

# ECO ETS Electromotive drive







#### 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.



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.



















#### ETS – System highlights

#### 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  $\times$  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.

3000 -					_			
2900 -					_			
2800 -								
2700 -								h
2600 -								
2500 -								
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2300 -	2			್ಷ		8	3	70,
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	38		2	38			29	18
2100 -	80 mm (20 Pa	10 kmm		erd cent www.c6				ed Obj
2000 -	1				_			
800	900	1000	1100	1200	13	00 14	00 15	00 16



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.













### DIN 18263-4 DIN 18650 EN 16005 F CE

	Performance c	riteria	ETS 73	ETS 64-R	120
	Closing force (continuously adjustable	Size acc. to EN e)	3 – 7	3 – 6	689
	Door width acc. to EN	Interior doors ≤ 1.600 mm	•		
		Fire protection doors $\leq$ 1.400 mm		•	S81 59
	Dimensions (incl. mounting plate)	Length in mm Depth in mm Height in mm	690 120 95	690 120 95	38
	Ambient tempera	iture	-15 to	+50° C	Dimensions: ETS with slide rail
	Relative humidity		max.	85%	* In the case of rebated doors please use the long pins (included in delivery)
	Power consumpti	ion	max. 560 W	(standby 4 W)	
	DIN left / right				120
	Opening speed a	djustable	max.	40°/s	689
	Closing speed adjustable with mains of fixed if there is a power		max.	40°/s	SE CONTRACTOR
	Hold-open time a	djustable	0 -	60s	00000
	Max. door openin	ng angle	10	)5°	
	Tested acc. to EN	I	DIN 18650 EN 16005	DIN 18263-4 DIN 18650 EN 16005	Dimensions: ETS with standard arm
	Suitable for fire- a	and smoke control doors	-	F (DIBt)	
	Certified accordin	g to EU-Directive	C	€	
<ul><li>Yes</li><li>No</li><li>Option</li></ul>	Wooden door	Steel Prof door door	file frame r		

# 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



**ETS** 

# DIN 18263-4 DIN 18650 EN 16005 F CE





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)

#### 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

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).



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					
* Earlintal dapth up to 2E0 mm (fire protection)							

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

#### 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
- 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



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DIN 18650 EN 16005 CE

# 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.

ETS



# 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



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.





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.



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.

**ETS** 



# Installation drawing ETS 64-R double leaf



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.



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.



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.



DIN 18650 EN 16005 CE



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, other- wise the cable is installed externally with cable transition (black).
4	Large button internal	4 x 0,6 mm <sup>2</sup> oder 4 x 0,8 mm <sup>2</sup>	Concealed socket, cable installed in advance
4.1.	Large button external	4 x 0,6 mm <sup>2</sup> oder 4 x 0,8 mm <sup>2</sup>	Concealed socket, cable installed in advance
5	Emergency button "Door Closed" (optional)	4 x 0,8 mm <sup>2</sup>	Concealed socket, cable installed in advance
6	Bedix switchpoint	4 x 0,8 mm <sup>2</sup>	Concealed socket, cable installed in advance
7	Power cable 230V	3 x 1,5 mm <sup>2</sup>	50 Hz, 10 A
8	E-opener 24V	4 x 0,6 oder 0,8 mm <sup>2</sup>	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)





### ETS 73 - Cable plan double leaf





Pos.	Drawing	Cable	Comment
1	ECO ETS 73 (Master- GF)	3 x 1,5 mm <sup>2</sup> (50 Hz, 10 A)	Mounting hinge side or hinge-opposite side
1.1	ECO ETS 73 (Slave- SF)	3 x 1,5 mm <sup>2</sup> (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 exter- nally 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 mm <sup>2</sup>	Cable installed in advance in SF
10	Radar (internal)	4 x 0,8 mm <sup>2</sup>	Cable installed in advance (or concealed)
10.1	Radar (external)	4 x 0,8 mm <sup>2</sup>	Cable installed in advance (or concealed)
11	internal cable transition	for E-opener and smoke protec- tion 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)





# DIN 18263-4 DIN 18650 EN 16005 F CE

## **Check list orders - ETS**

Pos.	Type of arm	Fi prote			eaf	Be	dix	But	ton	Ra	dar	Ra	dio	Saf	ety eleme	ents	Emerg		E-op	ener	RS	SK
		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





Slide rails

Standard arms



Integrated closing sequence selector (SRI)

Drive

### **Operating elements**



 $\begin{array}{c} Bedix \text{ (external operation and } \\ \text{programming element)} \end{array}$ 

#### Security elements



Sensor strips

#### **Accessories locks**



E-opener



Switch with large surface area GFT

Finger protection



Radar

Flatscan



Remote control



Emergency off



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.



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#### 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

#### 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	35020000052100
ORS 143 A (Surface-mounted socket)	White	RAL 9010	355000350
ORS 143 UH (Flush-mounted socket)	White	RAL 9010	355000359



#### 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



EN 54



#### **ETS Accessories**



#### Relay board (RSP)

Relay board of the ETS. 4 freely configurable relays for controlling 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 mechanically 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 protection requirements. Door openers with red connection blocks are designed for 12 or 24 Volt (each  $\pm 15\%$ ) 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  $\pm 15\%$ ) 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	





#### **ETS Accessories**



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











#### **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







#### **ETS Accessories**

#### 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

#### 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







Rain cover hood





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### ■ SYSTEM TECHNOLOGY FOR THE DOOR







