

# LINEAR ACTUATORS

## SMX 01

Thrusts 0—45Kgf

Strokes 0—300mm



- **New Style Switches**
- **Clean and Compact**
- **All Electric**
- **Easily Installed**

**ELECTRIC ACTUATOR**  
COMPANY LIMITED

Bolling Road Bradford BD4 7BZ

Telephone: +44 (0)1274 732931 Email: [sales@electricactuator.co.uk](mailto:sales@electricactuator.co.uk)

Telex 517792

## TECHNICAL DATA

SIZE	PUSH/PULL FORCE		PUSH/PULL SPEED		STROKE		Motor SPEED rpm	H.P.	NETT WEIGHT	
	kgf	lb.	mm/sec.	ins./sec.	mm	ins.			kg	lb.
SMX 01	45	100	32	1.25	0-100 0-200 0-300	0-3.9 0-7.9 0-11.8	1500	0.12	5.0 5.5 6.4	11 12 14
	45	100	64	2.5	0-100 0-200 0-300	0-3.9 0-7.9 0-11.8	3000	0.24	5.0 5.5 6.4	11 12 14

### ADDITIONAL 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
- Code 6 + 4
- 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 frequent switching.
- Hand winding – makes setting up easier.
- Fail safe feature – Actuator will give one stroke if power fails.
- Brake – Electro magnetic type for accurate positioning.

### MOUNTING

Trunnion or front flange.

### ENCLOSURE

Dust and damp protected is standard.  
 Weatherproof when a chrome shaft is fitted.  
 Flameproof available Buxton Certified for groups 1, 2 and 3 gases and vapours.

### 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.

### CONSTRUCTION

Die cast aluminium housings or steel and cast iron.

### GENERAL INFORMATION

Advantages and economics of "All electric" installations –  
 No compressed air or hydraulic supply is required.  
 Easily wired up.  
 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 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.

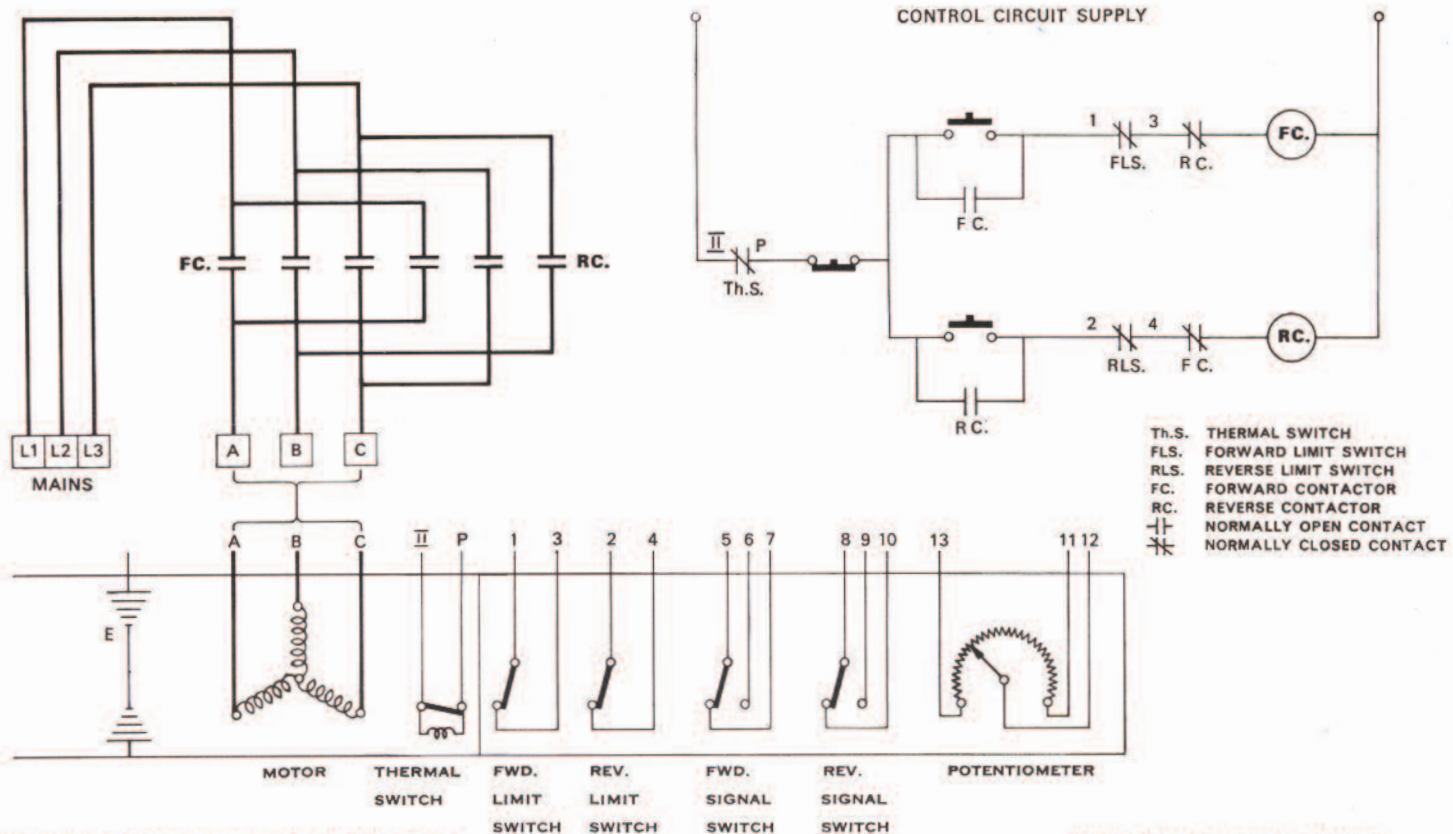
D.C. up to 100 volts.

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

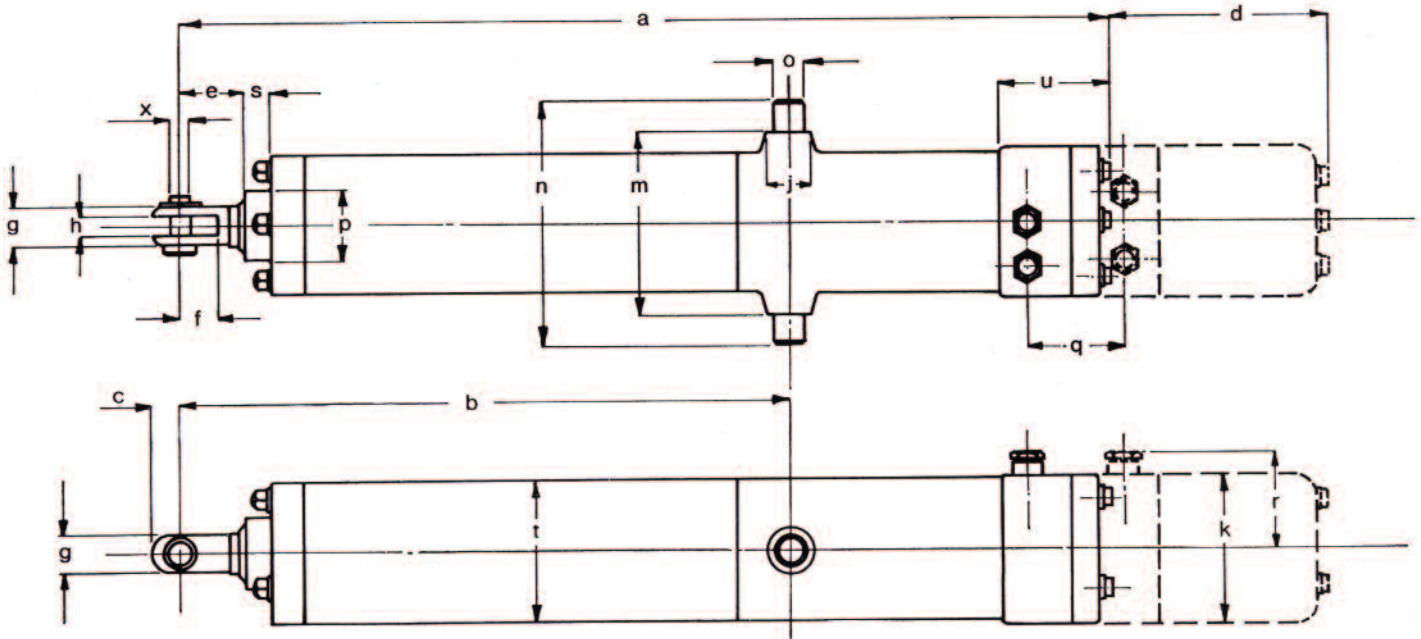
Cables: Mains and control cables have separate glands. Standard length of cable 30 inches.

See separate leaflet for position indicator and current sensor.

## SCHEMATIC



## DIMENSIONS



Type	STROKE	a	b	c	e	f	g	h	j	k	m	n	o	p	q	r	s	t	u	x
SMX 01	0 - 100 mm 0 - 3-9"	404 15.9	223 8.78																	
	0 - 200 mm 0 - 7-9"	504 19.84	323 12.72	12 0.47	35 1.38	20 0.8	20 0.8	10 0.39	24 0.9	83 3.26	100 3.94	130 5.1	16 0.63	36 1.4	48 1.9	56 2.2	13 0.5	75 2.9	61 2.4	10 0.394
	0 - 300 mm 0 - 11-8"	604 23.78	423 16.65																	

Add the following dimensions 'd' for extras -

TYPE	PUSH/PULL STROKE	Code 7 Code 4 Code 6	Code 7 + 4	Code 6 + 7 Code 6 + 4 Code 6 + 4 + 7
SMX 01	0 - 100 and 200 mm. 0 - 3-9" and 7-9"	86 3.39	108 4.25	147 5.79
	0 - 300 mm. 0 - 11-8"	97 3.82	119 4.68	158 6.22

Bellows diameter 134mm (5 1/4")  
when fitted

Lubrication -  
 Type of grease -  
 Rocol Grade MTS 1000  
 Extend shaft fully and apply grease  
 to grease nipple in front guide cover.  
 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.

