

ELEKTROMATEN® SIK

Safedrive® Compact

For driving: Roller shutters and rolling grilles which require an anti-fallback device, suitable for installation in tight spaces

Series SG63F-SIK
SIK 17.10 WS
SIK 25.10
SIK 25.10 WS

“Safedrive® Compact” ELEKTROMATEN SIK are special drives for industrial doors which require an anti-fallback device. The patented safety brake is built into the gear. The drive unit is fitted directly to the door shaft. Safedrive® ELEKTROMATEN SIK comprises of: Worm gear with safety brake and hollow shaft, emergency manual operator, integrated limit switches and electrical motor. The centrally-aligned hollow shaft of the ELEKTROMATEN SIK makes it suitable particularly for installation in tight spaces.



Patented built-in safety brake

- Safety against failure of worm or wheel
- Independent of speed / direction
- Maintenance free, self-monitoring
- Excellent damping characteristics in operation
- Compact dimensions

Approvals and certificates

ELEKTROMATEN

Type test according to:
DIN EN 12453
DIN EN 60335-1
DIN EN 60335-2-103
TÜV NORD CERT GmbH



Built-in safety brake

Certificate of conformity according to:
DIN EN 12604 / 12605
ift Rosenheim GmbH



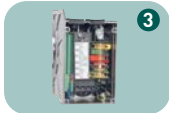
Emergency manual operation

- Hand crank NHK
- Rapid hand chain operator SK



Limit switches

- Mechanical limit NES
■ 2 operating, 2 emergency- and 2 auxiliary limit switches



Digital limit DES

- Absolute encoder, after a power failure, re-adjustment is not required



Mounting

- Floating foot (standard fitting)
- Torque bracket
- Moving-torque bracket

Door controls

- Simple connection by means of non-interchangeable plug connections allowing simple exchange with other GfA control panels
- Control voltage: 24 V
- Frequency: 50 Hz / 60 Hz
- Mains supply:
1N~230 V, 3~230 V, 3N~400 V, 3~400 V

Details of all GfA door controls can be found in Section 8.

1. Technical data

ELEKTROMATEN Series		SIK 17.10 WS	SIK 25.10	SIK 25.10 WS
		SG63F-SIK	SG63F-SIK	SG63F-SIK
Output torque	Nm	170	250	250
Output speed	rpm	10	10	10
Output shaft / hollow shaft (Ø)	mm	30	30	30
Locking torque ¹⁾	Nm	420	510	510
Safety brake (approval number)		14-003612-PR02	14-003612-PR02	14-003612-PR02
Max. holding torque ²⁾	Nm	170	250	250
Max. output speed OPEN / CLOSE for frequency inverter operation ³⁾	rpm	--	18 / 10	--
Motor power	kW	0,40	0,40	0,40
Supply voltage	V	1N-230	3-230 / 400	1N-230
Operating frequency	Hz	50	50	50
Operating current ⁴⁾	A	4,5	2,6 / 1,5	4,5
Max. cycles per hour ⁵⁾		8 (2,2)	12 (8,3)	8 (2,2)
Limit switch range ⁶⁾		10	10 (20)	10
Max. hand force NHK / SK ⁷⁾	N	75 / 198	75 / 198	75 / 198
Weight	kg	18	16	18
Spare parts: Catalogue page		9.053	9.053	9.053
Part no. installation drawing (dxf, dwg)		50000589	50000589	50000589
Part no. ELEKTROMATEN		10004146	10003999	10004000

Generally applies: Degree of protection IP54, permissible temperature range -10 °C...+40 °C [+60 °C], operating sound pressure level SPL <70 dB(A)

1) See 3.5 · 2) Maximum torque that may act on the output shaft of the drive unit when the door is stationary · 3) We recommend the selection of GfA ELEKTROMATEN-FI for use with frequency inverter, OPEN drive speed at 87 Hz, see 3.7 · 4) The operating current in door drives can reach up to 4x the rated current for limited periods, see 3.6 and 3.7 · 5) One cycle consists of a complete opening and closing movement of the door. The value according to EN 60335-2-103 is given in brackets. If the limit switch range is not fully used, the number of possible cycles can be increased in relation to the reduced number of revolutions of the output shaft, see also 3.2 · 6) Maximum revolutions of hollow shaft · 7) See 3.4

2. Selection chart

Roller shutters Tube EN 10220 [mm]	SIK 17.10 WS		SIK 25.10 / SIK 25.10 WS	
	F [N]	v _a [cm/s]	F [N]	v _a [cm/s]
101,6 x 3,6	2237	6,4	3289	6,4
108,0 x 3,6	2125	6,7	3125	6,7
133,0 x 4,0	1778	8,0	2614	8,0
159,0 x 4,5	1520	9,3	2235	9,4
177,8 x 5,0	1375	10,4	2022	10,4
193,7 x 5,4	--	--	1872	11,2

■ F = Lift [N]

■ v_a = Initial speed [cm/s]

■ Includes 20 % friction for single-wall profiles (profile thickness 20 mm)

■ Read note in 3.2

3. Notes

3.1 European directive

In accordance with the product standard EN 13241 Doors- and EN 12453 Safety in use of power operated doors-Requirements.

3.2 Selection chart / Cycles per hour

The specified cycles per hour (see technical data) apply to even distribution and the limit switch range first mentioned. When using the temperature range +40 °C to +60 °C, the specified value must be halved. For other limit switch ranges, the values must be converted accordingly.

The selection chart includes 20 % friction for roller shutters with single-wall profiles (profile thickness 20 mm) and 10 % friction for sectional doors.

Reduce the weight by a further 20 % for vertical lifted doors and insulated shutters with double walled, thick and/or deep sections. Do not calculate using the tube diameter. The highest torque will occur normally after 1-2 turns of the barrel from close.

3.3 Gear self-braking / Brake

Drives without an electric brake have a self-sustaining worm gear and stop automatically.

On drives with an electric brake, stopping is achieved by the external brake. Brake inspection must always be carried out by qualified service engineers.

3.4 Manual operation

In accordance with EN 12453 and 12604 hand force up to 390 N is permissible. For large, heavy doors, manual operation is only used for closing the door. In the case of drive units with an electric brake; emergency manual operation is carried out against the closed brake (Read note in 3.3).

3.5 Locking torque / Holding torque

The permissible loads on walls, fastenings, mountings and transmission elements must not be exceeded, even for maximum holding torques or locking torques.

3.6 Motor overload protection

Motor overload protection must be able to withstand 4x the operating motor current because the starting current of the drive unit can reach these levels for short periods.

3.7 Use with external frequency inverter

For external frequency inverters applies:

A higher than recommended drive speed puts extra load onto the gear. This extra load must be taken into account when sizing a drive by reducing the available output torque.

Increasing the drive speed by 10 % reduces the admissible drive torque by 5 %. In the case of higher drive speeds reduce the drive torque accordingly (enquire if necessary).

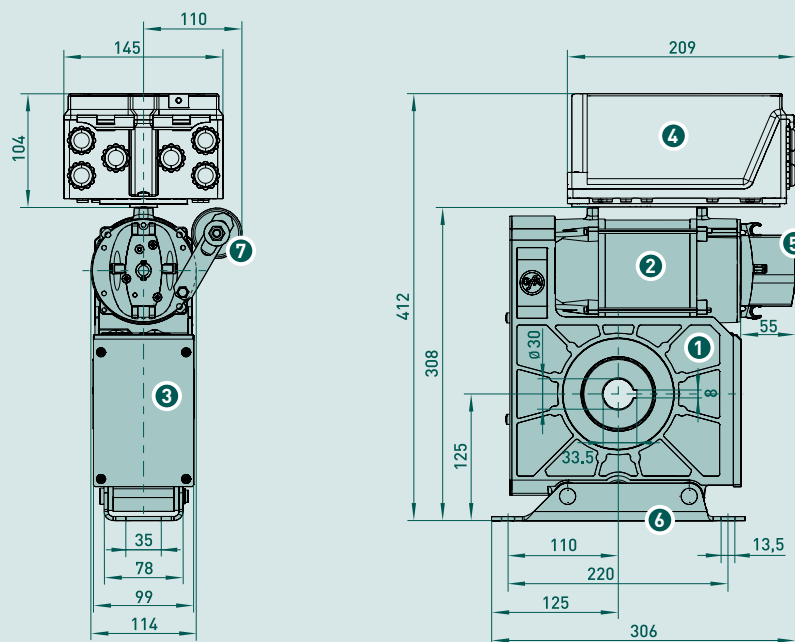
The admissible drive speeds may not be exceeded (see Technical data). The operating forces must comply with EN 12453, and the corresponding EMC directives must likewise be observed.

If selecting a frequency inverter, note that the starting current of the drive unit can reach 4x the operating motor current.

4. Dimensions

SIK 17.10 WS – SIK 25.10 WS

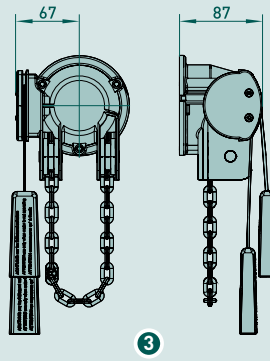
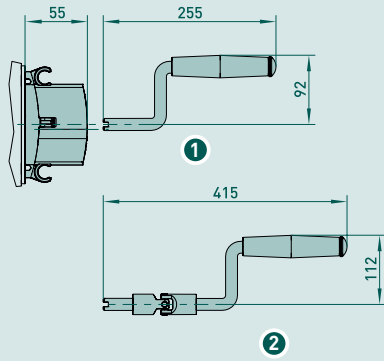
SG63F-SIK



- 1 Worm gear with safety brake
- 2 Motor
- 3 Limit switch
- 4 Optional:
WS 900 control panel,
removable, with 0,8 m cable
- 5 Emergency manual
operation NHK
- 6 Floating foot
- 7 Capacitor
(SIK 17.10 WS / 25.10 WS)

■ Permitted installation: Horizontal (as shown) or vertical (motor at the bottom)

5. Emergency manual operation • for horizontal or vertical installation



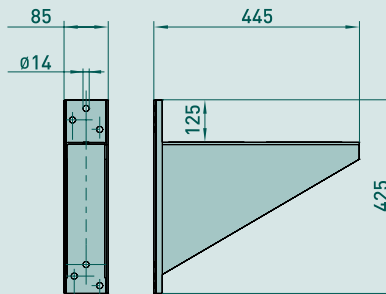
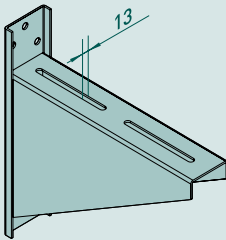
- 1 Manual hand crank operation NHK (Standard)
Part no. 30002591 (Ø 10 mm)
- 2 Manual hand crank operation with knuckle joint NHKK
Part no. 30002715 (Ø 10 mm)
- 3 Rapid hand chain operator SK

■ Manual forces, see item 1 of technical data

■ Read note in 3.4

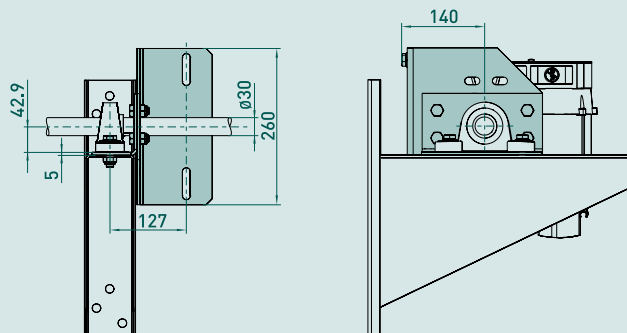
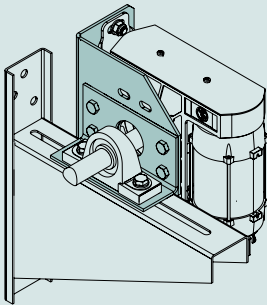
6. Attachments / Accessories

6.1 Bracket Part no. 40006488



■ Max. load 5 kN

6.2 Torque bracket Part no. 30002930

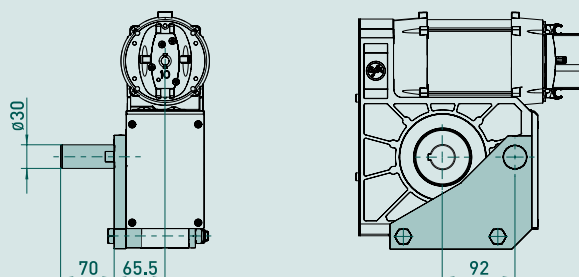
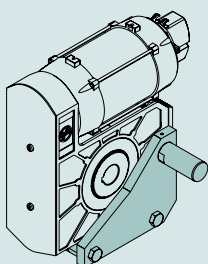


■ Right- or left-hand use

■ ELEKTROMATEN vertical (as shown) or horizontal

■ For mounting with floating foot additional requirements:
Bracket 6.1 and bearing

6.3 Moving-torque bracket Part no. 20002773.00005



■ Right- or left-hand use

■ ELEKTROMATEN horizontal only