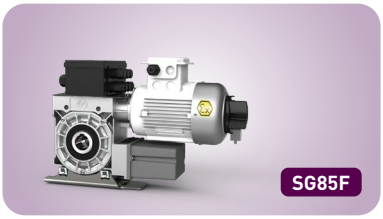
ELEKTROMATEN® SI

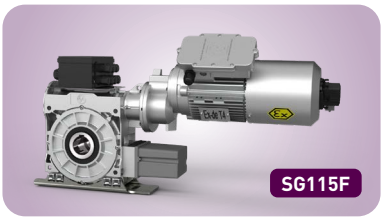
Safedrive®

comply to ATEX

Series SG85F
SI 25.15 Ex
SI 40.15 Ex
SI 55.12 Ex
Series SG115F
SI 80.12 Ex

"Safedrive®" ELEKTROMATEN SI are special drives for industrial doors to be used in potentially explosive atmospheres - 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 comply to ATEX comprises of:
Worm gear with safety brake and hollow shaft, emergency manual operator, integrated limit switches and electrical motor.





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

Approvals and certificates

ELEKTROMATEN

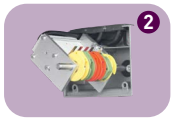
Type test according to:
DIN EN 12453
DIN EN 60335-1
DIN EN 60335-2-103
TÜV NORD CERT GmbH

Built-in safety brake

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

ATEX - registration number

Registration number:
8000306986
TÜV NORD CERT GmbH



Emergency manual operation

- Hand crank NHK 1

Limit switch

Mechanical limit NES 2

- 2 operating, 2 emergency- and 2 auxiliary limit switches

Terminal box

- Terminal box 3

Mounting

- Floating foot (standard fitting)

Electrical accessories

For ELEKTROMATEN in potentially explosive atmospheres:

- Door control
- Evaluators
- Push buttons etc.

Details of all GfA door controls to be used in in potentially explosive atmospheres can be found from page 6.051.

1. Technical data

ELEKTROMATEN Series				SI 25.15 Ex SG85F	SI 40.15 Ex SG85F	SI 55.12 Ex SG85F	SI 80.12 Ex SG115F
Type of protection	Motor Ex-e Increased Safety	T3	⟨Ex⟩	Assemblies fitted: Gas: II 2G Ex db eb h IIC T3 Gb Dust: II 2D Ex tb h IIIC 190°C Db	Assemblies fitted: Gas: II 2G Ex db eb h IIC T3 Gb Dust: II 2D Ex tb h IIIC 190°C Db	– –	– –
	Motor Ex-de Flameproof Enclosures	T4		Assemblies fitted: Gas: II 2G Ex db eb h IIC T4 Gb Dust: II 2D Ex tb h IIIC 130°C Db	Assemblies fitted: Gas: II 2G Ex db eb h IIC T4 Gb Dust: II 2D Ex tb h IIIC 130°C Db	Assemblies fitted: Gas: II 2G Ex db eb h IIC T4 Gb Dust: II 2D Ex tb h IIIC 130°C Db	Assemblies fitted: Gas: II 2G Ex db eb h IIC T4 Gb Dust: II 2D Ex tb h IIIC 130°C Db
Output torque			Nm	250	400	550	800
Output speed			rpm	15	15	12	12
Output shaft / hollow shaft (Ø)			mm	30 / 40	40	40	55
Locking torque [1]			Nm	635	760	1100	2800
Safety brake (approval number)				14-003612-PR03	14-003612-PR03	14-003612-PR03	14-003305-PR01
Max. holding torque [2]			Nm	250	400	550	800
Motor power	Ex-e T3 Ex-de T4		kW	1,10 0,75	1,10 0,75	-- 0,75	-- 1,10
Supply voltage			V	3~230 / 400	3~230 / 400	3~230 / 400	3~230 / 400
Operating frequency			Hz	50	50	50	50
Operating current [3]	Ex-e T3 Ex-de T4		A	4,70 / 2,70 3,64 / 2,00	4,70 / 2,70 3,64 / 2,00	– – 3,64 / 2,00	– – 4,67 / 2,70
Max. cyles per hour [4]	Ex-e T3 Ex-de T4			29 (28,0) 12 (10,2)	15 (14,0) 10 (5,2)	-- 10 (5,2)	-- 12 (10,2)
Limit switch range [5]				20 (10)	20 (30)	20	20 (10)
Max. hand force NHK [6]	Ex-e T3 Ex-de T4		N	85 176	136 227	-- 220	-- 159
Permissible temperature range	Ex-e T3 Ex-de T4		°C	-10...+40 -20...+40	-10...+40 -20...+40	– – -20...+40	– – -20...+40
Weight	Ex-e T3 Ex-de T4		kg	30 31	30 30	-- 36	-- 47
Part no. installation drawing (dxf, dwg)	Ex-e T3 Ex-de T4			50000782 50002191	50000782 50002191	-- 50002210	-- 50002189
Part no. ELEKTROMATEN	Ex-e T3 Ex-de T4			10002589 (Ø30) / 10005127 (Ø40) 10005483 (Ø30) / 10005485 (Ø40)	10002591 10005484	-- 10005525	-- 10005486

Generally applies: Degree of protection IP65, operating sound pressure level SPL <70 dB(A)
1) See 2.5 · **2)** Maximum torque that may act on the output shaft of the drive unit when the door is stationary · **3)** See 2.6 · **4)** 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 2.2 · **5)** Maximum revolutions of the output shaft / hollow shaft; optional limit switch ranges are listed in brackets (→ change in cycles per hour) · **6)** See 2.4

2. Notes

2.1 European directive

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

2.2 Cyles 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.

2.3 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.

2.4 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 2.3).

2.5 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.

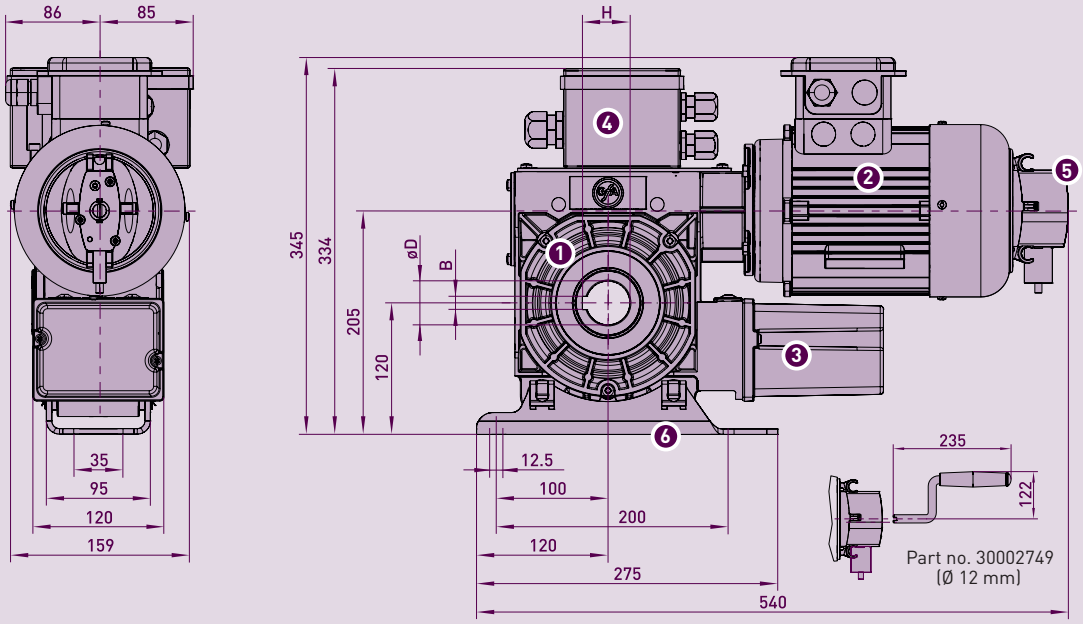
2.6 Motor overload protection

Drives for use in explosion protected zones have to be protected against overload, short circuits and phase failures (in three-phase systems). The motor protection switch has to be integrated in an external motor door control. The motor protection switch has to be adjusted in match to the operating current of the motor.

3. Dimensions

3.1 SI 25.15 / SI 40.15 — Ex-e T3

SG85F



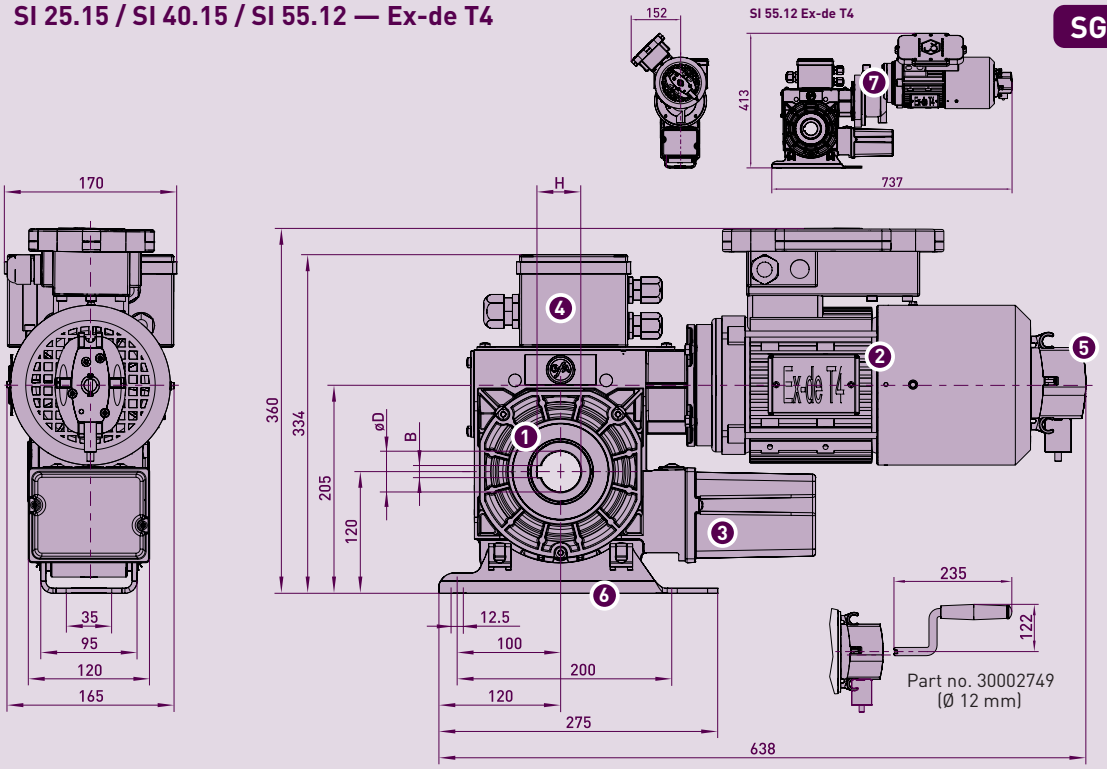
1. Worm gear with safety brake
2. Motor Ex-e
3. Limit switch
4. Terminal box
5. Hand crank NHK
6. Floating foot

Ø D	H	B
30	33,3	8
40	43,3	12

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

3.2 SI 25.15 / SI 40.15 / SI 55.12 — Ex-de T4

SG85F



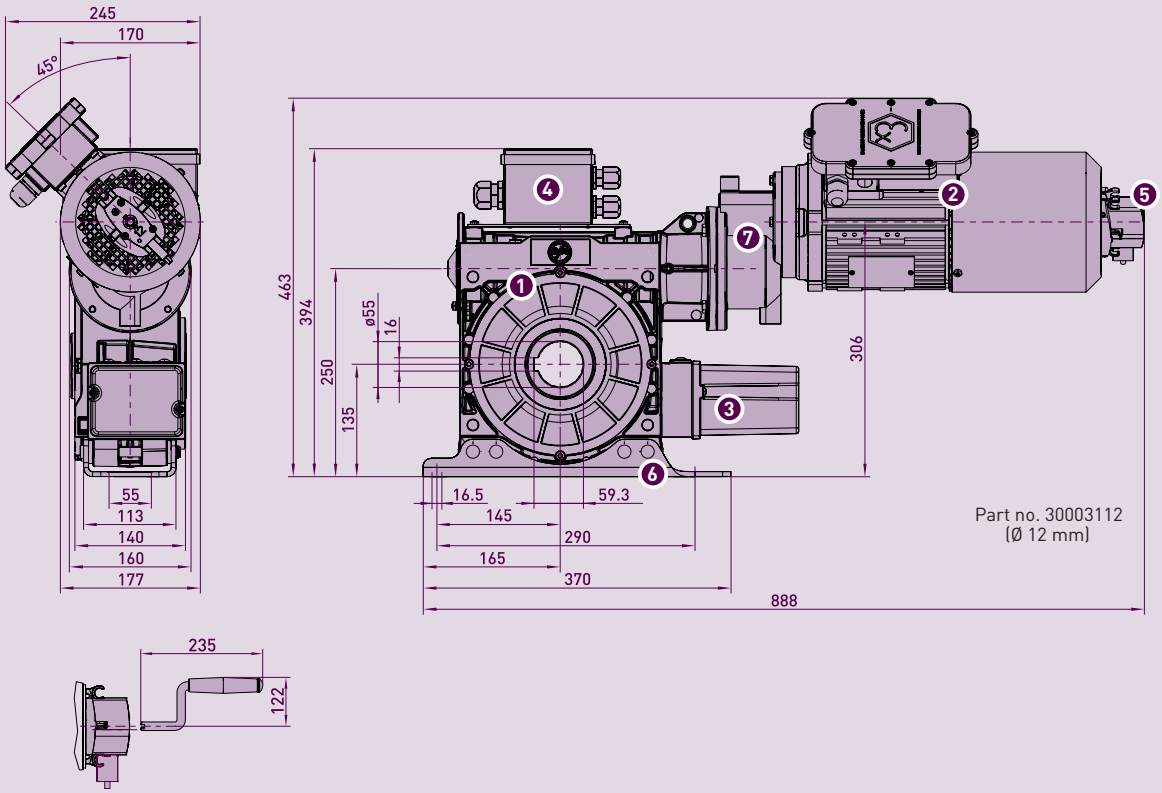
1. Worm gear with safety brake
2. Motor Ex-de with integrated brake
3. Limit switch
4. Terminal box
5. Hand crank NHK
6. Floating foot
7. Intemediate gear (SI 55.12 Ex-de T4)

Ø D	H	B
30	33,3	8
40	43,3	12

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

3.3 SI 80.12 Ex-de T4

SG115F



1. Worm gear with safety brake
2. Motor Ex-de with integrated brake
3. Limit switch
4. Terminal box
5. Hand crank NHK
6. Floating foot
7. Intemediate gear

■ Permitted installation: Horizontal (as shown), vertical (motor at the bottom) only with torque mount (page 1.056 section 6.3)

4. Attachments / Accessories for ELEKTROMATEN SI

See section 1 - ELEKTROMATEN SI