

Operating instructions for swing door operator DFA 125 G

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1. General

These operating instructions are intended for the record DFA 125 G automatic swing door operator. The operator is the person responsible for the technical maintenance of this door system.

These instructions describe the use of the record DFA 125 G swing door operator. They form the basis for satisfactory functioning.

These operating instructions should be read by the door operator before commissioning and the safety instructions observed !

It is recommended to keep these operating instructions close to the automatic sliding door.

Product designation: *Automatic swing door operator*

Product name: *record DFA 125 G*

Serial number: _____ (please complete when installing)

2. Technical data and operating conditions

Dimensions: Operator 600 × 104 × 114mm (W×H×D)

Power supply data:
Mains voltage: 230 V 50 / 60 Hz
Rated power: 60 W
Fuse protection: min. 1 A slow-acting

Max. turning moment: 50 Nm

Opening angle: adjustable from 70° through 110°

Time delay: adjustable from 0 through 20 seconds

Opening speed: adjustable from 3 through 20 seconds

Closing speed: adjustable from 5 through 20 seconds

Ambient conditions:
Temperature range: -15° to +50° C
Humidity range: up to 85 % rel. humidity,
non thawing

3. Safety instructions

The record DFA 125 G swing door operator has been constructed in accordance with the latest state of the art and the recognised technical safety regulations, including limiting of forces and speeds. Nevertheless, danger can arise for the user if not used as intended.

Installation, maintenance and repairs to the record DFA 125 G must only be performed by qualified and authorized personnel (technicians).

Use for the intended purpose

The record DFA 125 G swing door operator is designed exclusively for normal service with automatic sliding doors in dry areas and must be installed within or on the inside of buildings.

Any other application or use beyond this purpose is not considered use for the intended purpose. The manufacturer bears no liability for any resulting damage; the operator alone shall bear the responsibility.

Use for the intended purpose also includes observation of the operating conditions specified by the manufacturer, in addition to regular care, maintenance and repair.

Unauthorized modifications to the automatic door exclude any liability of the manufacturer for resulting damage.

General safety and accident prevention regulations

In principle, no safety devices (sensors) must be dismantled or placed out of service.

No persons or objects must be present in the opening area/path of the sliding door, in order to avoid crushing and cutting.

The installation is **not** intended to be disconnected from the mains at night!

4. Description of system

4.1 Components

The record DFA 125 G swing door operator forms part of an electromechanical swing door system and comprises the following main components:

Control unit STG:	Intelligent, learning, microprocessor-controlled control system
Driving unit ATE:	Low maintenance d.c. geared motor with electronic path measurement and integral thermostatic protective switch
Power supply NET:	Compact 230 V power supply with integral input filter and overvoltage protection
Control unit BDE:	As required with convenient, simple mechanical control unit and / or a programmable electronic one
Locking VRR (optional):	It is possible to connect an performed by principal electrical door opener (24V-) to the operator
Sensing units:	Aesthetic actuating and self-monitoring safety elements with adjustable sensitivity ensure optimum, smooth and reliable operation of the door system

4.2 Functional description

In the standard "Automatic" mode of operation the door system opens by the response of an actuating device (e.g. radar unit) to persons or objects approaching. The door closes after the door hold-open time, provided no further opening pulse is received.

In the "Automatic locking" mode of operation, the door is only opened by actuation of an optional key-operated contact (SSK). The door closes after the SSK door hold-open time, provided no further opening pulse is received.

An obstacle to the swing door leave during **Closing** leads to an immediate re-opening (automatic reverse). The obstacle position is recorded in the door operator and this position is approached slowly when next closing. An obstacle to the swing door leave when **Opening** results in an immediate stop.

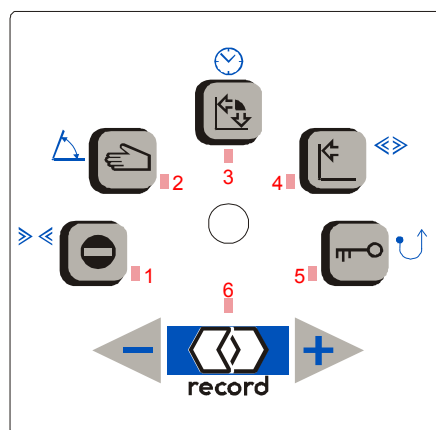
5. Operating instructions

Various control units can be connected to the record DFA 125 G. The mechanical control unit to select the various modes of operation (control toggle switch: continuously open / automatic / manual operation) is situated in the side cover. The electronic control unit can be fixed externally (max. length of the cable 80m) or usually near to the door.

5.1 Electronic control unit (BDE-E)

The electronic control unit BDE-E is a convenient input and output unit. It has several control levels. The 1st level contains the standard modes of operation. The significance of the keys can vary depending on the control level.

All LEDs light in turn during the first seconds after the power supply is switched on, followed by display of the current mode of operation.



1st control level (modes of operation)

Key functions:



Automatic operation with total opening width (summer opening): This mode of operation corresponds to standard operation. The door is opened by an actuating device (e.g. radar). The door closes again after expiration of the hold-open time.



Continuously open: door opens and remains in the open position.



Automatic mode with one-way traffic (shop closing time control): The door only opens in response to the actuating device on the inside of the door (radar) or by an optional key-operated contact (SSK).



Manual operation: The door can easily be opened by hand.



Automatic locking: (if present): The door is locked automatically after closing. Opening to the last opening width effective can only be initiated with the key-operated contact SSK.

Warning: Door opening in the locked condition without auxiliary battery or without manual unlocking is no longer ensured in the event of a **power failure** !

If no locking is provided, the door also closes and remains closed, but is not locked.

The mode of operation activated is indicated in each case by the associated red LED. The current mode is stored in the event of a power failure.

Programming keys:



"record" key





"plus" programming key



"minus" programming key

Auxiliary functions:

If the  key is pressed in the "Locked" status, an **SSK opening** is performed.

If the  key is pressed until all LED's fully lit, a **new start of the control** is performed. The settings stored remain in the memory.

2nd level (control blocked)

It is possible to block the control unit to prevent unauthorized use. Blocking and release are performed by pressing 3 keys in turn.

Block BDE-E:    (the  LED lights when blocked)

Release BDE-E:   

3rd level (programming level) SINGLE DRIVE + MASTER


Entry to programming level with key sequence:








LED  flashes slowly.

Selection of following menus by pressing relevant key.

The value is displayed while the key remains pressed.




The **value display** is made proportionally in max. 40 increments (partial steps). Divided into 5 LEDs from left to right, starting with LED 1 , whereby every LED is divided into 8 increments. Every constantly lit LED represents 20 %. The range from 0 % to 100 % is therefore covered, similar to a vehicle tachometer.

Example: door hold-open time 6s



LEDs  fully lit (corresponding to 1 time 8 increments)
 LED  has an on/off ratio of 1/2 (corresponding to 4 increments)
 LED , ,  remains off

Therefore total 12 increments = 6s

Menu functions:

	Programming function	Range	Step width	Standard values
»«	Closing speed	5 – 20s	0,5s	9s
	Opening angle	70° - 110°	1°	100°
	Door hold-open time	0 – 20s	0,5s	2s
«»	Opening speed	3 – 20s	0,5s	3s
	Automatic reverse	1 - 40	1	20


Setting:

Following menu selection (the LED lights for the menu selected) the value can be changed by pressing the  or  keys several times.

The current value is displayed while these keys are pressed.

The setting returns to the lowest value at the upper range limit and vice-versa.

Simultaneous operation of the  **and**  keys resets the values to the **standard values**.

The  key must be pressed briefly to leave the programming level. It is also left automatically if no key is pressed for 3 minutes (timeout).


4th level (programming level) SLAVE



Entry to the level can only be made by the control unit or testbox, which will be connected to the STG 125 from the **Master- drive** !

Entry to programming level with key sequence:





LED  flashes quickly.



Selection of following menus by pressing relevant key.

The value is displayed while the key remains pressed.

Menu functions:

	Programming function	Range	Step width	Standard values
	Opening angle	70° - 110°	1°	100°
	Automatic reverse	1 - 40	1	20


Setting:

Following menu selection (the LED lights for the menu selected) the value can be changed by pressing the  or  keys several times.

The current value is displayed while these keys are pressed.

The setting returns to the lowest value at the upper range limit and vice-versa.

Simultaneous operation of the  **and**  keys resets the values to the **standard values**.

The  key must be pressed briefly to leave the programming level. It is also left automatically if no key is pressed for 3 minutes (timeout).

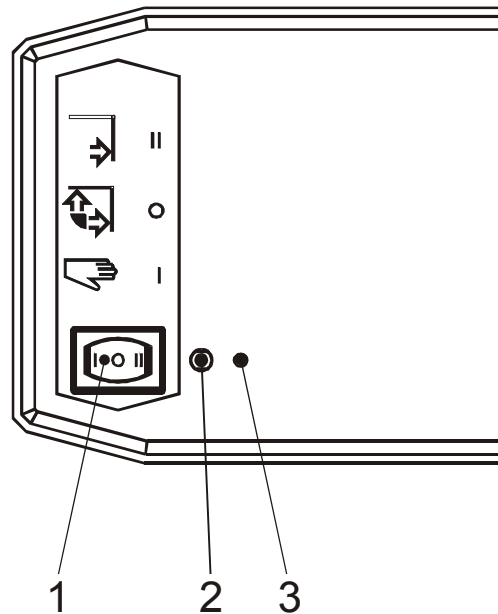


The changed datas (opening angle / automatic reverse) get stored when you exit the 4th programming level !

5.2 Mechanical control unit (standard)

Each swing door operator is standard fitted with a mechanical control unit

The mechanical control unit is a control toggle switch which is situated in the side cover



- 1 Mech. BDE 3 Positions (control toggle switch)
- 2 Reset button
- 3 Status signal

Mechanical BDE (control toggle switch)

The following operational modes can be set up with the 3-position toggle switch on the side cover:

Manual operation I :

In this operational mode, the DFA functions as a normal door-closer. It can easily be opened by hand, and closes again automatically. The connected actuating devices are ignored.

Automatic O :

The door opens and closes automatically, either by the activation of a actuating element, or by nudging the door by switching on the touch control.

Continuously open II :

The door opens and then remains in the open position. If an obstacle is encountered while opening, the DFA will attempt to bring the door into the set open position five more times, within the next few seconds. If the obstacle is still present, the current position will be accepted as the continuously-open position.

The mechanical BDE is always connected and active on a DFA 125 G. If there is an additional BDE-E connected, the operating mode will be set by a definition of a priority structure from the BDE with the highest priority.

The priority and the code shown in the following table apply to the operating mode, whereby BDE2 (S2) and BDE1 (S1) represent the two STG input terminals:

(L = interruption or 0V, H = +24V)

Mechanical BDE (toggle switch)		Electronic BDE-E	
BDE2 (S2)	BDE1 (S1)	Function	Priority (1=highest)
		locked	1
		one-way traffic	2
L	H	continuously open	3
H	L	manual control	4
L	L	automatic	5

The BDE-E indicates the current operating mode.

If an operating mode is set on the BDE-E, which has no current priority, the status message 62 is displayed.

Reset button

If the button is pressed until the status signal LED will light on, a **new start of the control** is performed.

Status signal

Remains off if no fault present.

Will blink if a fault is present (see status and fault signals).

Does fully lit during a reset.

6. Care and maintenance instructions

General

The record DFA 125 G swing door operator is a product of the latest technology. It has been carefully made and only leaves the factory following thorough testing.

Automatic swing doors should be operated and maintained to ensure safety at all times.

Care

The entire swing door system can be cleaned with a damp cloth and commercially available cleaning agents.

It is recommended to select the "Continuously open" or "Locked" mode of operation for this purpose, so that the door does not continually open and close unnecessarily.

Maintenance, periodic inspection

It is recommended to have a technical safety test with servicing performed by a specialist before first commissioning and as required, but at least twice a year.

Regular testing and servicing by our fully trained personnel therefore offers the best guarantee for a long service life and satisfactory operation. We therefore recommend the signing of a maintenance agreement. Our service department will be pleased to submit a proposal.

If nevertheless a fault should occur, which you cannot eliminate (see section 7) our service organisation or the maintenance personnel of our agents are available.

Service centres

Service centre in Switzerland: tel. 01/954 92 92 / fax 01/954 92 00

Alternative service centre: _____

7. Action in event of faults

7.1 Fault indication

Various indications are given for an irregularity or fault depending on the control unit connected BDE-E or BDE-M.

When using a mechanical BDE (control toggle switch)

With the mechanical control unit it is not possible to display a detailed status signal. If a fault occurs (will be shown by the status signal on the side cover), please proceed according to section 7.2..

When using an electronic BDE-E

An indication is given automatically on the BDE-E for a fault (status signal). This indication is coded.







The status signal and current mode of operation are then displayed alternately every 5 seconds. A status signal can be recognised by the rapid flashing of at least 2 LEDs simultaneously.

Status signals with a "W" are warnings. For these the fault relay contact output is not connected.

Elimination of the irregularity leading to the status signal is performed according to section 7.2.

7.2 Troubleshooting

The majority of faults can be eliminated by consulting the following table. If the fault cannot be eliminated even after working through the table, please contact the service centre. Please also contact the service centre directly when no recommended action is specified in the table.

						Status	Symptom, fault, door behaviour	Cause	Action (consult service if no recommend-action)
1	2	3	4	5	6				
				●	●	03	Door remains open	Actuating device inside active longer than 60 s	
			●		●	05	Door remains open	Actuating device outside active longer than 60 s	
			●	●		06	Door does not unlock	Unlocking fault	
	●		●	●	●	23		Control unit SLAVE defective	Reset by service fitter
	●	●			●	25		MASTER / SLAVE connection interrupted	Reset by service fitter
	●	●	●	●	●	31	Door stops	EMERGENCY STOP button operated	Release EMERGENCY STOP button
●			●		●	37	Door stops	Faulty motor current	
●			●	●		38	Door changes to manual control	Excess temperature motor	Wait until motor has cooled
●			●	●	●	39	Peripheral devices take too much power	Overload on +24 V supply	Reset by service fitter
●		●			●	41	Door stops	Motor 1 thermal sensor defective	Reset by service fitter
●		●		●	●	43	Door stops	Incremental transmitter defective	Reset by service fitter
●		●	●		●	45	Minimum hold-open time increased to 20 secs.	Motor current time product too large	Wait until motor has cooled
●		●	●	●		46	Door stops	Control unit defective	Reset by service fitter
●		●	●	●	●	47	Door remains closed	SIO sensor longer active than 60 sec.	Remove obstacle from surveillance range of sensor
●	●			●		50	Door stops	Control unit defective	Reset by service fitter
●	●		●			52		No valid drive parameter	Initiate calibration run
●	●		●		●	53	Door stops	Interruption Motor	Reset by service fitter
●	●		●	●		54 W	Door jolts possibly while opening	Calibration run	Initiate 1 opening cycle
●	●	●		●	●	59	Door stops	SIS sensor longer active than 60 sec.	Remove obstacle from surveillance range of sensor
●	●	●	●			60	Door stops	Parameter memory defective	Reset by service fitter
●	●	●	●		●	61	Door remains open	Key operated contact active longer than 60 s	Release key contact
●	●	●	●	●		62 W	Higher-order mode of operation present	Control unit BDE has no priority	Cancel higher-order mode of operation

⇒ A status number with a "W" is a warning !!