



Cert. No. LRQ 0963008

ISO 9001

spirax/sarco

TI-P358-10

CH Issue 2

Series A Linear Electric Actuators for DN125 to DN200 Valves

Description

The series A electric actuators are suitable for control of two and three port globe valves. There are four types offering on/off or regulating control using either external motor contactors or integral motor controls (switched logic).

Available sizes

Two sizes having thrusts of 37.5 kN or 64 kN.

Available linkage kits

Four linkage kits are available which enable mounting to KE, KEA and QL valves, DN125, DN150 and DN200.

Linkage kits include output drive (LE or A) column assembly and valve spindle attachments.

Available types

Note: Control type VMD (external contactor) will require additional switching equipment not supplied with these actuators.

On/off actuators

Size	Voltage	Model No.	Control	Linkage kit
10.1	240 V 1 phase	A10.11-22	VMD (external contactor)	A10
		AM10.11-22	VMD (switched logic)	
10.1	400 V 3 phase	A10.13-22	VMD (external contactor)	
		AM10.13-22	VMD (switched logic)	
14.1	400 V 3 phase	A14.13-22	VMD (external contactor)	A14
		AM14.13-22	VMD (switched logic)	

Regulating actuators

Size	Voltage	Model No.	Control	Linkage kit
10.1	400 V 3 phase	AR10.13-22	VMD (external contactor)	LE10
		ARM10.13-22	0/4-20 mA and 0-5 V	
14.1	400 V 3 phase	AR14.13-22	VMD (external contactor)	LE14
		ARM14.13-22	0/4-20 mA and 0-5 V	



Materials

No.	Part	Material
1	Gear case	Cast iron
2	Motor cover	Aluminium alloy
3	Handwheel	Aluminium alloy

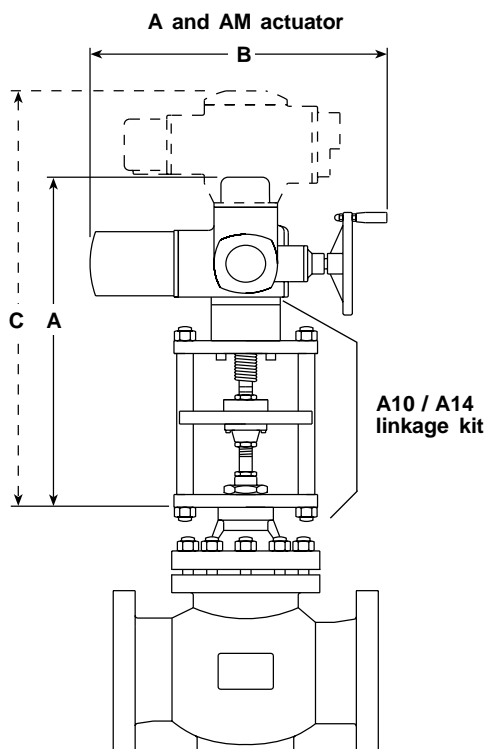
Technical data

Model	On/off control						Regulating control			
	A			AM			AR		ARM	
Size	10.1	10.1	14.1	10.1	10.1	14.1	10.1	14.1	10.1	14.1
Supply voltage Vac (±5%)	230	400	400	230	400	400	400	400	400	400
Supply frequency	50 Hz									
Actuator thrust max. kN	37.5	37.5	64	37.5	37.5	64	37.5	64	37.5	64
Regulating thrust kN	18.8	18.8	30.8	18.8	18.8	30.8	18.8	30.8	18.8	30.8
Supply current A	8	1.8	3.5	8	1.8	3.5	1.8	3.5	1.8	3.5
Enclosure rating to EN 60529	IP65	IP67		IP65	IP67		IP67		IP67	
Actuator speed mm/sec	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.5	2.2	2.5
Motor terminations	6 mm²									
Control terminations	2.5 mm²									
Conduit entries	Plug and socket unit with 2 x Pg 21, 1 x Pg 13,5									
Ambient limits	-25°C to +80°C			-25° to +70°C			-25°C to +60°C		-25°C to +60°C	
Actuator Motor rating To VDE0530/IEC6034 (mins)	S2 = 10	S2 = 15		S2 = 10	S2 = 15		S4 = 25%		S4 = 25%	
Maximum starts/hour	60						1200	900	1200	900
Design life starts (x 10⁶)	0.5						5	3.5	5	3.5

Dimensions/weights (approximate) in mm and kg

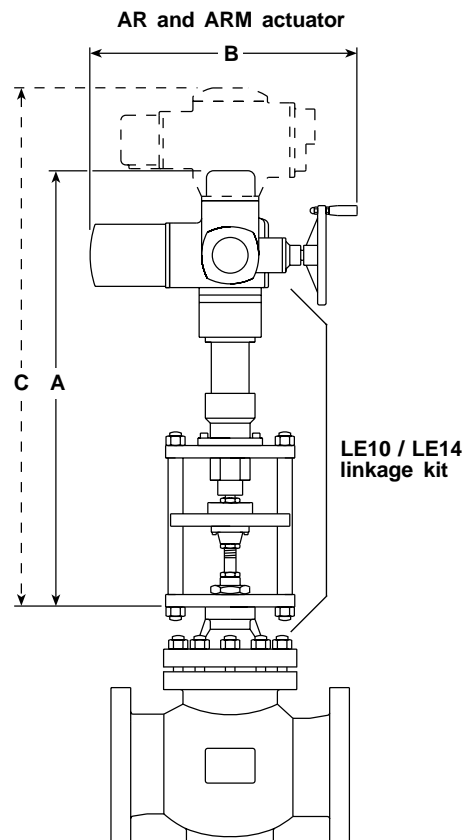
A and AM actuators

Model	A	B	C	Weight
A10.11-22	725	655	-	62
A10.13-22	605	538	-	62
A14.13-22	680	707	-	91
AM10.11-22	-	655	740	69
AM10.13-22	-	538	745	69
AM14.13-22	-	707	855	98



AR and ARM actuators

Model	A	B	C	Weight
AR10.13-22	789	538	-	69
AR14.13-22	908	707	-	107
ARM10.13-22	-	538	929	76
ARM14.13-22	-	707	1083	114



Maximum differential pressures (Δp) bar for KE/KEA and QL valves and series A actuators

Note: Actuators should be sized against K_{VS} rather than valve size.

Shut-off Δp , all models will achieve shut-off at this Δp . **Regulating Δp ,** the AR and ARM models are rated to regulate at this Δp .

KE/KEA and QL valves

Valve size	DN125		DN150		DN200	
Travel mm	50	30	50	30	50	30
K_{VS}	Full	Reduced	Full	Reduced	Full	Reduced

Series A actuators **Note:** Differential pressures shown in brackets are for stainless steel valves.

Size	Actuator model	Maximum differential pressures (Δp) bar									
		DN125				DN150				DN200	
		K_{VS}	No. 1	No. 2	No. 3	K_{VS}	No. 1	No. 2	No. 3	K_{VS}	No. 1
10.1	Shut-off (all models)	27.4	40.0	40.0	40.0	19.0	27.4	40.0	40.0	10.7	19.0
	Regulating (AR and ARM)	13.2	20.0	31.0	40.0	9.2	13.2	20.0	31.0	5.1	9.2
14.1	Shut-off (all models)	40.0 (33.2)	40.0 (40.0)	40.0 (40.0)	40.0 (40.0)	33.0 (23.1)	40.0 (33.2)	40.0 (40.0)	40.0 (40.0)	18.5 (13.0)	33.0 (23.1)
	Regulating (AR and ARM)	22.3 (15.6)	33.6 (23.5)	40.0 (36.3)	40.0 (40.0)	15.5 (10.8)	22.3 (15.6)	33.6 (23.5)	40.0 (36.3)	8.7 (6.1)	15.5 (10.8)

Selection example

Control valve	DN150 KE43 2-port valve Full K_{VS}
Maximum differential pressure	25 bar
Electrical supply	3 phase 400 V
Control method	External contactors
Application	On/off
Actuator selected	A14.13-22
Linkage kit required	A14

How to order

Example: 1 - Series A, EL actuator, A14.13-22, with linkage kit A14.