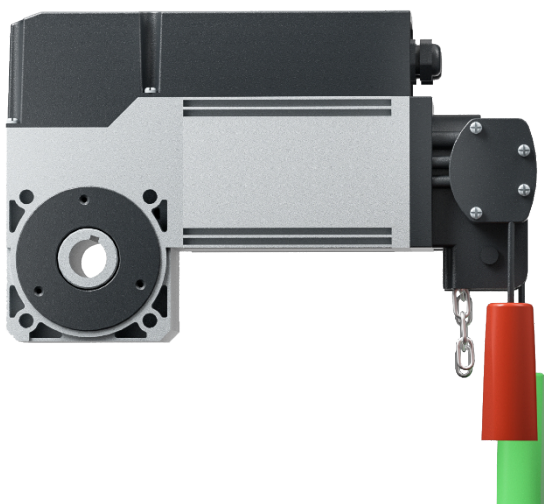

Instruction Manual

DC Brushless



for —Sectional door operators

Contents

1. General Safety Information.....	3
2. Product Description	3
3. Technical Data.....	4
4. Drawing of appearance and dimension	5
5. Warnings – Symbols.....	6
6. Safety information of operation.....	6
7. Safety information for installation.....	7
8. Proper Use.....	8
9. Scope of delivery	9
10. Table of components	9
11. Installation.....	10
12. Wiring.....	12
13. Operator Programming	13
14. Error Code	16

1.General Safety Information



- The door operator may only be used under the conditions described in these instructions. Any other use will be considered improper usage and therefore dangerous. The manufacturer is not liable for damage resulting from improper, incorrect, or inappropriate usage.
- Failure to observe the information contained in these instructions may lead to personal or material damage. The instructions must be passed on to all future users and operators of the door operator.
- Only use the door operator if no maintenance or adjustment measures are required to do so. Disconnect the operator from the power supply for cleaning or maintenance.
- Only use the door operator if the entire area of movement is fully visible. During operation, be aware of other people who may be within the operating range of the product or who may enter this area. Do not drive or walk underneath the door while it is moving.
- Do not use the door operator to lift objects and/or people.
- Ensure that children are kept away from the area around the door.
- Children over the age of 8 and persons with reduced physical, sensory, or mental capabilities may operate the door operator when supervised or if they have been instructed in the safe handling of the equipment and are aware of the associated risks.
- Keep remote controls and/or other controls out of reach of children to prevent the accidental activation of the door operator.
- Cleaning work on the door operator or the door or any maintenance measures may only be performed by children when supervised.

2.Product Description

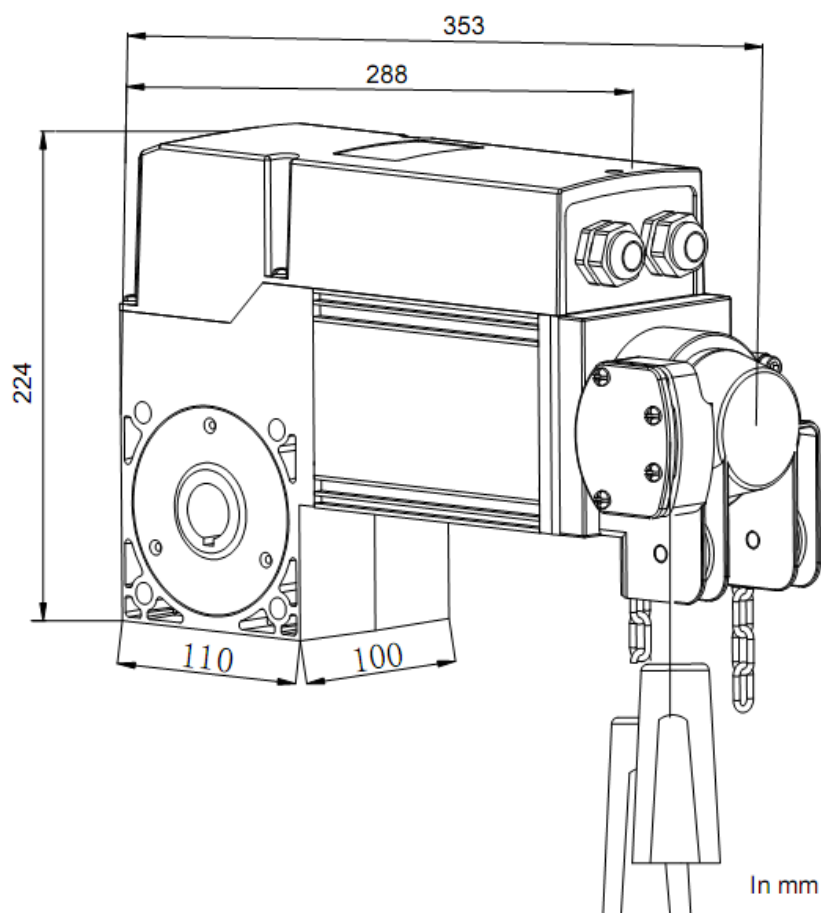
- The door operator has been developed for industrial doors.
- The door operator can be equipped with the following additional safety devices, such as:
 - Photocells, Safety edges
 - Radar
 - Loop detector
 - Remote control, Push buttons
 - Traffic light
- The door operator is operated via the control unit.
- You can choose different operating settings for the operator (e.g., automatic or hold to run).

3. Technical Data

230V single phase industrial door operator with brushless DC motor:

	Balanced sectional industrial door operator				
Model	GET50BLD	GET70BLD	GET110BLD	GET150BLD	GET200BLD
Motor power in W	400	550	850	1200	2000
Rated output torque in Nm	35	60	90	120	180
Max. output torque in Nm	50	70	110	150	200
Rated voltage/frequency	1N~220-240V 50/60Hz				
Speed in RPM	5-40			5-35	
Max. cycles per hour	30				
Limit setting of door travel	Digital encoder				
Operating environment	-20°C~-+50°C				
Max. door area in m ²	20	30	40	50	65

4. Drawing of appearance and dimension



5. Warnings – Symbols



Note: Technical information must be observed

Fig. 1 Number of a figure



Caution: Warns of a risk to a person / risk of injury



Warning: Warns of a risk to material / risk of damage

6. Safety information of operation



The door may only operate if:

- Conformity in accordance with Machinery Directive 2006/42/EC was declared following assembly.
- The door complies with the standards EN 12605, EN 12604 and DIN EN 13241-1.
- The door operator has been assembled in accordance with EN 12453, EN 12445 and EN 12635.
- Any additionally installed safety equipment is functioning properly.
- There is an internally operated emergency release for garages that have no second access.
- Any pass door set within the door is equipped with a safety device that prevents switch-on while the door is open.
- The emergency release cannot be caught on any vehicle parts (e.g. roof structures).
- It is insured that the installation is conform with the national safety regulations.

Keep the instruction manual at a safe place!

7. Safety information for installation



Important:

- The door must move easily and be functional and well-balanced in accordance with the manufacturer's specifications.
- It must be possible to open and close the door by hand easily.
- Assembly must be carried out by trained and specialized personnel.
- Electrical installation work must only be performed by authorized and specialized personnel.
- The suitability and bearing capacity of the supporting structure of the building in which the door operator is to be installed must be checked and confirmed by expert personnel.



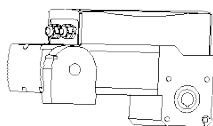
- The door operator must be securely fastened at all the mounting points provided. The mounting material must be chosen according to the material characteristics of the supporting structure to ensure that a minimum tensile force of 900 N can be withstood.
- If these requirements are not fulfilled, the door operator may fall, or the door may move without control. This means there is a risk of personal injury or material damage.
- When mounting the door operator, it must be secured by appropriate means against falling until it is completely and safely attached.
- Observe the relevant occupational health and safety regulations during the installation.

8. Proper Use

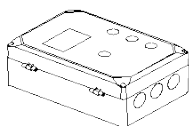
This door operator is suitable for use with balanced sectional/ high speed doors and sectional/ high speed doors equipped with spring-break protection and/or safety catch.

- The maximum dimensions given in the technical data must be complied with.
- Before installing the door operator, any existing locking mechanisms for the door must be disassembled or taken out of operation.
- Use in an explosion-proof environment is not permitted.
- Any other use above and beyond this is considered as improper use.
- All of the below activities performed without the express written approval of the manufacturer:
 - 1) Expansions or modifications
 - 2) Use of non-original replacement parts
 - 3) Performance of repairs by persons or operators that have not been authorized by the manufacturer may result in the loss of the warranty.
- No liability can be accepted for damages that result from the following causes:
 - 1) Technical defects on the door to be operated and structural deformations occurring during operation
 - 2) Improper maintenance of the door
 - 3) Failure to observe the operating instructions

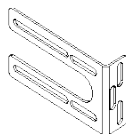
9. Scope of delivery



1



2



3



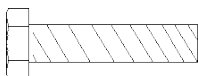
4



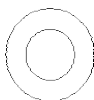
5

1 Door operator with emergency release	2 Control unit
3 Torque bracket	4 Fixed ring x 2
5 Key for shaft	

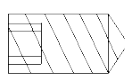
10. Table of components



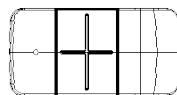
6



7



8



9

Item	Quantity
6 M10X20 bolt	4
7 Washer	4
8 M8X15 Set screw	2
9 Remote control (optional)	0

11. Installation



The door operator shown is similar to sectional door operators type with chain drive.

Preparation for installation



Risk of personal injury and/or material damage due to electrical voltage. Have a specialized electrician open and close the cover for the motor controller.

Determine the installation location of the door operator



The door operator must be positioned 100% above the door drive shaft.



Make sure that neither the emergency manual operation chain nor crank (depending on version) can impair the normal operation of the door (clearance) and that they can be used at any time.

11.1 Install the torque bracket

Install the torque bracket as shown in Fig. 1. Make sure that the drive shaft for the door can extend at least 135 mm (dimension A) in the door operator to be installed.

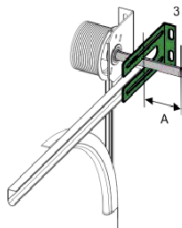


Fig. 1

11.2 Install the feature key

Install the key in the groove of the drive shaft for the door so that is secured against movement in Fig2.

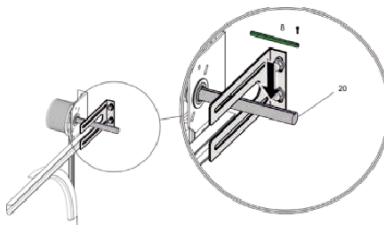


Fig. 2



The door operator is heavy, which may fall and causes personal injury and/or material damage. A suitable hoist must be used to bring it into the installation location.

- Do not supply power to the door operator yet. Do not connect any plugs.
- Position the drive shaft for the door operator such that it is suitable for the position of the anti-twist device (key, position 8 in Fig. 2). To do this, turn the transmission via the emergency operation.
- Grease the drive shaft for the door such that the door operator can be easily connected.

11.3 Secure the door operator

Slide the door operator onto the door drive shaft in Fig. 2. Secure the door operator with the 4 screws and washers.

11.4 Install the emergency release cord

Emergency release with chain

- Secure the emergency release cord such that the emergency release can be activated by using the red emergency release handle.
- The emergency release is activated by pulling the red emergency release handle.
- Make sure that the emergency release can be deactivated again by pulling the green handle.

11.5 Check the emergency operation

Emergency release with chain

Make sure that the door can be opened and closed without any problems by pulling on the chain.

12. Wiring

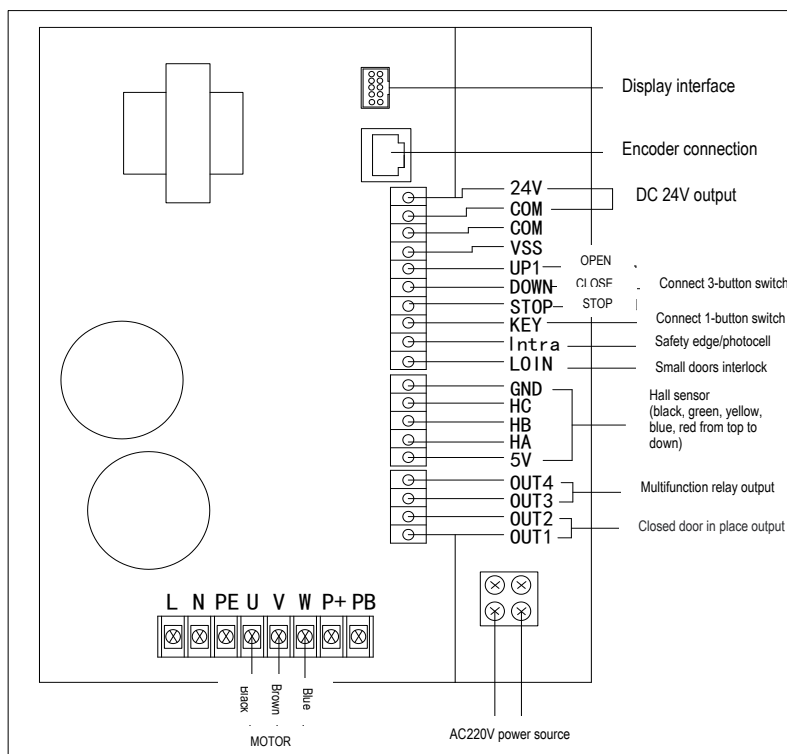


Fig.3

13. Operator Programming

13.1 Door Positions

1. Press and hold **STOP** button for 3 seconds, it will enter into passwords input interface.
2. Enter passwords "10", enter into door position interface.
How to enter the passwords: "OPEN" is for "tens", "CLOSE" is for "units", every press means number increased one.
3. The cursor stays at up limit, press "STOP" cursor move to up limit data, then press and hold on "OPEN" to open the door to required position, then press "STOP" to confirm. The cursor move back to up limit. Now the open limit setting is finished.
4. Press "CLOSE", the cursor move to down limit, press "STOP", cursor moves to down limit data. Press and hold on "CLOSE" to close the door to required position, press "STOP" to confirm. The cursor move back to down limit. Press "CLOSE" again to quit the door position interface, all door position setting is finished now.

Note: If the door not open, but close when pressing "OPEN" during above setting, it means the operator direction is wrong. Please first quit the door position setting interface, and enter into parameter setting, to correct the operator direction. Then set door position again. Please refer to "Parameter setting".

13.2 Parameter setting

1. Press and hold **STOP** button for 3 seconds, it will enter into passwords input interface.
2. Enter passwords "20", enter into parameter setting interface. Press "OPEN" or "CLOSE" to move cursor to select the parameter that need to change. Press "STOP", cursor blinking, press "OPEN" or "CLOSE" to modify the parameter data, press "STOP" to save the set data. Press and hold on "STOP" for 3s to quit the parameter setting interface.
3. Please refer to below table list of detailed parameter and its default data..

Display	Parameter	Setting Range	Min. unit	Default setting
FreqFWD	Up speed	0-100	1%	70
FreqREV	Down speed	0-100	1%	60
DownDelay	Down delay	1-6000	1s	10
InfraDist	Infrared distance	0- stroke pulse number	1	20
BufferUp	Upper buffer distance	100- stroke pulse number	1	1200
RsvUp	Upper stop reservation	2-100	1	8
BufferDown	Down buffer distance	100- stroke pulse number	1	800
RsvDown	Down stop reservation	2-100	1	8
ACCTime	Acceleration time	10-200	0.1s	50
DECTime	Deceleration time	1-200	0.1s	3
SwitchTime	Switch over delay	0-100	0.1s	1
JogFreq	Jog frequency	0-100	1%	25
UpJog	Up jog	0-continuous 1-jog	0	0
DownJog	Down jog	0-continuous 1-jog	0	0
BlockTime	Locked-rotor time	1-20	1s	5
RelaySelect	Relay function selection (OUT3,OUT4)	0-fault output 1-operating output 2-interlocking 3-open in place 4-close in place	0	0
BrakeFreq	Brake frequency	0-100	1%	13
StopDown	Stop down	0: no auto-down after stop 1: auto-delay down after stop	0	1
MotorDir	Motor direction	0: rotate in forward direction 1: rotate in reverse direction	0	0
WorkTimes	Work times	0-65535	x100times	100
Language	Language	0: Chinese 1: English		
Lockin	Interlocking	0: NO 1: NC	0	0
CarryFreq	Carrier frequency	1-20	1000	10
FacReset	Return to factory Settings	0: no 1: yes	1	0

13.3 System Information Query

1. Press and hold **STOP** button for 3 seconds, it will enter into passwords input interface.
2. Enter passwords "0", enter into system information query interface.
3. Software version, voltage, temperature, etc. are available to check.

13.4 Programming lock

Programming lock is designed to avoid the change of setting by mistake.

Push the switch to the upper position will enable the modification of the door 's end-position and advanced settings.

Push the switch to the lower position will disable the modification.

In order to avoid any change of setting by mistake, is better to push the switch to the lower position after finished all settings.

13.5 Remote control

Pair the remote control:

Press and hold on the button on the radio receiver board. The indicator will light up.

Double-click any button on remote control to begin pairing.

After the indicator stops blinking, pairing process is complete.

Repeat above steps to pair more remote controls.

Unpair the remote control:

Press and hold on the button on the radio receiver board until the indicator lights off. (All paired remote control will be unpaired)

14.Error Code

Display	Error	Possible caused reason	Solution
Err OC	Overcurrent	Up/down too fast	Reduce frequency, increase acceleration time
		Short circuit/ default phase/motor aged	Check circuit Change motor
		Motor and control torque do not match	Change motor or reduce torque to optimize parameters
		Up/down speed set too slow	Set the up/down speed again
		Controller power too small	Change to a controller with bigger power
		IPM inside the controller is broken	Call local agent or the manufacturer
		Motor wire not correspond to the hall wire	Exchange motor wire
Err OV	Overvoltage	Deceleration time too short	Increase the deceleration time
		Input voltage abnormal	Check the input voltage
		Controller power too small	Change to a controller with bigger power
Err OH	Controller overheating	Door too heavy	Change to a driver with bigger power
		Environment temperature too high	Improve ventilation, reduce carrier frequency
		Inverse module abnormal	Call local agent or the manufacturer
Err OL IVT	Controller overload	Acceleration time too short	Increase the acceleration time
		Power grid voltage too low	Check power grid voltage
		Load too heavy	Change to a controller with bigger power
Err LV	Undervoltage	Power grid voltage too low	Check power grid voltage
Err Mod	Module fault	Controller overflows instantly	Refer to "Overcurrent"
		The output three-phase has interphase short circuit or ground short circuit	Rewiring
		Environment temperature too high	Lower environment temperature
Learn Exceed	jog over limit	Overrun during up limit setting	Learn down limit first, then learn up limit
		Overrun during down limit setting	Learn up limit first, then learn down limit
Err Encoder	Encoder fault	Absolute encoder wire loose	Check and wiring again
		Encoder damaged	Call local agent or the manufacturer
		communication part of the controller damaged	Call local agent or the manufacturer

Err Exceed	Limit abnormal	Up/down limit not learnt	Learn the up/down limit
		Position exceed up limit	Learn the up/down limit again
		Up/down limit learned incorrectly	Refer to “13.1 Door positions”
Hall Err	Hall fault	Hall sensor damaged	Check hall board circuit
		Hall signal cable improperly connected	Check hall signal cable
		Hall cable of motor not connected correctly	Reconnect motor hall cable
		Manual release system not engaged	Shake or gently pull the manual chain
Moter OC	Motor overheating	Motor overheat signal cable contact is not good	Check motor overheat signal cable
		Motor temperature too high, load too heavy, use too often	Use after motor cool down
Err Block	Locked-rotor	Door blocked, motor not work	Adjust the door to smooth move
		Motor wire misconnected/bad contact	Reconnect motor wire