## ED 100

 ED 250Swing door operators in modular design

# Swing door operators in modular design 

With their ED 100 and ED 250 swing door operators, DORMA offers electromechanical swing door operators for various fields of application. Simply select the suitable version according to your prevailing doorleaf width and weight: While the ED 100 is suitable for doors with a weight of up to 100 kg and a door width of $1,100 \mathrm{~mm}$, the ED 250 is designed for doors with a width of $1,600 \mathrm{~mm}$ or a door weight of 250 kg . Both operators may be installed as push-version with standard arm and as pull-version with slide channel.

Apart from the extended cover, DORMA also provides an easy-to-install integrated door coordinator. With the aid of the DORMA Upgrade Card, the system's functional range may be adapted to various door versions. The large scope of integrated functions furthermore ensures that the majority of possible applications may easily be realised.

## Benefits:

- Flexible configuration: Customers only pay for the functions they actually require.
- Cheap transport and easy mounting thanks to the system's reduced weight.
- Low-noise application due to multi-stage gear.
- Elegant visual appearance: DORMA Contur design provides an operator height of only 70 mm .
- Various functions as standard.


## Fields of application:

- For single- or double-leaf swing doors. Choose between the ED 100 and the ED 250 in accordance with your prevailing doorleaf width and weight.
- The pull-version with slide channel and the pushversion with standard arm are suitable for application at fire and smoke doors.
- Thanks to its low- and fullenergy version, the system is suitable to automate both rarely and heavily frequented internal and external doors.
- High torque for full-automatic swing doors with radar motion control.
- For interior and exterior doors.


| Required operating conditions |  |
| :--- | :--- |
| Ambient temperature | -15 to $+50^{\circ} \mathrm{C}$ |
| Only suitable for dry <br> environments | Relative humidity max. $93 \%$ <br> (non condensing) |
| Power supply | 230 V AC $50 \mathrm{~Hz}+/-10 \%$ |
| Class of protection | IP 20 |


| General specifications |  |
| :--- | :--- |
| Dimensions (W $\times \mathrm{H} \times \mathrm{D}$ ) | $685 \times 70 \times 130 \mathrm{~mm}$ |
| Min. clearance between hinges <br> (double-leaf systems) | $1,400 \mathrm{~mm}$ |
| Min. clearance between hinges <br> for ESR (double-leaf systems) | $1,450 \mathrm{~mm}$ |
| Weight of single-leaf version 12 kg <br> Power supply for external <br> accessories $24 \mathrm{~V} \mathrm{DC} \mathrm{+/-10} \mathrm{\%,1.5} \mathrm{~A}$ <br> Opening angle Max. $110^{\circ}$ <br> Manufactured to ISO 9001  $\mathbf{}$ |  |


| Integrated functions |  |
| :--- | :--- |
| Hold-open time | 30 s, 180 s (optional) |
| Blocking behaviour | Reversing/Door closer <br> function |
| Locking feedback contact | Motor lock |
| Wind load control | up to 150 N |
| Voltage-independent braking <br> circuit | Adjustable via potentiometer |
| Electronic latching action <br> pulse | Force adjustable |
| LED status indicator <br> green | - Operating voltage indicator <br> - Malfunction indicator <br> -Service interval indicator |
| Integrated program switch | OFF <br> AUTOMATIC |
| PERMANENT OPEN <br> EXIT ONLY (only for single- <br> leaf systems) |  |
| User interface <br> with information display | Status indicator and <br> parameterisation |
| Slot for DORMA Upgrade Cards | Extension of functional range |


| Inputs, terminals max. 1.5 mm² |  |
| :--- | :--- |
| Potential-free activator | Inside and outside <br> (NO contact) |
| Energised activator | $8-24 \mathrm{~V} \mathrm{DC/AC}+10 \%$ |
| Night-/Bank (key switch) | NO contact/NC contact |
| Safety sensor | Hinge side and opposite <br> hinge side (NC contact) |
| Test signal for safety sensor | Hinge side and opposite <br> hinge side |
| Emergency-Off pushbutton/ <br> Lock switch | NC contact/NO contact |


| Outputs, terminals max. $\mathbf{1 . 5} \mathbf{~ m m}^{2}$ |  |
| :--- | :--- |
| Potential-free door status <br> contact, alternatively | Door closed |
|  | Door open |
|  | Malfunction |


| ED 100 |  |
| :--- | :--- |
| Max. power consumption | 120 Watts |
| Closing force EN 1154 | EN $2-4$, adjustable |
| Max. door-leaf weight for lintel <br> depths of up to 300 mm | 100 kg |
| Door-leaf width | $700-1,100 \mathrm{~mm}$ |
| Max. opening speed | $* * 50^{\circ}\left(27^{\circ *}\right) /$ second |
| Max. closing speed | $* * 50^{\circ}\left(27^{\circ *}\right) /$ second |
| Axle extension | $30 / 60 \mathrm{~mm}$ |
| Lintel depth for slide channel | $+/-30 \mathrm{~mm}$ |
| Lintel depth for standard arm | $0-300 \mathrm{~mm}$ |


| ED 250 |  |
| :---: | :---: |
| Max. power consumption | 240 Watts |
| Closing force | EN 4-6, adjustable |
| Max. door-leaf weight for lintel depths of up to 300 mm | $\begin{gathered} 250 \mathrm{~kg} \text { to } 1,400 \mathrm{~mm} \\ \text { Door-leaf width } \\ 190 \mathrm{~kg} \text { for } 1,600 \mathrm{~mm} \\ \text { Door-leaf width } \end{gathered}$ |
| Max. door-leaf weight for lintel depths from 301 mm to 500 mm | 160 kg |
| Door-leaf width | 700-1,600 mm |
| Door-leaf width for fire protection doors | 700-1,400 mm |
| Max. opening speed | $60^{\circ}\left(27^{\circ *}\right) /$ second |
| Max. closing speed | $60^{\circ}\left(27^{\circ *}\right) /$ second |
| Axle extension | 30/60/90 mm |
| Lintel depth for slide channel | +/-30 mm |
| Lintel depth for standard arm | 0-500 mm |
| * The values in brackets indicate the maximum speed in Low-Energy Mode without Full-Energy or Fire Protection Upgrade Card. |  |

## View: BASIC cover, pull-version, 12.5 mm pivot pin



Standard axle extension

## View: BASIC cover, pull-version, 25 mm pivot pin



Standard axle extension

View: BASIC cover, push-version


Standard axle extension

Drilling template: BASIC cover, pull-version, 12.5 mm pivot pin


Drilling template: BASIC cover, pull-version, 25 mm pivot pin


Drilling template: BASIC cover, push-version


View: PROFESSIONAL cover, pull-version, 12.5 mm pivot pin


Standard axle extension

View: PROFESSIONAL cover, pull-version, 25 mm pivot pin


Standard axle extension

View: PROFESSIONAL cover, push-version


Standard axle extension

Drilling template: PROFESSIONAL cover, pull-version, 12.5 mm pivot pin


Standard axle extension
The cable entry may be realised on the left or on the right side.

## Drilling template: PROFESSIONAL cover, pull-version, 25 mm pivot pin



Standard axle extension
The cable entry may be realised on the left or on the right side.

Drilling template: PROFESSIONAL cover, push-version


## Standard axle extension

The cable entry may be realised on the left or on the right side.

## System setup



The example system is equipped with all available components.
It is selected in accordance with the door-leaf width and the door-leaf weight.

| (1) Mains connection | (5) Adjustment of closing | (8) Slot for | (12) Standard arm* |
| :--- | :--- | :--- | :--- |
| (2) Connection unit | force | DORMA Upgrade Cards | (13) Complete cover* |
| (3) Axle connection | (6) Control unit | (3) User interface with |  |
| on both sides Switching power | information display | *supplied separately |  |
| (4) Drive system | (10) Internal program switch |  |  |
| (motor/gear/spring) |  | (11) Slide channel (set)* |  |


| Artikel-Nr. |  |  |
| :--- | :--- | :--- |
| ED 100 swing door operator 230 V | EN 2-4, push-version, fire protection; | 29222301 |
| ED 250 swing door operator 230 V | EN 2-4, pull-version, fire protection |  |
|  | EN 4-6, push-version, fire protection; pull-version, nor special requirements | 29202301 |
|  | EN 4-6; pull-version; fire protection | 29202302 |
|  | EN 4-5; pull-version; fire protection | 29202303 |

## Opening and closing torque

| ED 100 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Way of mounting | Lintel mounting on hinge side with slide channel (pull-version) |  | Lintel mounting on opposite hinge side Standard arm (push-version) |  |
|  | minimum | maximum | minimum | maximum |
| Closing force EN 1154 | EN 2 | EN 4 | EN 2 | EN 4 |
| Manual closing torque ( Nm ) | 13 | 34 | 13 | 37 |
| Closing torque in AUTOMATIC mode (Nm)** | 20 | FE: 150/LE: 67 | 20 | FE: 150/LE: 67 |
| Manual opening torque (Nm) | 30 | 50 | 35 | 55 |
| Opening torque in AUTOMATIC mode ( Nm )** | 20 | FE: 150/LE: 67 | 20 | FE: 150/LE: 67 |
| Opening torque of manually-activated Power-Assist Function (Nm) * | 23 | 23 | 23 | 23 |


| ED 250 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Way of mounting | Lintel mounting on hinge side with slide channel (pull-version) |  | Lintel mounting on opposite hinge side Standard arm (push-version) |  |
|  | minimum | maximum | minimum | maximum |
| Closing force EN 1154 | EN 4 | EN 6 | EN 4 | EN 6 |
| Manual closing torque ( Nm ) | 26 | 65 | 26 | 70 |
| Closing torque in AUTOMATIC mode ( Nm )** | 20 | FE: 150/LE: 67 | 20 | FE: 150/LE: 67 |
| Manual opening torque (Nm) | 55 | 85 | 60 | 90 |
| Opening torque in AUTOMATIC mode ( Nm )** | 20 | FE: 150/LE: 67 | 20 | FE: 150/LE: 67 |
| Opening torque of manually-activated Power-Assist Function (Nm) * | 23 | 23 | 23 | 23 |

FE = With Full-Energy or Fire Protection Upgrade Card, LE = Low-Energy standard operator without upgrade card

* Power-Assist Function is adjusted to maximum (function is activated at approx. $3^{\circ}$ opening width)
** The torque is activated by an automatic opening in AUTOMATIC mode.


## Door closer mode \& AUTOMATIC mode

Users may choose between two operation modes: door closer and AUTOMATIC mode. While adjusted to door closer mode (parameter $\mathrm{Hd}=1$ ), the system is optimised for manual operation. With its
optional Power-Assist Function, the door closer mode is tailored to predominantly manually-operated doors where a door closer function is desired. The AUTOMATIC mode (parameter $\mathrm{Hd}=0$ ) in
turn is especially suitable for mainly automatic access via motion detector or pushbutton. In addition, the door reverses as soon as it runs into an obstruction while closing. On activation of the

AUTOMATIC mode, also the wind load control is available. Although in AUTOMATIC mode, the doors are still ready for manual access. In this case we would recommend the Push \& Go function.

## Wind load control

ED 100 and ED 250 operators are especially suitable for application at exterior doors that are subject to varying wind loads and for interior doors separating rooms where different pressure prevails.

While the system is in AUTOMATIC mode, the wind load control monitors the driving speed and adjusts the speed correspondingly if it exceeds or falls below the adjusted value.

In conjunction with the FullEnergy Upgrade Card, the operator provides a force of up to 150 N at the main closing edge - which is then used to compensate environmental influences.

The electronic latching action is activated during the last $5^{\circ}$ of the closing cycle in order to support the closing action.
provides barrier-free access during standard operation. However, it is not possible to use the system in conjunction with the Push \& Go Function or the wind load control as these functions may affect the easy manual opening of the door.

## Arm



## ED 100 and ED 250:

For lintel depths $+/-30 \mathrm{~mm}$

| Article No. |  |
| :--- | :--- | :--- |
| ED slide channel set (silver-coloured) | 29275001 |
| ED slide channel set (white) | 29275002 |
| ED slide channel set (special colour) | 29275003 |

## ED standard arm 500 - push-version



## ED 250:

For lintel depths from 226 to 300 mm and a weight of 250 kg For lintel depths from 301 to 500 mm and a weight of 160 kg

ED 100:
For lintel depths from 226 to 300 mm

ED standard arm 225 - push-version


## ED 100 and ED 250:

For lintel depths from 0 to 225 mm

| Article No. |  |
| :--- | :--- | :--- |
| ED standard arm 225 (silver-coloured) | 29271001 |
| ED standard arm 225 (white) | 29271002 |
| ED standard arm 225 (special colour) | 29271003 |

## ED axle extensions



The axle extensions 30 and 60 mm are suitable for all arm versions of the ED 100 \& ED 250.

The axle extensions 90 mm is only suitable for all arm versions of the ED 250. The axle extensions are available in chromated black.

## Covers

The operator covers are packed separately from the operator system, which makes it easy to select the respectively required cover. DORMA provides covers for single- and double-leaf systems. All covers are
designed for on-site mounting and realised in DORMA Contur design. They are furthermore suitable for both the ED 100 and the ED 250 version. When creating double-leaf systems, the four-position
internal program switch has to be replaced by a threeposition switch, which means that the EXIT ONLY function is only available in combination with the external program switch. Doubleleaf systems are required for
doors where the clearance between the hinges exceeds $1,400 \mathrm{~mm}$ ( $1,450 \mathrm{~mm}$ with ESR).

ED BASIC cover - Aluminium cover for single-leaf swing door systems


| Article No. |  |
| :--- | :--- |
| ED BASIC cover (silver-coloured) | 29241001 |
| ED BASIC cover (white) | 29241002 |
| ED BASIC cover (special colour) | 29241003 |



| Article No. |  |
| :--- | :--- | :--- |
| ED VARIO cover, $2,200 \mathrm{~mm}$ (silver-coloured) | 29242001 |
| ED VARIO cover, $2,800 \mathrm{~mm}$ (silver-coloured) | 29242002 |


| double-leaf version | single-leaf version |
| :---: | :---: |
| $1,500 \mathrm{~mm}-2,200 \mathrm{~mm}$ | $800 \mathrm{~mm}-1,600 \mathrm{~mm}$ |
| $1,500 \mathrm{~mm}-2,800 \mathrm{~mm}$ | $800 \mathrm{~mm}-1,600 \mathrm{~mm}$ |

Swing door operators in modular design


## DORMA Upgrade Cards

DORMA Upgrade Cards are designed to increase the functional range of our swing door operators. The installation of the cards is very easy: Just insert the respective Upgrade Card
into the proper slot at the control unit and the software will be transferred automatically. DORMA offers different Upgrade Cards, which may either be combined or installed as individual
components. Please note that the respective function of the Upgrade Card is only available as long as the card is connected to the control unit.

## Upgrade Card Full-Energy - blue

All operator systems are supplied as Low-Energy version, which means that the adjustable opening and closing speed range is restricted to a certain limit. The respective limits depend on the prevailing door-leaf width and door-leaf weight and may vary between $1^{\circ}$ and $27^{\circ}$ per second. These limits furthermore comply
with DIN 18650 (German Industrial Standard), ANSI 156.19 (American Standard) and BS 7036 (British Standard). Depending on their field of application, such swing door operators might not require safety sensors when operated in Low-Energy Mode. If you need a higher driving speed, you will require the respective

## 3,200 mm.

With the PROFESSIONAL cover, also single-leaf operators may be extended to a
length of up to $3,000 \mathrm{~mm}$ towards the main closing edge.

Full-Energy Upgrade Card. The driving speed may then be increased to a maximum of $50 \%$ second with the ED 100 and to $60 \%$ second with the ED 250. In this case the swing path has to be monitored by safety sensors (mounted onto the door leaf).

## Article No.

ED Upgrade Card
Full-Energy
ED 100
29251022
blue
ED Upgrade Card
Full-Energy
ED 25029251020
blue/transparent

Upgrade Card Fire Protection ED 100 - red

When the ED 100 is installed at fire and smoke doors with application in preventive fire protection, the Upgrade Card Fire Protection is required for compliance with the guidelines for hold-open devices. Apart from its smoke detector connection (as monitored current loop), the card also offers a manual reset function (by opening the door), a full-energy function and the system may be triggered at the door leaf.

Thanks to the card's integrated full-energy function, no additional Full-Energy Upgrade Card is required.

## Manual reset by opening

 the doorA triggered hold-open system has to be reactivated manually. As soon as the function has been activated, it suffices to open the door until it has almost reached the adjusted opening width.

## Triggering at door leaf

 It must be possible to trigger a hold-open device manually in order to close the door. With ED 100 \& ED 250, users may deactivate the hold-open function by a slight push against the door leaf. So no pushbutton is required to trigger a closing cycle; however, it is still available as an option.Article No.
ED Upgrade Card
Fire Protection
ED 10029252022 red

ED 25029252020 red/transparent

## Upgrade Card Professional

The Upgrade Card Professional provides functions for swing door operators that used to be realised with the aid of external components.

## - Extended hold-open time of 180 s

The hold-open time of up to 30 seconds, which is already integrated in the basic system, is sufficient for most applications.
However, an extended holdopen time of up to 180 seconds may easily be realised with the aid of the Full-Energy Upgrade Card.

- Flip-Flop-Function

In standard mode, the operator opens the door after a Night-/Bank pulse has been triggered (via the key switch) and closes it on expiry of the hold-open time. When the flip-flop-function is activated, the door opens and remains in

PERMANENT OPEN position as soon as the Night-/ Bank function is triggered at the respective input. The door will close when the Night-/Bank function is activated again. The hold-open period in PERMANENT OPEN position is not limited, and the standard hold-open time is available at all other activator inputs. Please note that smoke detectors always have priority to the PERMANENT OPEN function.

- Nurse-Bed-Function (only for double-leaf door systems)
As soon as a pulse is triggered, both door leaves of the double-leaf system will open.
Sometimes this may not be necessary, as the full passage width is not required.

Whenever this is the case, the Nurse-Bed-Function is perfectly suitable to control the two door leaves separately.
The activator that is connected to the external detector only institutes the active door leaf to open. The resulting passage width is sufficiently big to allow people to use the door.
The other activator (the one that is connected to the internal detector) is used to open the door to the full opening width. In this case, both door leaves open so that the full passage width is accessible.
This function reduces the energy consumption and may help to avoid draughts and thus heat loss.

## Upgrade Card DCW

The Upgrade Card DCW provides the operator with a DCW Bus connection. The integrated DCW driver supports the following accessory:

- Emergency exit motor lock with self-locking action DORMA SVP DCW
The required procedure is controlled by the operator while the operator and the motor lock communicate via the DCW bus.
- ST 32 DCW

The key switch to trigger the Night-/Bank function is suitable for application as activator outside the secured area (if you turn the key clockwise). When the key switch is used in conjunction with the DCW program switch: the program switch is adjusted to OFF by turning the key counter-clockwise in order to deny access
after closing of business or during work breaks. Turn the key to the right for more than 3 seconds in order to trigger the AUTOMATIC function.*

* Depending on regional standards, provisions and regulations regarding the safeguarding of buildings, further measures to shut off the building may be required.

Article No.
ED Upgrade Card
Professional
ED 100/ED 25029253001 green

## Article No.

ED Upgrade Card DCW ED 100/ED 25029254001 yellow

## Upgrade Card Barrier-Free Toilet

With the aid of the upgrade card, the required special functions are allocated to the in- and outputs of the control unit to facilitate the connection of the respective components.

## System overview

The system requires an electric strike, a motor lock or similar devices to keep the door closed. Furthermore,
the door is equipped with a lever handle on the inside and a knob on the outside so that the door may only be opened from the inside and the outside with the corresponding key. In addition, large-surface pushbuttons are installed on the inside and on the outside of the toilet while a status indicator (vacant/occupied) on the outside and an occupied light
indicator on the inside of the toilet indicate the current status. As an option, we provide an emergency pushbutton (to be mounted on the outside), which allows to open the door immediately in the event of an emergency. Please note that DORMA recommends connecting the barrier-free toilet to an additional emergency call system (by others).

Article No.
Upgrade Card 29253002 Barrier-Free Toilet

## Functional characteristics

- Entering the barrier-free toilet
While the toilet is vacant, the status indicator on the outside is green. Use the pushbutton on the outside to trigger an automatic opening cycle. The door will close automatically on expiry of the adjusted hold-open time. As soon as the door is fully closed, users may deactivate the external pushbutton via the pushbutton on the inside so that the door is no longer accessible from the outside. At the same
time, the external status indicator switches from green to red in order to indicate that the toilet is occupied. Also the internal status indicator turns red to show the user inside the toilet that the door is now locked.
- Leaving the barrier-free toilet
Users may open the door either automatically via the internal pushbutton or manually by using the lever handle. At the same time, the system emits a

24 V DC message, which may be used to flush the toilet automatically. The door closes on expiry of the adjusted hold-open time. The status indicator on the outside switches from red to green and the light indicator on the inside goes out as soon as the door has reached its "closed" position.

- Emergency opening from the outside
The system is ready for connection of an emergency pushbutton so that, in the
event of an emergency, users may deactivate the locking function and the door can only be opened by hand. In this case the door not longer operates automatically.
As an alternative, the door may be opened with the aid of a key from the outside (in the event of an emergency). In both cases, the status indicator on the outside switches from red to green and the light indicator on the inside goes out.



## Functional characteristics

In the event of a fire, the ceiling-mounted or lintelmounted smoke detectors detect emitted smoke and deactivate the automatic opening of the door. In this case, the operator will close
the door via the integrated spring and can no longer open it automatically. Apart from the automatic activation via smoke detector, the system may also be triggered manually via the optional


1 ED 100/ED 250
2 ED 100/ED 250 with continuous cover
3 RM-ED smoke detector
manual release pushbutton or when the door is closed by hand. In order to reactivate the system, the door has to be opened manually.


4 RM-N smoke detector, opposite hinge side
5 RM-N smoke detector, hinge side
6 Optional manual release pushbutton "Tür zu" (German for "close door")

## DORMA RM-N ceiling-mounted smoke detector

$2 \times \mathrm{RM}-\mathrm{N}$
white
Article No. 64830900


RM-ED (silver-coloured)
RM-ED (white)
RM-ED (special colour)

Article No. 64840001
Article No. 64840011
Article No. 64840009

## DORMA HT manual release pushbutton



## Flush-mounted version

white
Article No. 19144601175

Box for surface-mounting for DORMA HT

Article No. 05158533332 (No picture)

## ESR - Integrated door coordinator

The ESR set is installed inside the double-leaf operator on site. It is available as individual component and easy to install. The system
works similar to a drum brake and thereby ensures the proper functioning of the system. Its brake works on the motor shaft of the
operator on the active door leaf and transfers the switching signal via a shaft. The system does not require any maintenance.

Article No.
ED ESR Set 29261001

1 Power supply
2 Emergency pushbutton, function: Emergency Off
3 Two-pole-and-earth socket

4 External PGS, mechanical
5 External PGS, electronic
6 Pushbutton, inside
7 Pushbutton, outside
8 Locking device
9 Radar motion detector, inside
10 Radar motion detector, outside
11 Key switch
12 ED 100/ED 250
13 ED 100/ED 250 with continuous cover
14 RM-ED smoke detector
15 RM-N smoke detector, opposite hinge side
16 RM-N smoke detector, hinge side
17 Optional manual release pushbutton "Tür zu" (German for "close door")

18 red-green-display

## ED 100/ED 250, single-leaf doors

## ED 100/ED 250, double-leaf doors



ED 100/ED 250, single-leaf doors, barrier-free toilet


## Program switches

External program switches are available in different designs and have been conceived for all kinds of demands. They offer various options, from a mechanical to a full-electronic
version, alternatively also lockable via Euro profile halfcylinder or in a full-electronic way via code. These switches are designed to replace the internal program switch.


## Program switch

4-position, aluminium, white, flush-mounted version, Gira S-Color

Article No. 19135404150 Box for surface-mounting: 5080531332

## Mechanical and lockable



## Program switch

4-position, lockable, aluminium, white, flush-mounted version, Gira S-Color

Article No. 19135604150
Box for surface-mounting: 5080531332

## Electronic



## Full-electronic

program switch
In System 55 design,
4-position, lockable via code or additional TL-ST S55 key switch, membrane keypad, aluminium-coloured, white, flush-mounted version

Article No. 16557001150
Box for surface-mounting: 5158533332

## Mechanical with Euro profile half-cylinder



## Program switch

4-position, lockable via Euro profile half-cylinder, white, flush-mounted version

Article No. 19141801170
Box for surface-mounting:
19142201170

## Pushbuttons



## Pushbutton

Single-pole changeover contact, standard frame, white, flush-mounted version, System 55

Article No. 19144701170

Key switches


KT 3-1
Surface-mounted version Flush-mounted version

ST 32
(without illustration)


Surface-mounted version


## Key switch KT 3-1

1 NO contact, with Euro profile half-cylinder (may be replaced by any standard Euro profile half-cylinder), key only retractable in neutral position, aluminium, metal, $75 \times 75 \times 60 \mathrm{~mm}$
KT 3-1, flush-mounted version Article No. 05054531332
KT 3-1, surface-mounted version
Article No. 05054631332

## ST 32 tamper-proof key

 switch with LED displaySilver-coloured aluminium cover with face plate, suitable for flush- and surface-mounting, to lock/unlock the door system from the outside Approximate dimensions of housing ( $\mathrm{W} \times \mathrm{H} \times \mathrm{D}$ ): $75 \times 75 \times 67 \mathrm{~mm}$
Face plate (flush-mounted):
$90 \times 100 \times 2 \mathrm{~mm}$
Article-No. 56043201


Large-sized pushbuttons (elbow)


Large-sized pushbutton

## (elbow)

Surface-mounted version, extra-flat design, plastic, grey,
$209 \times 79 \times 17 \mathrm{~mm}$
Article No. 05095431332


## Large-sized pushbutton

With box for flush-mounting, without switch pad,
incl. switch, $224 \times 82 \mathrm{~mm}$
Article No. 05095531332
Large-sized pushbutton
With box for surface-mount-
ing, without switch pad, incl.
switch, paint box for surfacemounting (silver-coloured),
$224 \times 82 \times 44 \mathrm{~mm}$
Article No. 05095231332

## Switch pad

Stainless-steel, suitable for surface-mounted version/ flush-mounted version, $214 \times 70 \mathrm{~mm}$
Article No. 05095431332

## Switch pad

Stainless-steel, suitable for surface-mounted version/ flush-mounted version, $214 \times 70 \mathrm{~mm}$, lettering "Tür auf" (German for "open door")
Article No. 05095331332
(No picture)

CT 4/1 code keypad as control for locking devices (keypad and electronic module have to be combined)


The code keypad does not require optional software for simple access authorisations. The water resistant metal keypad is also suitable for installation in the exterior of a building. Thanks to Plug\&Play, the 4- or 6 -digit code may be changed directly with the aid of the keypad. The respective control unit is installed within the security zone and may be connected to all DORMA operators.
Surface-mounted version, $230 \mathrm{~V} / 50 \mathrm{~Hz}, 1.5 \mathrm{~V} \mathrm{~A}, 1 \times \mathrm{UM}$ potential-free relay contact $8 \mathrm{~A}, 250 \mathrm{~V}$, connections: max. $2.5 \mathrm{~mm}, 75 \times 75 \times 11.5 \mathrm{~mm}$

MTB 4/1 metal keypad
to enter the activation code (to open the door) and for programming purposes,
surface-mounted version $75 \times 75 \times 11.5 \mathrm{~mm}$

Article No. 05079331332

## EB 4/1

Electronic module, incl. 2 m connection cable, plastic cover, black, surface-mounted version

Article No. 05063431332

## DORMA BRC remote system

The new DORMA BRC system operates with a bi-directional BidCoS wireless protocol. In contrast to unidirectional systems, the receiver sends a message to the hand-
held transmitter that the signal has been received. The hand-held transmitter indicates the prevailing status via a LED. Thus a short keystroke is enough


Battery-operated transmitter, designed for installation into a pushbutton with deep box for flush-mounting or into a surface-mounted large-sized pushbutton. In connection with the DORMA stainlesssteel large-sized pushbutton it is also suitable for heavier conditions.
to trigger an opening pulse in a reliable way within the system's typical field range of 100 meters. The BRC-W and BRC-T transmitters are also of bi-directional design;

The new DORMA BRC-R radio receiver may easily be installed inside the operator as its size is adapted to the available space. Simply fix it on the motor-gear-unit with two screws. We offer three different types of transmitters. Up to 1024 transmitters may be allocated to a DORMA BRC-R.

The hand-held transmitter provides two individually allocatable channels.
Feedback via integrated LED: orange, red and green.
Shock proof design and DORMA keychain.

The battery-operated wall transmitter in 55 mm design is made of white plastic and may easily be adhered to the wall or fixed with screws. It is suitable for light indooruse.
however, the status indicator is not visible as the transmitters are integrated in pushbuttons.

## Article No.

BRC-R receiver 29302002

## Article No.

BRC-H
hand-held transmitter
29301001

## Article No.

BRC-W
wall transmitter 29301002

## Article No.

BRC-T
Battery-operated
transmitter 29301003

## Radar motion detectors

Radar motion detectors respond to movements. They detect approaching people within their detection range and trigger the activation (opening) signal at the door operator. Thanks to their various adjustments, also difficult installations may be realised.


## Infrared safety sensors



DORMA infrared safety sensors are active infrared sensors and designed to detect all static and moving obstructions, either people or objects, within their detection range.
On the opposite hinge side, the infrared safety sensor fulfils the function of an activator, which means that
the sensor will institute the door to reverse and open as soon as an obstruction is detected in the course of a closing cycle. Then the holdopen times starts anew. On the hinge side, the infrared safety sensor will interrupt the automatic movement of the door whenever it detects an obstruction;
the door closes on expiry of the adjusted hold-open time. DORMA infrared safety sensors are available in different lengths and may be supplied in the same colour as the operator. We offer two different types of infrared safety sensors: The DORMA IRS-4, which is required for areas where
compliance with DIN 18650 (German Industrial Standard) is essential and the DORMA IRS-2, a moving infrared safety sensor, which is suitable for areas that are not subject to DIN 18650.

IRS-4 active infrared safety sensor

## DORMA IRS-4

IRS-4 safety sensors are excelled by their easy commissioning and adjustment. The sensors' monitoring quality within the driving path depends on the condition of
the floor in the close range of the door system.
IRS-4 sensors are suitable to monitor standard floors and floors with low reflectance levels, gratings or floor mats.
The operator and the IRS-4
communicate bidirectionally via the integrated communication interface. The system performs the cyclical sensor test and activates the Energy Saving Mode (ESM) in a fast and reliable way, while the
operator automatically assesses its utilisation degree and switches the IRS-4 to Energy Saving Mode as soon as it is not required.

| IRS-4 active infrared safety sensor |  | Colour | Article No. |
| :---: | :---: | :---: | :---: |
| IRS-4-35 | With one sensor, length: 350 mm | silver-coloured | 294350 |
|  | Type-approved in accordance with DIN 18650 | special colour | 294351 |
| IRS-4-110 | With two sensors, length: $1,100 \mathrm{~mm}$ | silver-coloured | 294110 |
|  | Type-approved in accordance with DIN 18650 | special colour | 294111 |
| IRS-4-160 | With three sensors, length: $1,600 \mathrm{~mm}$ | silver-coloured | 294160 |
|  | Type-approved in accordance with DIN 18650 | special colour | 294161 |

IRS-2 active infrared safety sensor


DORMA IRS-2

With the aid of the DORMA IRS-2, danger spots within the swing path of the door may be safeguarded via moving active infrared safety sensors. The DORMA IRS-2 is available in
different lengths and with a variable number of infrared sensors. It furthermore prevents the door leaf from hitting people in the most relevant danger zones.

| IRS-2 active infrared safety sensor | Colour | Article No. |  |
| :--- | :--- | :--- | :--- |
| IRS-2-33 | With one sensor, length: 330 mm | silver-coloured | 16521701150 |
|  |  | white | 16521704150 |
| IRS-2-70 | With one sensor, length: 700 mm | special colour | 16521705150 |
|  |  | white | 16521706150 |
|  | special colour | 16521709150 |  |
| IRS-2-90 | With two sensors, length: 900 mm | silver-coloured | 16521710150 |
|  |  | white | 16521711150 |
|  | special colour | 16521714150 |  |
| IRS-2-120/2 | With two sensors, length: $1,200 \mathrm{~mm}$ | silver-coloured | 16521715150 |
|  |  | white | 16521716150 |
| IRS-2-120/3 | With three sensors, length: $1,200 \mathrm{~mm}$ | special colour | 16521719150 |
|  |  | silver-coloured | 16521720150 |

## Further accessories



The red-green display indicates the status of the door system. The extravagant, semicircular designer light indicator is made of acryl, manufactured according to the latest LED technology and equipped with a high-grade LED display (24 V, brilliancy according to DIN VDE 0834, part 1).
Its light signals are visible from both sides and the front even from a large distance.
Light indicator, 24 V DC, LED display (red, green, white). Article No. 05111631332


In order to provide unlimited safety to all visitors of a building, existing door systems have to remain fully functional even in the event of a power failure. This is achieved with the aid of the DORMA MT 700 USV emergency power supply unit. Depending on the connected accessories, this unit may keep the system operational for up to one hour by providing emergency power supply for the complete door system. Thus there is sufficient time for countermeasures and securing the building.
USV MT 700 V A emergency power supply unit, integrated in 230 V power supply line
Dimensions: $160 \times 120 \times 360 \mathrm{~mm}(\mathrm{H} \times \mathrm{W} \times \mathrm{D})$

