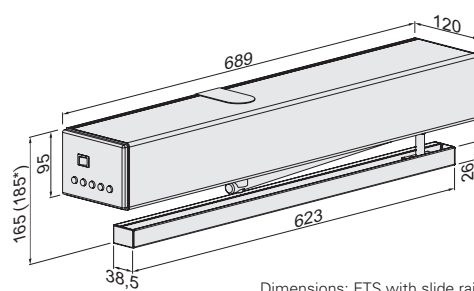

6. Simple assembly and service

The ETS has a simple, user-friendly setting function for all parameters. This is provided by the display panel with joystick function on the control board. A menu style checklist makes it easy to configure the initial operation on site. All parameters can also be configured at a later date or to suit any new operational requirements (password protected) with no need for an external control module or laptop.

This makes the ETS particularly interesting for assembly and service companies, who do not want to have to use a specific external programming device or special software for every type of drive.

Performance criteria		ETS 73	ETS 64-R
Closing force (continuously adjustable)	Size acc. to EN	3 – 7	3 – 6
Door width acc. to EN	Interior doors ≤ 1.600 mm	■	
	Fire protection doors ≤ 1.400 mm		■
Dimensions (incl. mounting plate)	Length in mm / Depth in mm / Height in mm	690 / 120 / 95	690 / 120 / 95
Ambient temperature		-15 to +50° C	
Relative humidity		max. 85%	
Power consumption		max. 560 W (standby 4 W)	
DIN left / right		■	■
Opening speed adjustable		max. 40°/s	
Closing speed adjustable with mains operation, fixed if there is a power failure		max. 40°/s	
Hold-open time adjustable		0 - 60s	
Max. door opening angle		105°	
Tested acc. to EN		DIN 18650 / EN 16005	DIN 18263-4 / DIN 18650 / EN 16005
Suitable for fire- and smoke control doors		-	F (DIBt)
Certified according to EU-Directive		CE	

■ Yes
- No
□ Option

Wooden door   Steel door   Profile frame door

Dimensions: ETS with slide rail

* In the case of rebated doors please use the long pins (included in delivery)
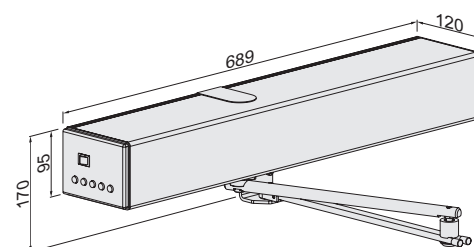
Dimensions: ETS with standard arm

ECO ETS ▪ Harmonious door movement – motor-powered opening – controlled closing

The new ETS from ECO is a powerful, low-noise, electromotive drive for heavy internal and external doors up to 400 kg (250 kg with fire/smoke protection doors). Equally suitable for new facilities and modernisations.

Models and functions:

- Slide rails pushing (opposite hinge side) and pulling (hinge side)
- Normal arm pushing (opposite hinge side)
- 1 and 2-door structures with continuous cover
- Integrated, concealed door control for fire/smoke protection doors (in the universal cladding)
- Integrated, concealed smoke sensor (integrated in the covering hood, can be retrofitted (DIBt, EN 54-7))
- Adjustable spring closing pressure (when cut off from the electricity mains)
- Easy operation with illuminated program selection keys in the side cover (automatic, always on, manual, exit and night)
- The main switch separating all poles is integrated in the side cover
- Push + Go function, easy responsiveness
- Adjustable starting power and closing power amplification (for pressing shut into the lock)
- Adjustable start delay (motorised lock, closing sequence)
- Plug + Play, setup of functions with LCD display
- Low Energy operation without safety sensor technology
- Very low standby consumption (4 Watts)
- Connectable wind load compensation, max. wind speed 80 km/h (320 Pa)
- Connectable acoustic signal of opening and/or closing movement

Double-leaf revolving door Type ECO ETS 64-R IRM-SRI (GSZ) (with integrated door control and integrated smoke sensor)

ECO ETS 73 / ETS 64-R ▪ Product description

Single-leaf drives (without arms)

Single-leaf drives	Colour	Article number
ETS 73	Stainless steel	338501548010000
ETS 64-R	Stainless steel	358501548021000
ETS 64-R (GSD)	Stainless steel	358501548023000
ETS 64-R IRM	Stainless steel	On request
ETS 64-R IRM (GSD)	Stainless steel	On request

Arm variations for ETS

Slide rails for ETS	Colour	Article number
GS-ETS 620*	Stainless steel	358501547120010
GS-ETS 830**	Stainless steel	338501547120020

* Mounting GSZ or GSD (up to 30 mm lintel depth / fire protection)
** Mounting GSZ, GSD or on door leaf (up to 200 mm lintel depth / no fire protection)

Normal arms for ETS (up to 250 mm lintel depth)	Colour	Article number
NG-ETS 250*	Stainless steel	358501547110020
NG-ETS 400**	Stainless steel	358500547190010

* For lintel depth up to 250 mm (fire protection)
** For lintel depth up to 400 mm (no fire protection)

Double-leaf drives (complete sets)

Double-leaf drives	Colour	Article number
ETS 64-R IRM-SRI (NG)	Stainless steel	308501450548037
ETS 64-R IRM-SRI (GSD)	Stainless steel	308501450548039
ETS 64-R IRM-SRI (GSZ)	Stainless steel	308501450548050

Complete set consisting of:

- 1 ETS 64-R IRM (inactive leaf, DIN left = DIN right)
- 1 ETS 64-R (moving leaf)
- Assembly set SRI (DIN left = DIN right)
- Medium cladding set
- 2 mounting plates
- 2 arms
- CAN cable
- HAT 02

!

Please order any safety elements to provide additional protection at contact points and closing edges at the same time.
Sensor bars or FlatScan in compliance with DIN 18650 and EN 16005!
Please order any accessories, such as ceiling smoke sensors, sensor bars and control devices, separately (from page 14 onwards).

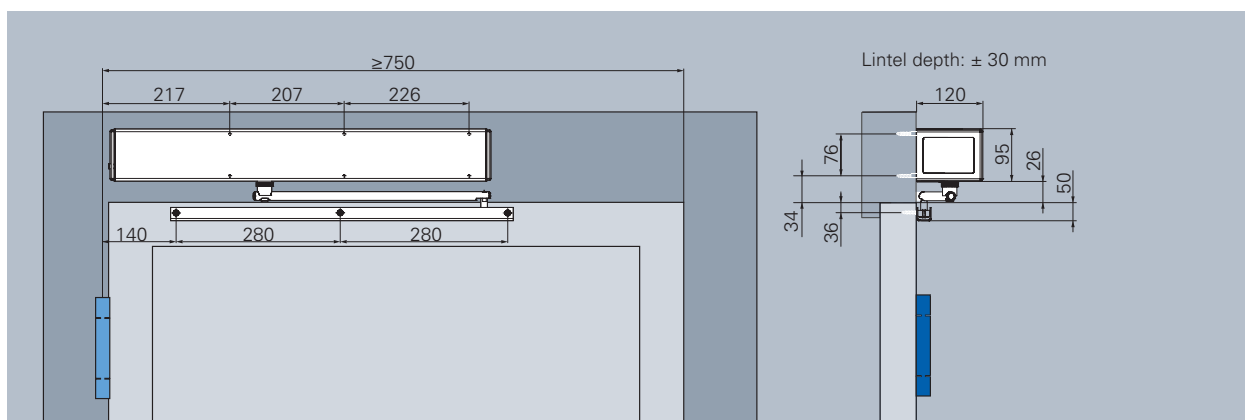NG = Version for normal arms pushing (head mounting on opposite hinge side)
GSD = Version for slide rails pushing (head mounting on opposite hinge side)
GSZ = Version for slide rails pulling (normal mounting on opposite hinge side)
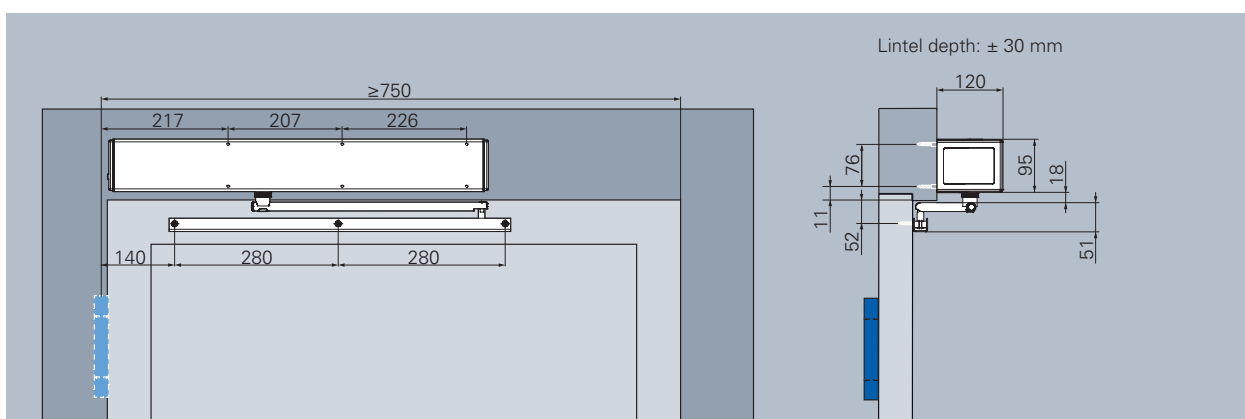IRM = Integrated smoke sensor
SRI = Integrated door control
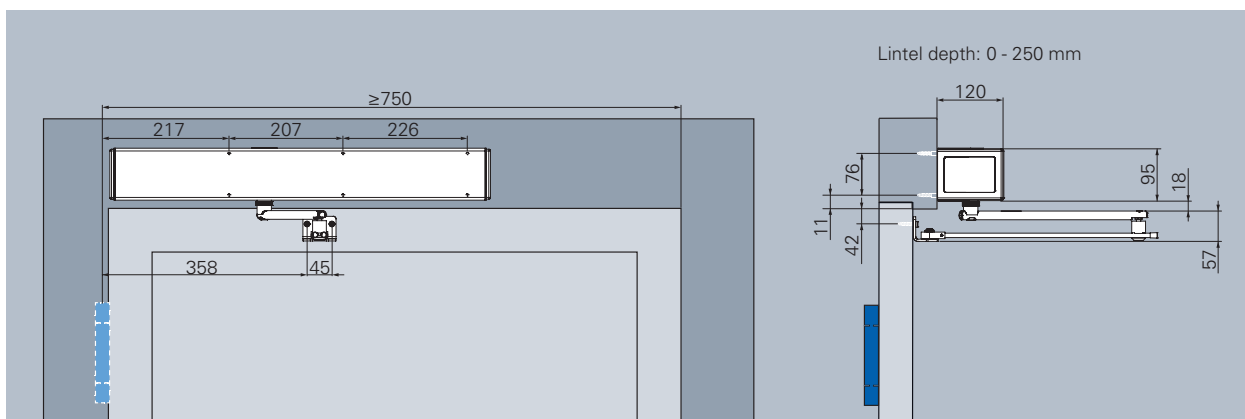
Installation drawing ETS 73 single leaf

ETS 73 Head mounting hinge side with slide rail (pull)

With KS-13 axle pin and long sliding bolt (included in the delivery)

ETS 73 Head mounting hinge-opposite side with slide rail (push)

With standard axle pin and short sliding bolt.

ETS 73 Head mounting hinge-opposite side with standard arm (push)

With standard axle pin.

DIN 18650   EN 16005   CE

ECO

Installation drawing ETS 73 double leaf

ETS 73 Head mounting hinge side with slide rail (pull)

With KS-13 axle pin and long sliding bolt (included in the delivery)

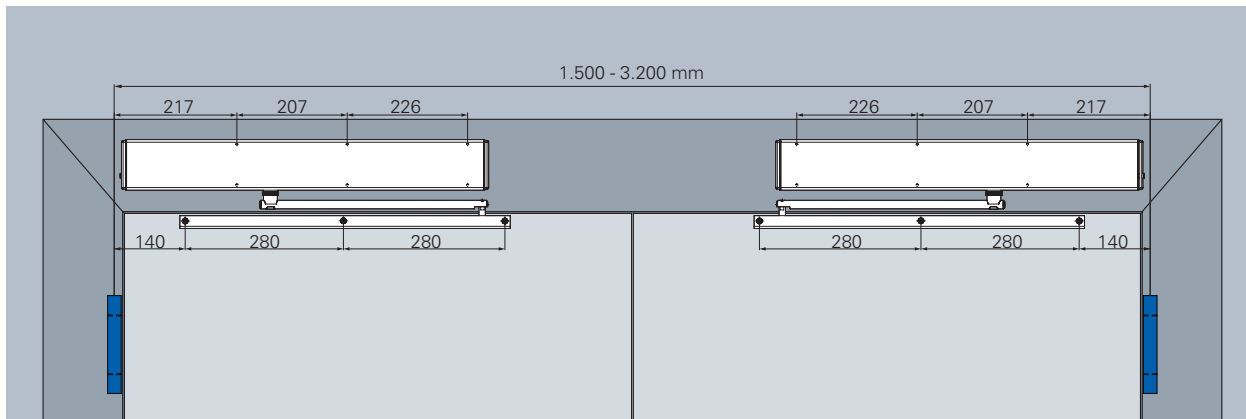**ETS 73 Head mounting hinge-opposite side with slide rail (push)**

With standard axle pin and short sliding bolt.

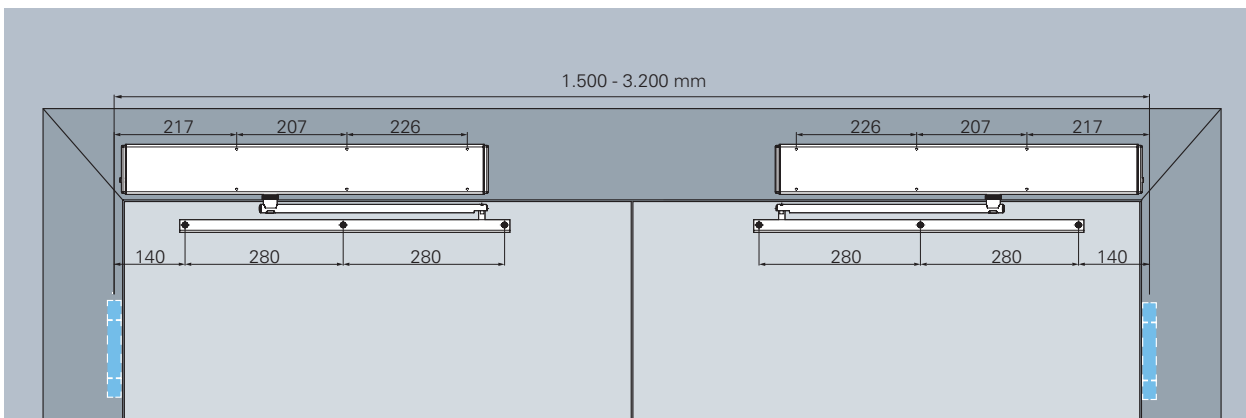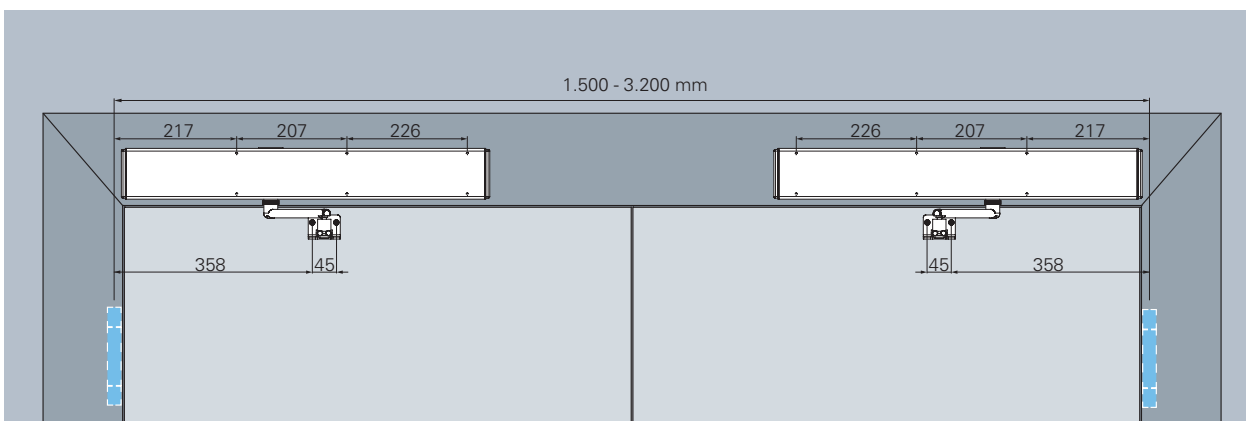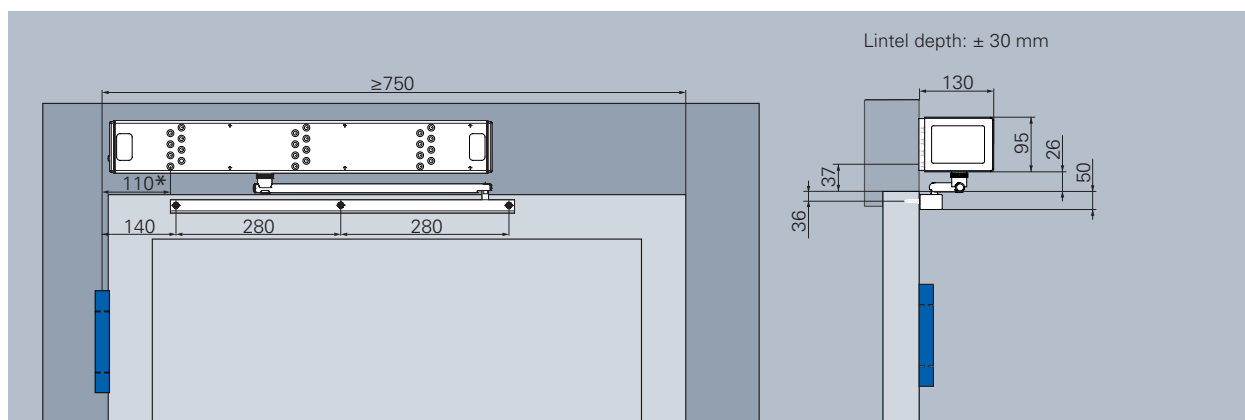**ETS 73 Head mounting hinge-opposite side with standard arm (push)**
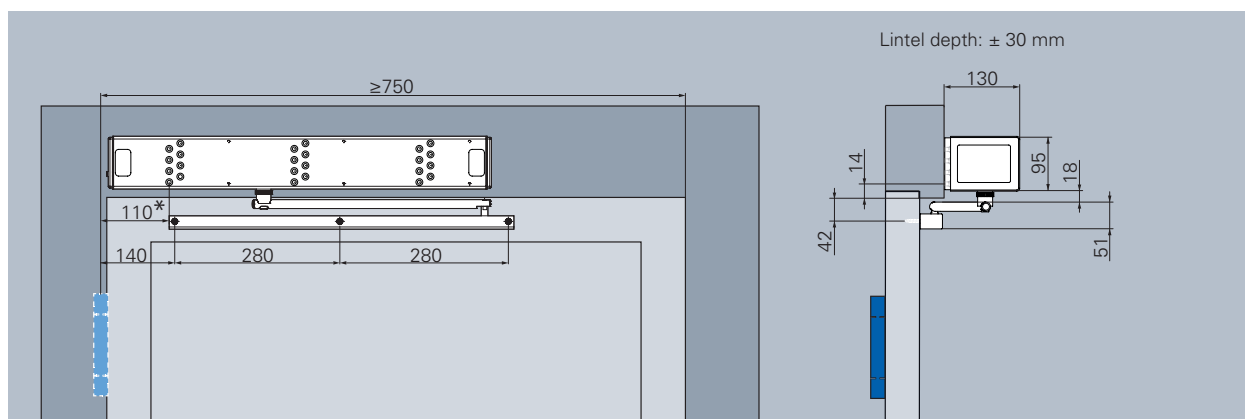
With standard axle pin.

Installation drawing ETS 64-R single leaf

Lintel depth: ± 30 mm

ETS 64-R – Single leaf head mounting hinge side with slide rail (pull) and mounting plate

With KS-13 axle pin and long sliding bolt.

*Reference dimension - all further holes must be drilled according to the specifications of the door or profile manufacturer.

Lintel depth: ± 30 mm

ETS 64-R – Single leaf head mounting hinge-opposite side with standard arm (push) and mounting plate

With standard axle pin and short sliding bolt.

*Reference dimension - all further holes must be drilled according to the specifications of the door or profile manufacturer.

Lintel depth: 0 - 240 mm

ETS 64-R – Single leaf head mounting hinge-opposite side with slide rail (push) and mounting plate

With standard axle pin.
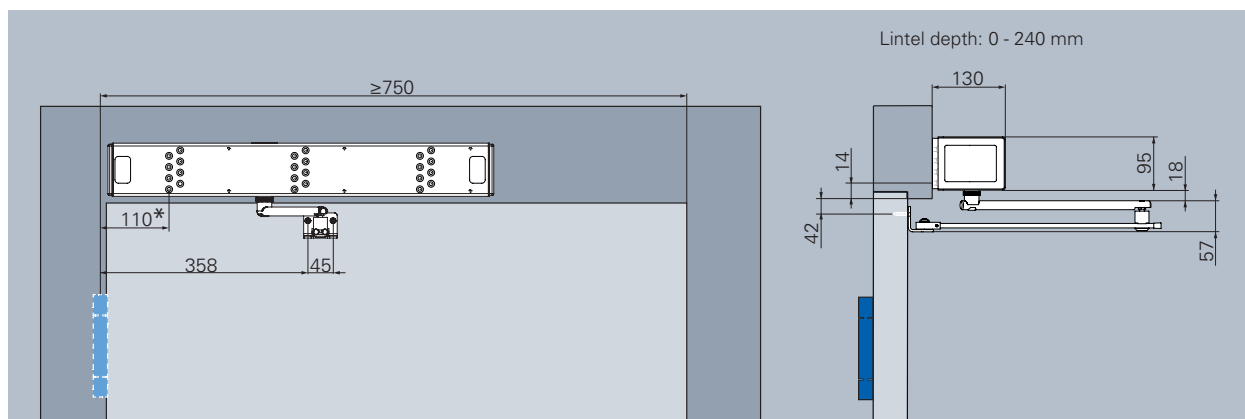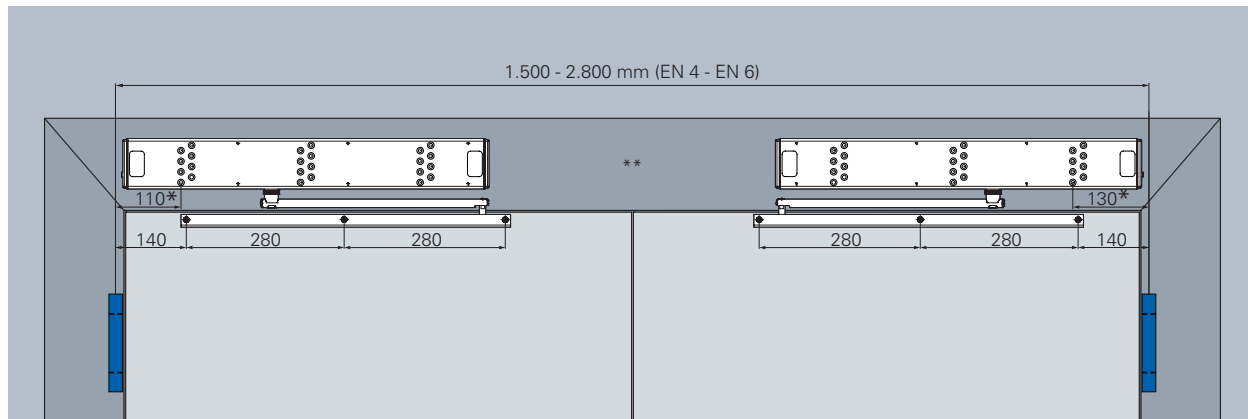
*Reference dimension - all further holes must be drilled according to the specifications of the door or profile manufacturer.
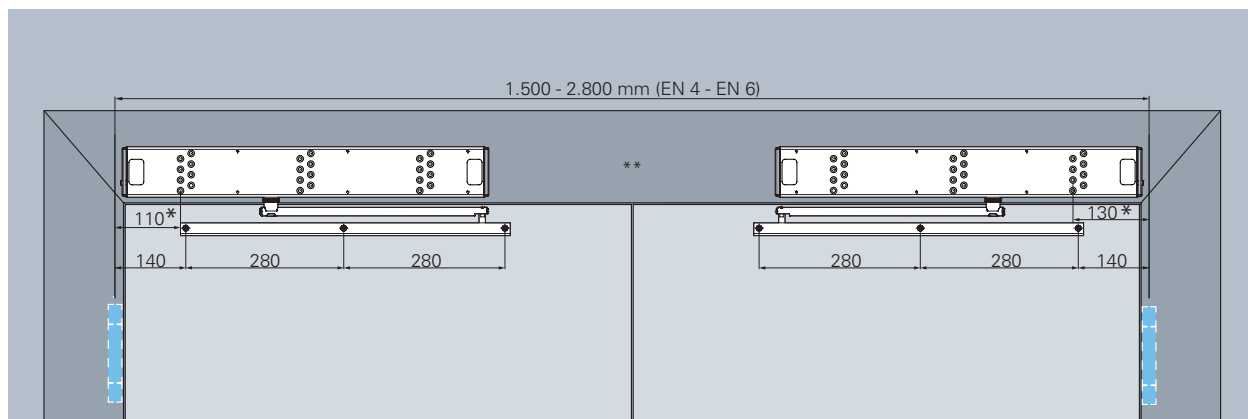
ECO

Installation drawing ETS 64-R double leaf

1.500 - 2.800 mm (EN 4 - EN 6)

**

110*   130*
140   280   280   280   280   140

ETS 64-R – Double leaf head mounting hinge-opposite side with slide rail (pull) and mounting plate

*Reference dimension - all further holes must be drilled according to the specifications of the door or profile manufacturer. For rebated doors please use the long pins (included in delivery). All information in brackets can vary according to the clamp (clamp -13 or clamp +20)

** Optionally available with integrated door control and medium cladding.

1.500 - 2.800 mm (EN 4 - EN 6)

**

110*   130*
140   280   280   280   280   140

ETS 64-R – Double leaf head mounting hinge-opposite side with slide rail (push) and mounting plate

*Reference dimension - all further holes must be drilled according to the specifications of the door or profile manufacturer.

** Optionally available with integrated door control and medium cladding.

1.500 - 2.800 mm (EN 4 - EN 6)

**

110*   130*
358   45   45   358

ETS 64-R – Double leaf head mounting hinge-opposite side with standard arm (push) and mounting plate

*Reference dimension - all further holes must be drilled according to the specifications of the door or profile manufacturer. For rebated doors please use the long pins (included in delivery). All information in brackets can vary according to the clamp (clamp -13 or clamp +20)
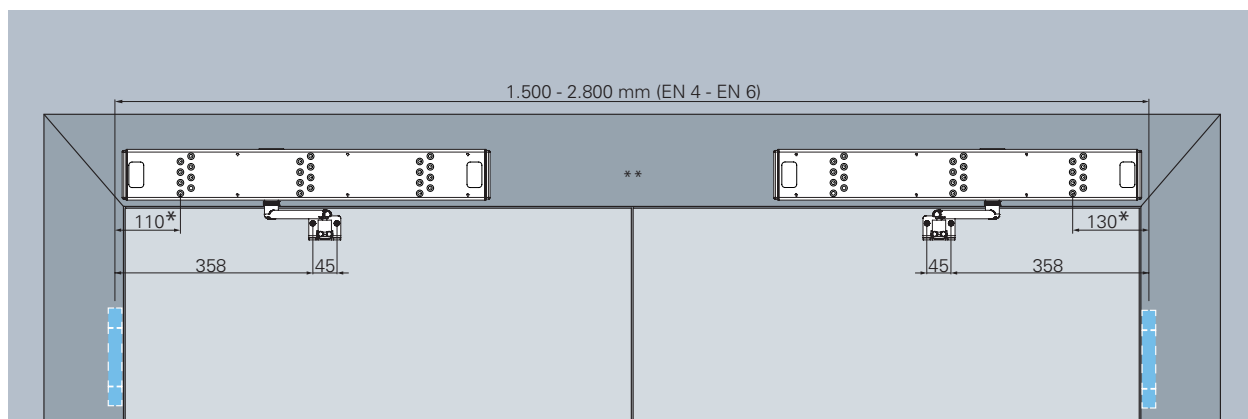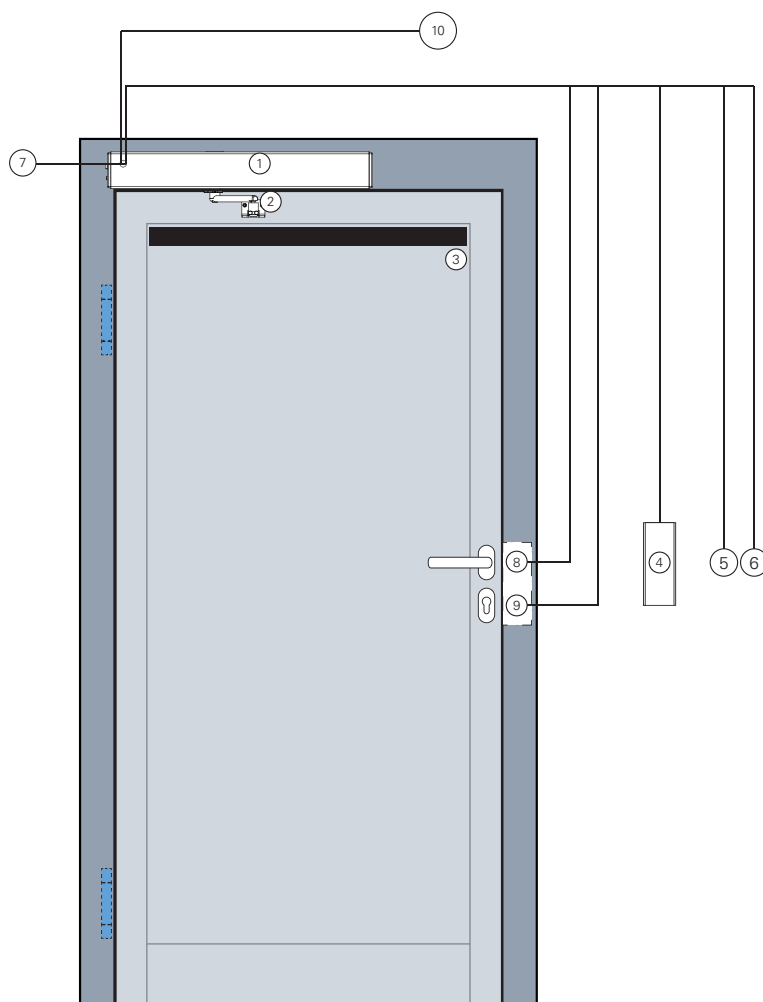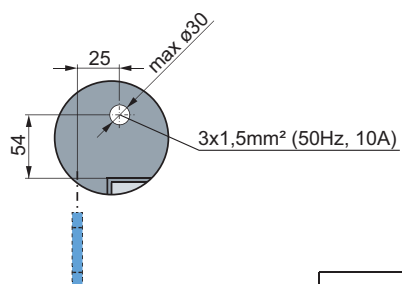
** Optionally available with integrated door control and medium cladding.

3x1,5mm² (50Hz, 10A)

Pos.	Drawing	Cable	Comment
1	ECO ETS 73		Mounting hinge side or hinge-opposite side
2	Normal arm or slide rail (push)		Mounting on door leaf hinge side or hinge-opposite side
3	Sensor strip set for hinge or hinge-opposite side with stop or reverse function	supplied by ECO	For internal cabling the cable is installed in advance, otherwise the cable is installed externally with cable transition (black).
4	Large button internal	4 x 0,6 mm² oder 4 x 0,8 mm²	Concealed socket, cable installed in advance
4.1.	Large button external	4 x 0,6 mm² oder 4 x 0,8 mm²	Concealed socket, cable installed in advance
5	Emergency button „Door Closed" (optional)	4 x 0,8 mm²	Concealed socket, cable installed in advance
6	Bedix switchpoint	4 x 0,8 mm²	Concealed socket, cable installed in advance
7	Power cable 230V	3 x 1,5 mm²	50 Hz, 10 A
8	E-opener 24V	4 x 0,6 oder 0,8 mm²	Cable installation in advance inside the frame
9	Control circuit contact	supplied by ECO	Cable installation in advance inside the frame
10	Radar (internal)	supplied by ECO	Cable installation in advance (or concealed)
10.1	Radar (external)	supplied by ECO	Cable installation in advance (or concealed)

DIN 18650   EN 16005   CE   ECO
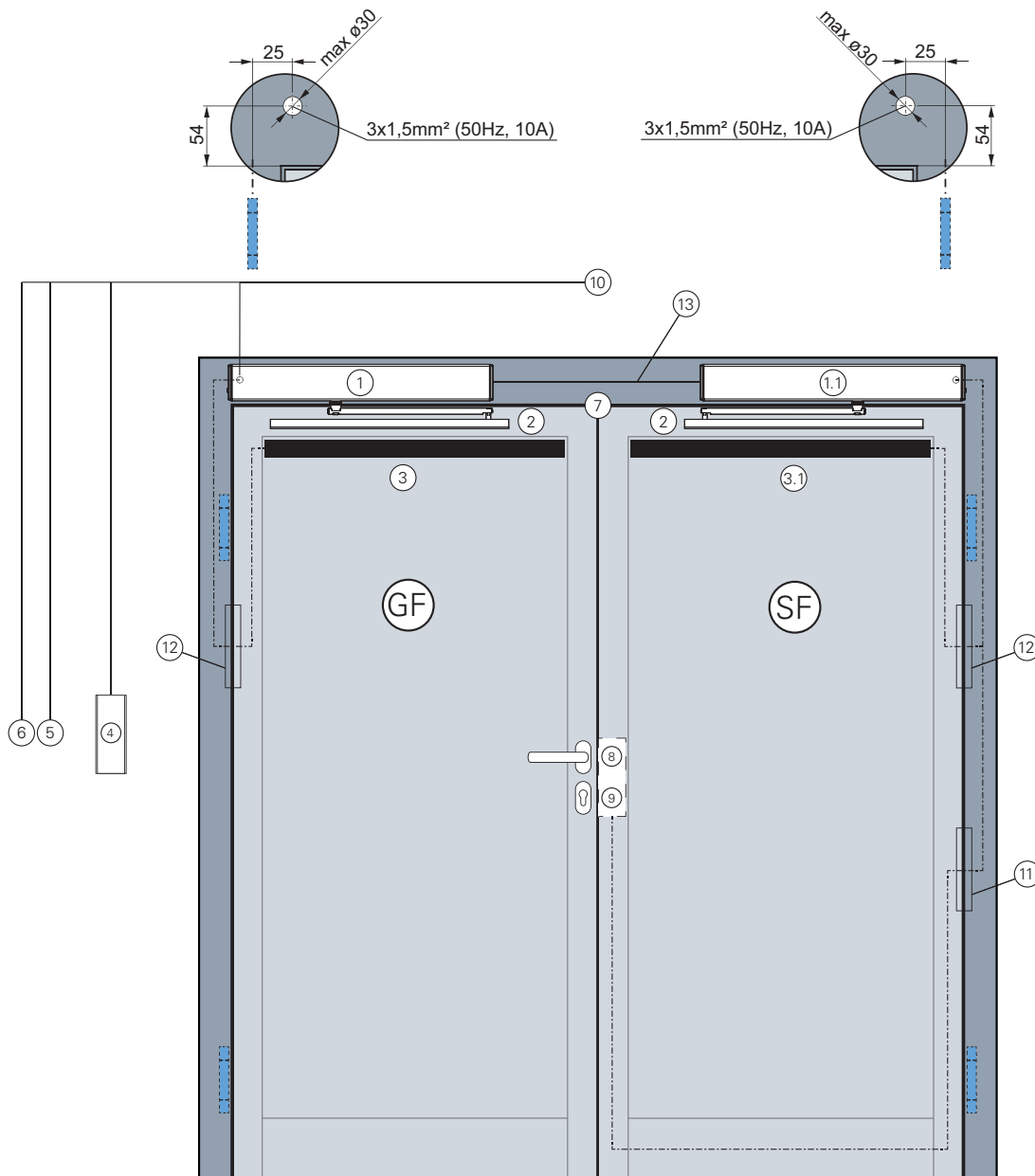
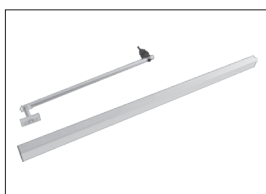| Pos.	Drawing	Cable	Comment
1	ECO ETS 73 (Master- GF)	3 x 1,5 mm² (50 Hz, 10 A)	Mounting hinge side or hinge-opposite side
1.1	ECO ETS 73 (Slave- SF)	3 x 1,5 mm² (50 Hz, 10 A)	Mounting hinge side or hinge-opposite side
2	Standard arm or slide rail		Mounting on door leaf hinge side or hinge-opposite side
3	Sensor strip set GF	Cable from ECO, Installed to Master- GF	internal cabling in advance, otherwise cable installed externally with cable transition
3.1	Sensor strip set SF	Cable from ECO, installed to Slave- SF	internal cabling in advance, otherwise cable installed externally with cable transition
4	Large button internal	4 x 0,6 oder 0,8 mm²	Concealed socket, cable installed in advance
4.1	Large button external	4 x 0,6 oder 0,8 mm²	Concealed socket, cable installed in advance
5	Bedix	4 x 0,6 oder 0,8 mm²	Concealed socket, cable installed in advance
6	alternative operating elements	4 x 0,6 oder 0,8 mm²	Concealed socket, cable installed in advance
7	ECO dual locking, or E-opener in SF	bei E-Öffner- 4 x 0,6 mm²	Cable installed in advance in the frame
8	E-opener 24V	4 x 0,6 oder 0,8 mm²	Cable installed in advance in SF
9	Control circuit contact	4 x 0,8 mm²	Cable installed in advance in SF
10	Radar (internal)	4 x 0,8 mm²	Cable installed in advance (or concealed)
10.1	Radar (external)	4 x 0,8 mm²	Cable installed in advance (or concealed)
11	internal cable transition	for E-opener and smoke protection RSK	Optional, in advance
12	internal cable transition	for sensor strips	Optional, in advance
13	CAN cable for control of closing sequence regulation for T0 doors	supplied by ECO	Cable installed in the frame (in advance) or in the continuous drive cladding (optional)

Check list orders - ETS

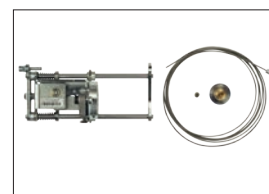| Pos.	Type of arm	Fire protection		Leaf		Bedix		Button		Radar		Radio		Safety elements			Emergency off		E-opener		RSK	
		yes	no	1	2	yes	no	inter-nal	exter-nal	inter-nal	exter-nal	yes	no	Sensor bars	Finger protection	Flatscan	yes	no	yes	no	yes	no

Hardware

Drive

Slide rails

Standard arms

Integrated closing sequence selector (SRI)

Operating elements

Bedix (external operation and programming element)

Switch with large surface area GFT

Radar

Remote control

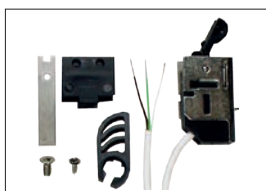## Security elements

Sensor strips

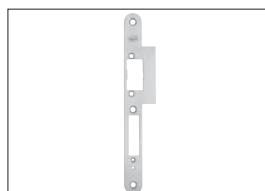

Finger protection

Flatscan

Emergency off

## Accessories locks

E-opener

RSK

Strike plate

Motor driven locks

ECO **Schulte**
Global confidence.

All over the world, wherever people value quality, reliability and safety, ECO Schulte products have been in use for many years. The combination of functionality and design have brought the ECO systems international recognition.

At this point we would like to say thank you for the global confidence that has been shown in ECO Schulte products. We see this as a challenge to continue to satisfy the demands of our customers and the market through constant development and carefully tailored production.
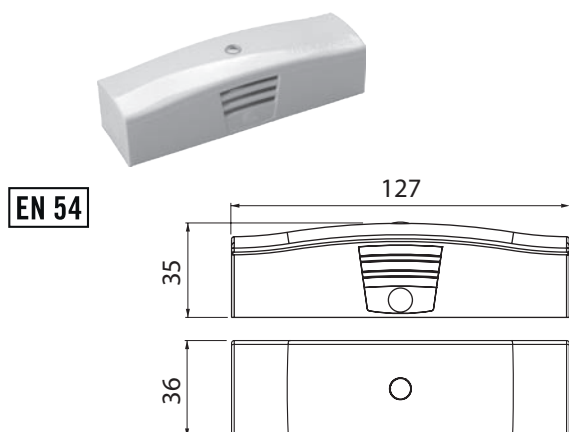
EN 54

Smoke switch ORS 142 W – Standard

- **Function:** Scattered light
- **Alarm level smoke** acc. to EN 54, Part 7
- **Release temperature:** 70 ± 5° C
- **Supply voltage:** 18 to 24 V DC
- **Power input:** at 28 V DC Max. 22 mA
- **Degree of protection:** IP 42
- **Ambient temperature:** -20 to +75° C
- incl. RZO covering hood

| ORS 142 W- Standard	Colour		Article number
Smoke switch ORS 142 W- Standard	White	RAL 9016	3550005722
Smoke switch ORS 142 W- Standard	Silver	RAL 9006	3550005721

Ø 80
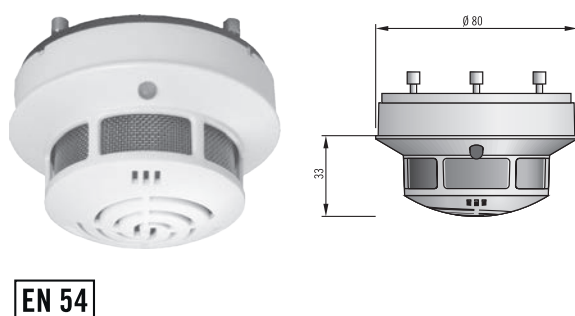
EN 54

ORS 142 ceiling smoke switch

- **Smoke detection:** according to **EN 54**, Part 7
- **Temperature:** 70°C
- **Operating voltage:** 18 – 28 V DC
- **Current power:** at 28 V DC, rest 22 mA, Alarm 11 mA, Fault 16 mA,
- **Relay contact:** Opener
- **Switching voltage:** 30 V DC
- **Switching current:** 1A
- **Switching power:** 30 W
- **Protection type:** IP 42
- **Temperature range:** -20°C bis +60°C

Ceiling smoke switch	Colour		Article number
ORS 142	White	RAL 9010	350200000052100
ORS 143 A (Surface-mounted socket)	White	RAL 9010	355000350
ORS 143 UH (Flush-mounted socket)	White	RAL 9010	355000359

Tür schließen

Tür schließen
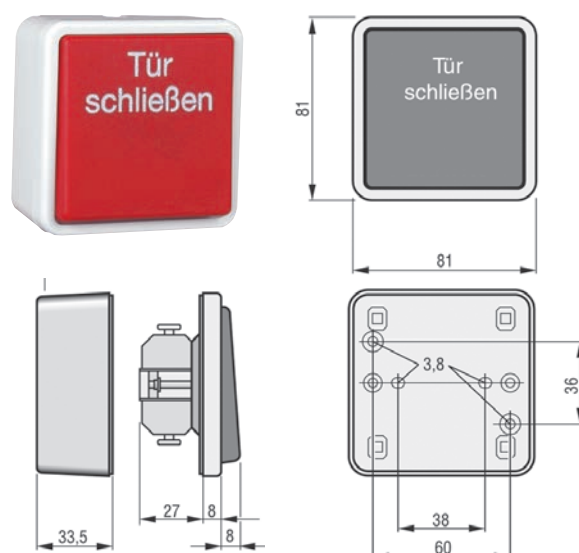
HAT 02

Hand-operated button for mounting in dry environments, for the manual activation of hold-open mechanisms in accordance with DIBt guidelines

- **Mounting:** On-wall / concealed
- **Relay contact:** Opener
- **Switching voltage:** 30 V DC
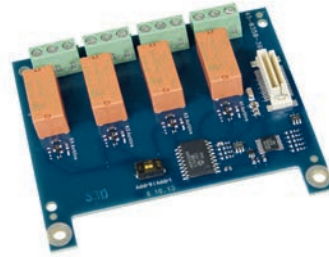- **Switching current:** Max. 1 A
- **Protection type:** IP 20

Hand-operated button	Article number
HAT 02	356500143

Relay board (RSP)

Relay board of the ETS. 4 freely configurable relays for control-
ling acoustic or optic transmitters or to signal the door status
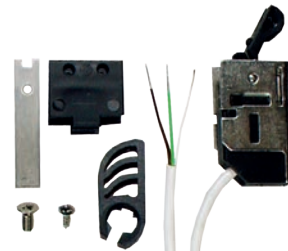(e.g. open, closed, locked, fault)

■ Can be mounted retrospectively

Relay board	Article number
RSP	33850450548215

Dead bolt switch contact (RSK)

Dead bolt switch contact for installation in the closing plate.
Switches the power unit off as soon as the lock is mechani-
cally locked. This prevents a failure of the power unit when
locking. Includes 6 m cable.

Dead bolt switch contact	Article number
Dead bolt switch contact (RSK)	35851RK1335U06

Standard opener with smoke protection approval

For deployment on smoke protection doors without fire protec-
tion requirements. Door openers with red connection blocks are
designed for 12 or 24 Volt (each ±15%) continuous operation.

Standard opener with smoke protection approval	Article number
A-5002-B	35851A5002B
A-5002-FB (Latch guide)	35851A5002FB

Fire protection door opener

For deployment on doors with fire protection requirements.
Door openers with red connection blocks are designed for 12
or 24 Volt (each ±15%) continuous operation.

Fire protection door opener	Article number
FT-502-B	35851FT502B
FT-502-FB (Latch guide)	35851FT502FB

Motor driven locks

FlipLock drive

- Multi-point locking with panic function, mechanically self-locking
- 3 patented latches + 3 long bars
- Motor unit with integrated control
- Pin and lock variations available

FlipLock access

- Multi-point locking with panic function, mechanically self-locking
- 3 patented latches + 3 long bars
- Motor unit with external control
- Pin and lock variations available
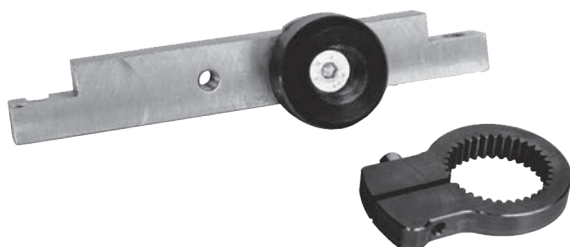- Evaluation of all contacts (potential-free)

Motor driven locks	Article number
FlipLock drive	On request
FlipLock access	On request

Mounting plate for ETS (MPL)

Necessary for use in fire protection and for mounting on walls or narrow frame facings.

Mounting plate	Article number
MPL ETS	358500450548358

Open stop for ETS (OA)

Mounted on the power unit to provide additional mechanical open stop. Can be used in combination with the standard arm and slide rails (not possible in combination with the short clamps).

Open stop	Article number
OA ETS	358500450548106

Clamps (extension shaft)

For use in special mounting situations

Clamp (extention shaft)	Article number
Clamp short (-13 mm)	358500450548124
Clamp 20 (+20 mm)	358500450548125
Clamp 50 (+50 mm)	358500450548126

Cladding for double leaf doors

consisting of assembly profile, stainless steel cladding and accessories. Set 1 1,200 mm long for two-leaf doors up to 2,600 mm.

Cladding	Total length	Article number
V-ETS	1.200 mm	358500450548214
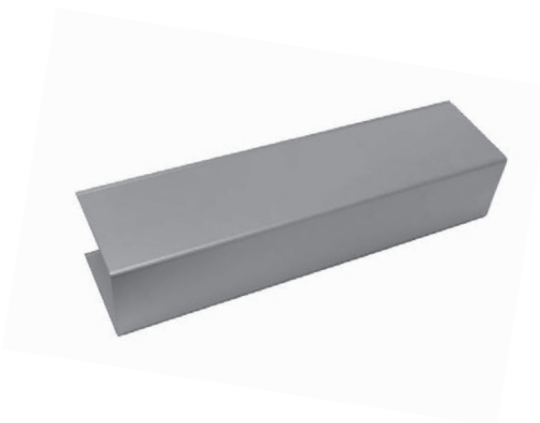
Integrated closing sequence selector (SRI)

Assembly set for retrofitting an ETS 64-R two-leaf catch system with an integrated, mechanical door control. Approved by the DIBt.
(Medium cladding set necessary).

Integrated closing sequence selector	Article number
SRI	338500450548154

17
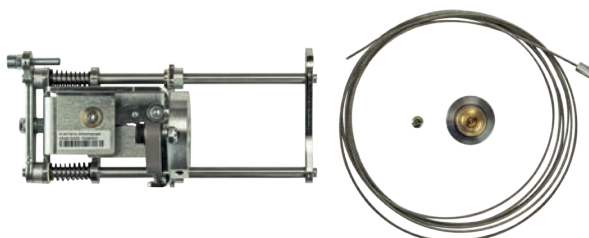
Operating console D-BEDIX for ETS

With the D-BEDIX, the different types of operation can be chosen directly. In addition, the most important door settings can be implemented with ease. The display clearly shows the types of operation, menu settings and possible faults.

Operating console	Article number
D-BEDIX	358500063514215

Flip switch (GFT)

- Function door "OPEN".
- Operating voltage 250 V AC / 30 V DC
- Current power max. 10 A AC / 2 A DC
- Protection type IP 40
- 225 x 83 mm

Flip switch	Colour	Article number
GFT-UP (flush-mounted fitting in on-site flush-mounted box)	platinum grey RAL 7036	358506443210000
Surface mounted accessories for GFT switch (accessory set for surface fitting)	platinum grey RAL 7036	338506442583000
Radio set for GFT switch (for retrofitting)	—	358506443210050

Contactless surface switch (BFT)

- also for exterior application
- Protection type IP 65
- responds at a proximity of around 10 cm or less
- incl. 80 x 80mm stainless steel plate
- indirectly illuminated (24V from the ETS)
- vandalism-proof

Contactless surface switch	Article number
BFT (flush-mounted)	35851PB001UP
BFT (surface-mounted, incl. stainless steel surface mounting box)	35851PB002AP

Contactless motion detector (magic switch)

- only for interior applications
- responds from 10 to 50 cm
- Adjustment of detection field by potentiometer
- incl. 84 x 84mm nylon cover
- suitable for flush-mounted assembly

Contactless motion detector	Article number
Magic Switch (white with hand symbol)	3385MAGICSWITCH
Surface mount box for Magic Switch (white)	338500645229001

Radar "Eagle One"

Radar motion detector as the opening impulse provider for automatic doors, identifies direction. Incl. 5 m prepared connection cable.

Radar	Article number
Radar BEA "Eagle One"	33850456466419
ORA rain hood for "Eagle One"	33851ORARSHAUBE

Remote control for ETS

For the remote control of the motor, for disabled-friendly opening of the door.

Remote print for easy insertion on the control board of the ETS.

Handheld radio transmitter with a range of up to 10 m.

Remote control	Article number
Remote control (breadboard and hand transmitter)	358545035039600
Additional hand transmitter	358500006465722

Sensor strips

Active infrared safety sensor for automatic doors. Secures the movement area. Stops or reverses when obstacles are identified.

- Incl. cable and external, flexible cable transition.
- **Set III** consisting of 2 sensor strips per leaf (BEA), up to max. 1.200 mm
- **Set IV** consisting of 2 sensor strips per leaf (BEA), up to max. 1.600 mm

Sensor strips	Article number
Set III	358506466401
Set IV	358506466402
Rain cover hood (for outside deployment) with sensor bars up to 1100 mm	338500201880002
Rain cover hood (for outside deployment) with sensor bars up to 1500 mm	338500201880003
Fire protection doors adapter (6mm bore) (terminal block + slave cable)	33851FSSet4SAFE

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Rain cover hood

Flatscan

Sensor for swing doors to secure the entire width and height of the door leaf on the hinge side or opposite hinge side, as well as the secondary closing edge.

- Laser Scanner (to measure radiated light)
- Electricity supply 12 to 24 V AV DC ± 15 %
- Power consumption <= 2W
- IP 54
- Dimensions: 142 x 55 x 23 mm
- Set consisting of 2 sensors, for hinge and opposite hinge sides

Sensor	Colour		Article number
Flatscan Set	White	RAL 9010	3385LZRFLATSCA1
Flatscan Set	Black	RAL 9005	3385LZRFLATSCA2
Flatscan Set	Silver	RAL 9006	3385LZRFLATSCAN

DIN 18650 EN 16005

Your company logo

■ SYSTEM TECHNOLOGY FOR THE DOOR

ECO