

# LINEAR ACTUATORS SMX 08

Thrusts 0—2700 Kgf

Strokes 0—1200 mm



- All Electric
- Simple Construction
- Heavy Duty
- High Speed

**ELECTRIC ACTUATOR**  
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## TECHNICAL DATA

SIZE	PUSH/PULL FORCE		PUSH/PULL SPEED		STROKE		NETT WEIGHT		MOTOR SPEED rpm	MOTOR RATING HP
	lbs.	kg.f.	in./sec.	mm/sec.	in.	mm	lb.	kg.		
SMX08	6000	2700	5.9	150	0 - 11.8	0 - 300	630	286	1500	16.75
					0 - 15.7	0 - 400	660	300		
					0 - 23.6	0 - 600	720	327		
					0 - 31.5	0 - 800	780	354		
					0 - 39.4	0 - 1000	840	382		
					0 - 47.2	0 - 1200	900	410		
					0 - 11.8	0 - 300	630	286		
					0 - 15.7	0 - 400	660	300		
					0 - 23.6	0 - 600	720	327		
					0 - 31.5	0 - 800	780	354		
					0 - 39.4	0 - 1000	840	382		
					0 - 47.2	0 - 1200	900	410		

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

## ADDITIONAL FEATURES

- CODE 7** Two adjustable end-of-stroke limit switches.  
**CODE 4** Two adjustable signal switches.  
**CODE 6** Potentiometer for position indication or control.

### Combinations

- Code 7 + 4  
 Code 6 + 7  
 Code 6 + 4  
 Code 6 + 4 + 7

Hard chromed Shaft – for abrasive or corrosive conditions.

Bellows – for protection of push/pull shaft.

Tropical finish – for working in high humidity or tropical areas.

High temperature – for high ambient temperatures and for sustained switching.

Thermistors – for thermal protection of motor winding.

Current sensor – to adjust to the thrust required and to switch off the actuator if the demand exceeds the selected thrust.

Hand Winding – with electrical interlock.

Brake – electro magnetic type for accurate positioning.

## MOUNTING

Trunnion

Fixing centres can be interchangeable with previous designs.

## ENCLOSURE

Weatherproof.

## PRINCIPLE

Rotation of an electric motor is converted into linear motion by using a long motor spindle as a lead screw. The push/pull shaft is connected to a 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. The lead screw is protected from ingress of dust and dirt by the push/pull tube, and a dust seal fitted in the front guide bush. The drive nut is mounted between disc springs to provide cushioning and also to absorb the rotor kinetic energy if there is an obstruction or when the actuator reaches the end of its stroke.



## ELECTRICS

### MOTOR

- 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.

### THERMISTORS

- can be fitted in the motor winding to prevent overheating.

### STARTING

- by reversing contactors with pushbuttons. When part of an automatic system, the actuator can be controlled by timers.

### POTENTIOMETER

- when fitted will provide remote indication of the shaft position, or can be used with proportional control units. Accurate positioning may require a brake to be fitted.

### SWITCHES

- for end-of-stroke and signalling, they are adjustable with locking cams.

Inductive Ratings: 15 amps at 110 volts A.C.  
 10 amps at 220 volts A.C.  
 6 amps at 440 volts A.C. 0.25 amps at 110 volts D.C.

The switch housing provides easy access for switch setting and potentiometer adjustment.

### SUPPLY

- A.C., three-phase up to 600 volts; frequencies up to 60 Hz.  
 D.C., up to 440 volts. Available on request.

### CABLES

- 25mm Conduit tapped holes provided for incoming cable glands. Mains and control connections are made in weatherproof terminal boxes with ample space for cabling.

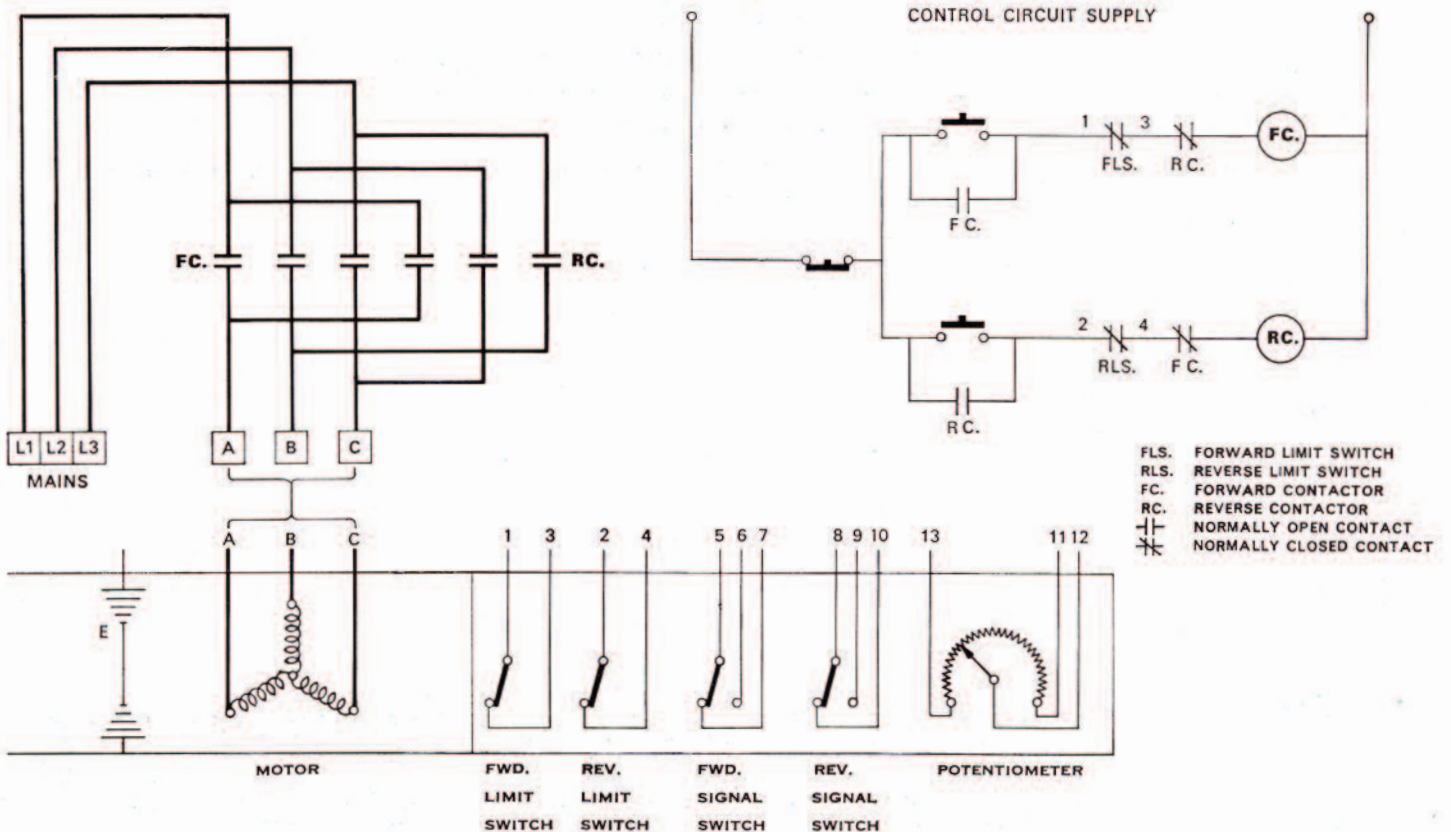
### CURRENT SENSOR

- Adjustable to trip the contactors at a pre-selected push pull force.

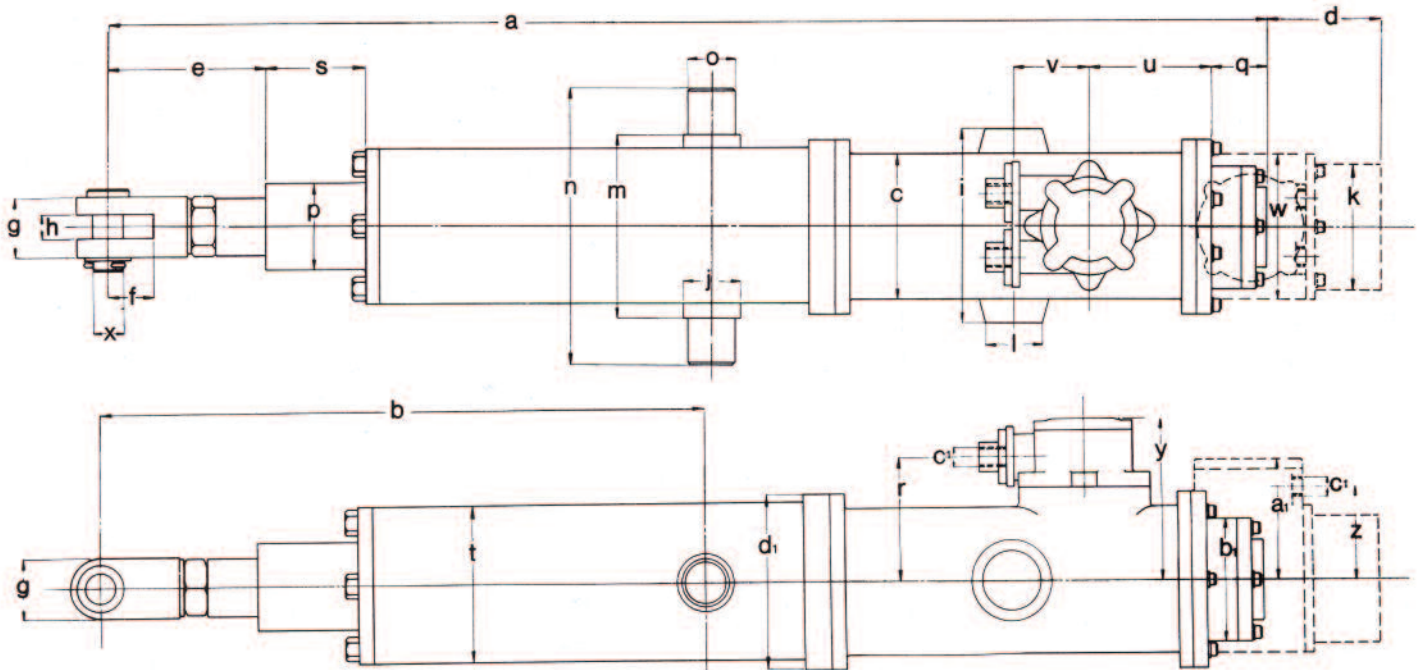
### POSITION INDICATOR

- Shows the position of the actuator shaft on a remote mounting meter.

## SCHEMATIC



## DIMENSIONS



TYPE	STROKE	a	b	c	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	
SMX08	0-300mm 0-11.8"	1580 62.2	768 30.24																			
	0-400mm 0-15.7"	1680 66.14	843 33.19																			
	0-600mm 0-23.6"	1880 74.02	993 39.10	196 7.72	169 6.65	60 2.36	80 3.15	32 1.26	254 10	76 2.99	165 6.50	76 2.99	242 9.53	362 14.25	63.5 2.50	114 4.49	75 2.95	162 6.38	165 6.50	204 8.03	161 6.34	
	0-800mm 0-31.5"	2080 81.89	1143 45.0																			
	0-1000mm 0-39.4"	2280 89.76	1293 50.91																			
	0-1200mm 0-47.2"	2480 97.64	1443 56.81																			

TYPE	STROKE	v	w	x	y	z	a1	b1	c1	d1
SMX08	0-300mm 0-11.8"									
	0-400mm 0-15.7"									
	0-600mm 0-23.6"	97	190	40	211	121	156	159	25mm conduit	229
	0-800mm 0-31.5"	3.82	7.48	1.57	8.31	4.76	6.14	6.26		9.02
	0-1000mm 0-39.4"									
	0-1200mm 0-47.2"									

Bellows diameter 197mm (7 7/8")  
when fitted

Add 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
SMX08	170 6.69	253 9.96

## LUBRICATION

ROCOL GRADE MTS1000. Inject grease through the grease nipple located at the clevis end of the push/pull shaft and in the back bearing housing 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.