

# LINEAR ACTUATORS SGX 01

Thrusts 0—180 Kgf

Strokes 0—400 mm



- All Electric
- Clean and Compact
- Easily Installed
- Simple Construction

**ELECTRIC ACTUATOR**  
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## TECHNICAL DATA

SIZE	PUSH/PULL FORCE		PUSH/PULL SPEED		STROKE		MOTOR watts	Motor SPEED rpm	NETT WEIGHT	
	kgf	lb.	mm/sec.	ins./sec.	mm.	ins.			kg	lb.
SGX 01	180	400	12	0.5	0-100	0-3.9	120	1500	7.7	17
					0-200	0-7.9			8.2	18
					0-300	0-11.8			9.1	20
					0-400	0-15.7			10.0	22
	180	400	24	1.0	0-100	0-3.9	240	3000	7.7	17
					0-200	0-7.9			8.2	18
					0-300	0-11.8			9.1	20
					0-400	0-15.7			10.0	22

## OPTIONAL FEATURES

- CODE 7** Two adjustable end of stroke limit switches.  
**CODE 4** Two adjustable signalling switches.  
**CODE 6** Potentiometer for positional indication or proportional control.

### Combinations

- Code 7 + 4  
 Code 6 + 7  
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 Code 6 + 4 + 7  
 Hard chromed shaft— required for abrasive or corrosive conditions or outdoor weatherproof.  
 Bellows — for extra push/pull shaft protection.  
 Tropical finish — for working in high humidity and tropical areas.  
 High temperature — for high ambient temperatures and for sustained switching.  
 Hand winding — makes setting up easier.  
 Brake — Electro magnetic type for accurate positioning.  
 Terminal box — in place of flying leads.

## MOUNTING

Trunnion or front flange.

## ENCLOSURES AVAILABLE

Dust and damp protected.  
 Weatherproof IP54.  
 Weatherproof and hoseproof IP55.  
 Dustproof and hoseproof IP65.  
 CSA ENC4.  
 Flameproof and explosion proof models to BS4683 part 2 1971 groups, I, IIA and IIB.  
 British Coal Electrical Acceptance Certificate No 1996.  
 CSA explosion proof to class I group D and class II groups F and G.

## CONSTRUCTION

Die cast aluminium housings or steel and cast iron according to the specification chosen.

## PRINCIPLE

Rotation of an electric motor is converted into linear motion by using a lead screw and nut. The push/pull shaft is connected to the nut and is either extended or retracted as the nut travels along the lead screw. Reversal of the motor reverses the direction of the push/pull shaft.

## GENERAL INFORMATION

Advantages and economics of "All electric" installations —  
 No compressed air or hydraulic supply is required.  
 Quick response to control signals.  
 Maintains full thrust with power off.  
 No power consumption when not operating.  
 Can be mounted in any position.  
 Auxiliary switches can be provided inside actuator enclosure.  
 Maintenance responsibilities are not duplicated due to all electric.  
 No danger of leaking oil.  
 Electrical components for control are generally inexpensive.

## ELECTRICS

The motor is a 3-phase squirrel cage unit with a die-cast aluminium rotor, designed with a low starting current and a low inertia. These are desirable features, since an actuator is required to start and stop frequently, rarely running for more than a few seconds on each stroke.

A thermal switch is fitted in the winding to prevent overheating. Starting is by manual reversing switch or reversing contactors with push buttons.

The actuator can be controlled in sequence by timers and used with proportional control equipment and remote position indicating units.

Switches are adjustable with locking cams for stroke setting.

Inductive ratings: 10 amps at 110 volts a.c.  
 10 amps at 240 volts a.c.  
 5 amps at 415 volts a.c.  
 0.5 amps at 80 volts d.c.

The cam and switch housing is designed to give easy switch setting and potentiometer adjustment.

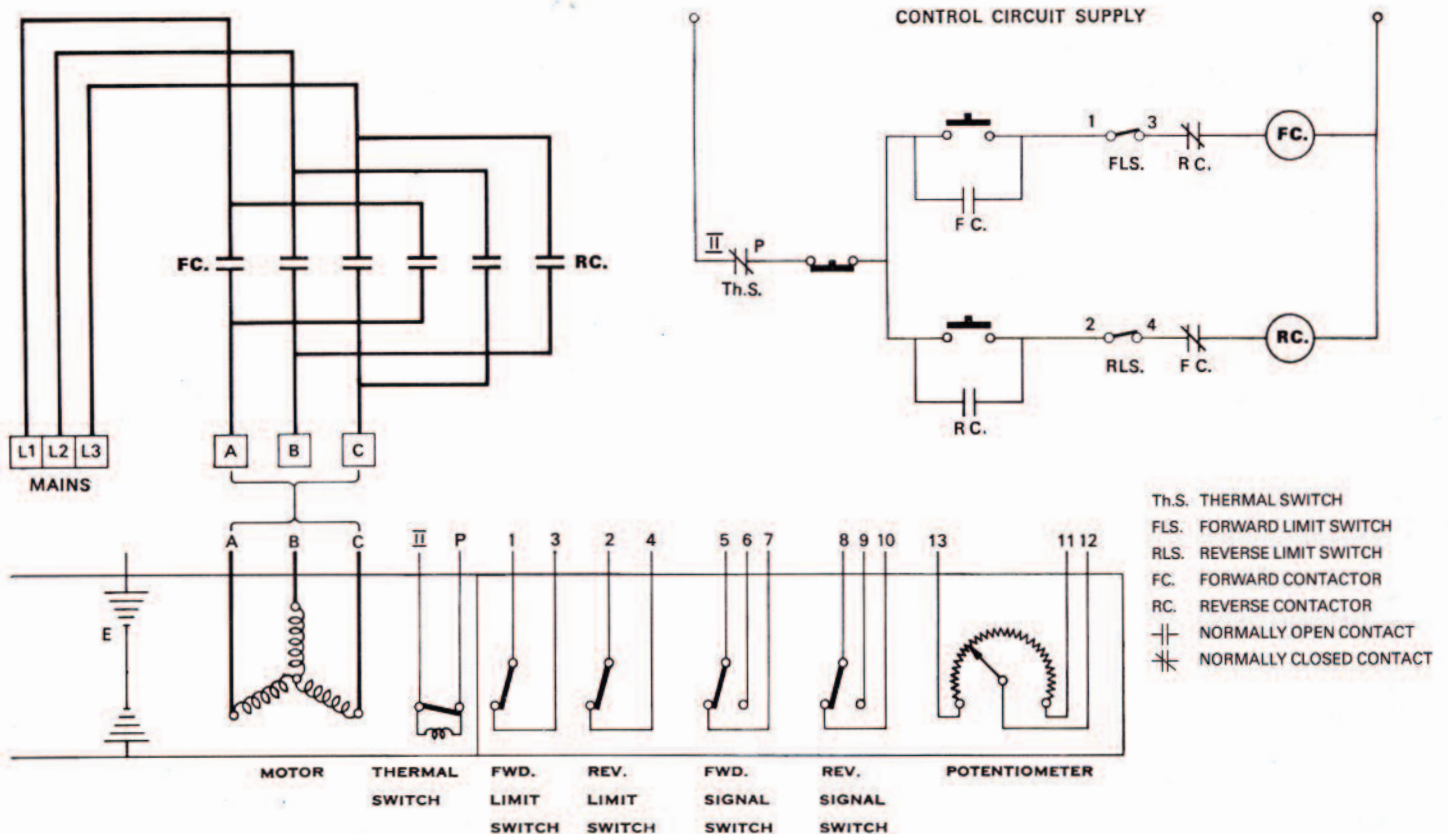
Supply systems: A.C. three-phase up to 600 volts — Frequencies up to 60 Hz.  
 D.C. up to 100 volts.

Technical Data table shows motor speeds and linear speeds on 50 Hz supply. Other frequencies give speeds pro rata.

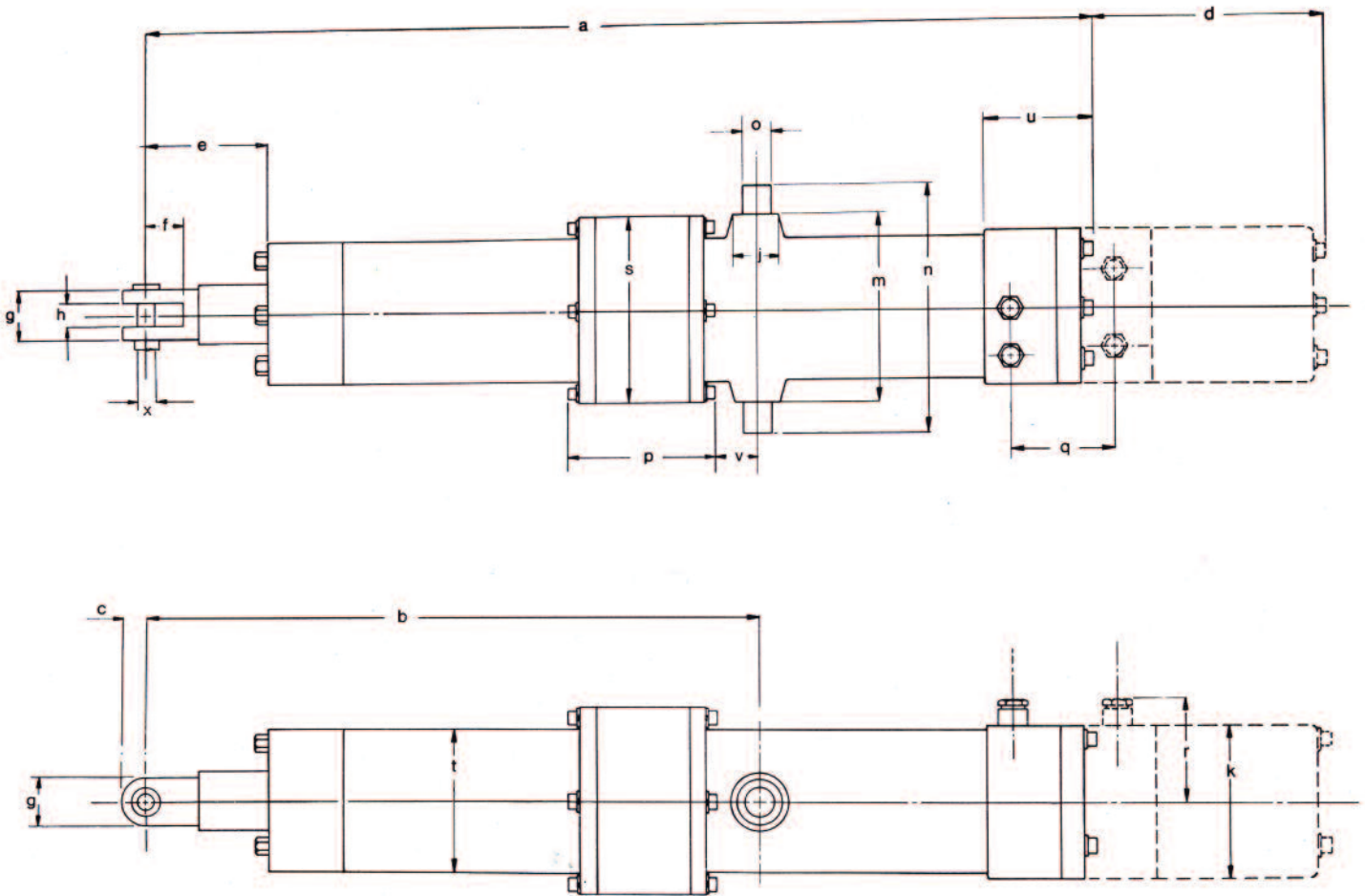
Cables: Mains and control cables have separate glands. Standard length of cable 750 mm.

See separate leaflet for position indicator and current sensor.

## TYPICAL SCHEMATIC



## DIMENSIONS



Type	STROKE	a	b	c	e	f	g	h	j	k	m	n	o	p	q	r	s	t	u	v	x
SGX 01	0 – 100 mm 0 – 3-9"	511 20-12	330 13-0	14 0-55	58 2-3	20 0-79	28 1-1	12 0-47	24 0-9	83 3-26	100 3-94	130 5-1	16 0-63	80 3-1	48 1-9	56 2-2	98 3-85	75 3-0	61 0-24	22 0-87	12 -472
	0 – 200 mm 0 – 7-9"	611 24-06	430 16-93																		
	0 – 300 mm 0 – 11-8"	711 27-99	530 20-87																		
	0 – 400 mm 0 – 15-7"	811 31-93	630 24-8																		

Bellows diameter 134mm (5¼")  
when fitted

Add the following dimensions 'd' for extras –

TYPE	Code 7 Code 4 Code 6	Code 7+4	Code 6+7 Code 6+4 Code 6+4+7
SGX01	97 3-82	119 4-68	158 6-22

### Lubrication

Type of Grease: Rocol Grade MTS 1000.

Inject grease through grease nipple located at the clevis end of push/pull shaft every 200,000 operations or 12 months for normal working.

## APPLICATIONS

Mechanical handling of components, covers, flaps, chutes and doors; Parcel sorting and packaging equipment; Valves and switchgear isolators; Conveyor ploughs and cranes; Boiler and furnace dampers Machine tools; Dust removal and filters; Hydraulic pump control; Switch points and signalling; Remote control of heating and air conditioning equipment.