



KEYSTONE EPI-2 ELECTRIC ACTUATORS

The EPI-2 series are compact, intelligent quarter-turn electric actuators for the accurate control of valves with torques from 35 to 2000 Nm / 308 to 17,700 lb.in.



FEATURES

- Low or high voltage single phase DC or AC power supply with 3-phase option
- Multiple adjustable stroking times to suit specific applications
- Interchangeable base plate and range of shaft inserts enable simple connection to any valve type
- Intelligent control unit prevents overheating
- Epicyclical gearing ensures reliable and smooth operation
- Top-mounted position indicator
- Constantly-engaged, hand wheel-operated manual override in case of power failure
- Bluetooth™ wireless connectivity for non-intrusive configuration, operation and diagnostics
- Optional local control panel for manual valve operation with additional open/close indicator
- Simple upgrade options for modulating control and network communication via DeviceNet or Profibus DP protocols
- Latched-type output contacts for fully open/fully close remote indication. Output contacts for monitor and blinker/local selector indication are also available

Bluetooth™ is a trademark of Bluetooth SIG. Inc, USA

GENERAL APPLICATION

The EPI-2 is available in six sizes and is designed for on/off or modulating control of butterfly, ball, rotary plug valves or dampers in a wide range of heavy industrial, chemical and petrochemical plants on and offshore.

APPROVALS

Waterproof: IP66/68 or NEMA 4/4X/6 (NEMA ICS6/NEMA 250) CAN/CSA C22.2 No 139-10 UL 429-2009

Explosionproof: Ex d e IIB T5 Gb (gas) Ex tb IIIC T100°C Db (dust) (prefix c for model 2000) NEC 500 (FM approval) Class I, Zone 1 Group IIB Class II, III, Division 1, Groups E, F,G

TECHNICAL DATA

Power supply: Single phase from 24 to 48 V DC or AC at 50/60 Hz
Single phase from 100 to 240 V DC or AC at 50/60 Hz
3-phase from 208-240 V AC, 380-480 V AC and 500-575 V AC

Voltage fluctuations: +/- 10%

Frequency: +/- 5%

Torque output: From 35 to 2000 Nm / 308 to 17,700 lb.in.

Ambient temperature
Standard range: -25°C to +70°C / -13°F to 158°F

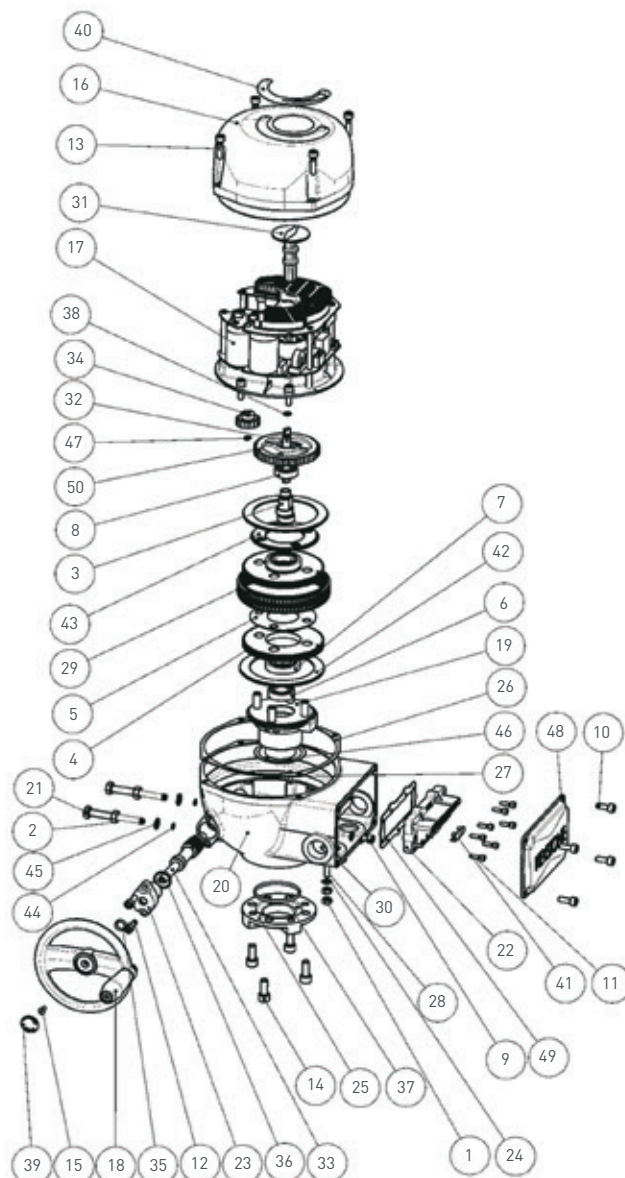
Low temp range: -40°C to +70°C / -40°F to 158°F

Conduit entry: M25/1" NPT

KEYSTONE EPI-2 ELECTRIC ACTUATORS

COMPONENT PARTS - MODELS 063/E006-125/E013-250/E025-500/E051-1000/E091

Part	Description	Quantity
1	Nut UNI5588 M6	2
2	Nut UNI5588 M8	2
3	Eccentric	1
4	Planocentric gear	2
5	Spacer	1
6	Ball bearing type 16002	1
7	Ball bearing type 16004	2
8	Ball bearing type 6001	1
9	ESH screw UNI5931- M6x8	1
10	HSCH screw UNI5931- M6x16	4
11	HSCH screw UNI5931- M4x14	7
12	HSCH screw UNI5931- M6x18	2
13	HSCH screw UNI5931- M6x25	4
14	HSCH screw UNI5931- M8x20	4
15	HSSC screw UNI5933- M4x10	1
16	Cover assembly	1
17	Drive and control unit	1
18	Handwheel	1
19	Output drive assembly	1
20	Standard housing	1
21	Stopper	2
22	Terminal block	1
23	Worm shaft flange	1
24	Anti-loosening washer UNI 8842-J6	1
25	Base plate ISO 5211 / F05-F07	1
26	Cover gasket	1*
27	Dowel pin UNI EN 22338	1
28	Earth stud	1
29	Fixed anulus	1
30	Gasket	1*
31	Indicator	1
32	Indicator shaft	1
33	Manual worm shaft	1
34	Motor pinion	1
35	O-ring Di=10.77/W=2.62	1*
36	O-ring Di=18.77/W=1.78	1*
37	O-ring Di=52.07/W=2.62	1*
38	O-ring Di=6.07/W=1.78	1*
39	Plug	1
40	Position label	1
41	Power clamps protection	1
42	Ring	2
43	Ring for pins alignment	1
44	Ring RW 7 UNI7433	2
45	Seal washer 8.3	2
46	Sliding ring	1
47	Snap ring for shaft D.6	1
48	Terminal block cover	1
49	Terminal board gasket	1*
50	Wheel	1



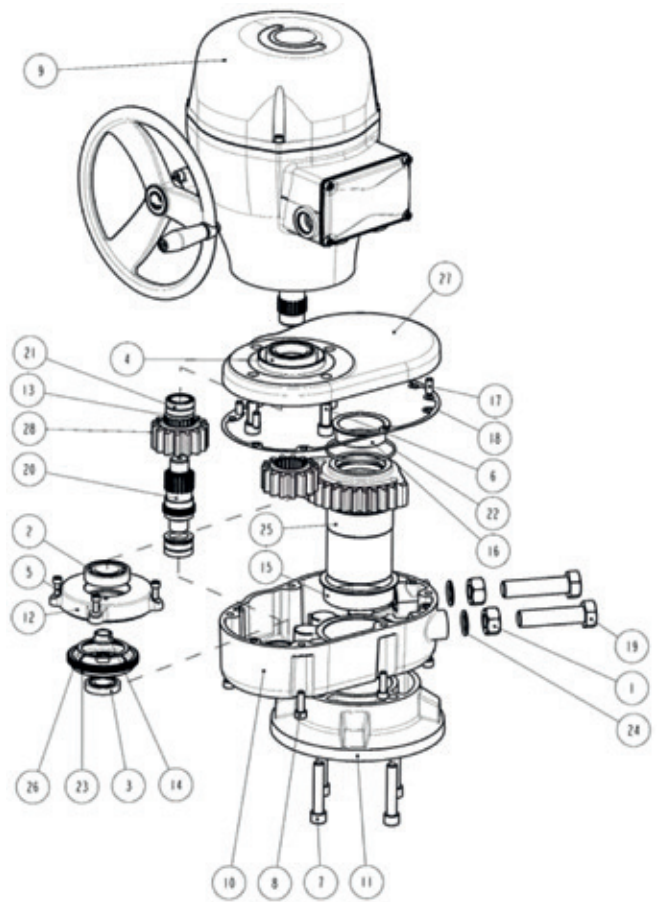
* Indicates recommended spare parts

KEYSTONE EPI-2 ELECTRIC ACTUATORS

COMPONENT PARTS - MODEL 2000/E171

Part	Description	Quantity
1	Nut M20 ISO 4032 EN 24032	2
2	Ball bearing type 6006	1
3	Ball bearing type 16004	1
4	Ball bearing type 61908	1
5	HSHC screw UNI5931- M6x16	3
6	HSHC screw UNI5931- M12x30	4
7	HSHC screw UNI5931- M12x65	4
8	HSHC screw UNI5931- M8x25 A4-70	6
9	EPI-2 actuator	1
10	Base housing	1
11	Base plate ISO 5211 / F12-F16	1
12	Bearing support	1
13	Bushing	2
14	Bushing	1
15	Bushing	1
16	Bushing	1
17	Dowel pin UNI EN 22338 D 8x20 type B	4
18	Gasket	1*
19	Hex head screw M20x80 UNI EN 24017	2
20	Idle wheel shaft	1
21	Needle bearing type NKI 22/16	2
22	O-ring Di=82.22/W=2.62	1*
23	Position wheel	1
24	Seal washer 20.3	2
25	Selector gear	1
26	Sliding ring	1
27	Upper vover	1
28	Wheel	2

* Indicates recommended spare parts



KEYSTONE EPI-2 ELECTRIC ACTUATORS

DESIGN FEATURES

Mechanical connection to the valve

EPI-2 actuators feature a multi drilled base plate and a range of drive inserts to allow direct mounting to almost all valve types according to the EN ISO 5211 and other manufacturers' standards.

Power supply

EPI-2 can simply be connected to the local power supply. It accepts any single phase input voltages (from 24 to 48 V DC or AC and 100 to 240 V DC or AC). Alternatively 3 phase voltages from 208-240 V AC, 380-480 V AC and 500-575 V AC are also available

Electric motor thermostat

A thermostat to protect the motor temperature in hot applications is included as standard in the control circuit of the electric actuator.

Heater

A heater is standard available within the unit and is powered from the motor power supply. It is automatically activated when the temperature drops below 10°C in order to prevent condensation.

Actuator service

The standard actuator is suitable for open/close and modulating applications.

Compact and light design

EPI-2 actuators are very compact and balanced for easy installation to small valves minimizing pipe work stress or loads to the valve shaft.

Actuator configuration

Each actuator is equipped with 2 rotary switches on the logic board to configure each function and parameter like position, torque, open/close speed and output contacts. Additionally each optional module has its own additional switches for its specific configuration.

Local manual override

A constantly engaged manual override (not rotating during motor operation) is fitted to all EPI-2 actuators.

Torque and sizing

The EPI-2 range comprises of six models, for operating torques of up to 2000 Nm / 17,700 lb.in. with a configurable operation time from 15 to 180 seconds. The nominal output torque value is constant along the entire stroke.

Non-intrusive configuration

With Bluetooth® wireless technology enabled on your PDA or PC all configuration requirements can be undertaken without opening the unit. Direct access to the EPI-2 is then available for configuration and predictive/preventative maintenance information, including valve position, actuator speed, output torque, alarm and status.

Position monitoring

The EPI-2 provides a local mechanical position indication. For remote indication the position is detected by a non-contact sensor. The open and close position are configured via the electronic control card.

Electronic controls

Internal drive to reverse the actuator rotation direction via remote control signals with internal 24 V DC or external 24 V DC/AC up to 120 V DC/AC power supply.

Output contacts

4 latched-type output contacts for fully open/fully close remote indication; 1 output contact for monitor (loss of power, torque alarm, high temperature alarm, travel alarm, position sensor, hardware malfunction, local interface malfunction, local selector in LOCAL); 1 output contact for blinker/local selector indication (local selector feature only with OM3 installed).

KEYSTONE EPI-2 ELECTRIC ACTUATORS

OPTIONAL MODULES AND PERFORMANCE

OPTIONAL MODULES

OM1 I/O additional module

Analog position INPUT 4-20 mA or 0-10 V DC
 Analog position OUTPUT 4-20 mA or 0-10 V DC
 4 additional SPST output contacts
 Optional Bluetooth interface

Monitor relay

Information about loss of input signal and Bluetooth failure are available on monitor relay output contact.

OM3 local interface

Local/remote selector
 OP/CL pushbuttons
 2 LEDs for local indication
 Available in WP version

OM13 3-wire module

110/240 V AC
 3-wire control module for open/close

Bus communication – network interfaces

OM9) Profibus DP V0/V1
 OM11) DeviceNet

OPTIONAL MODULES SELECTION TABLE

Order code	OM1 I/O additional module	OM3 local interface	Bluetooth component	OM9 PDP V0/V1	OM11 DeviceNet	OM13 3-wires module
P1	✓					
PA	✓	✓	✓			
P6	✓	✓				
P7	✓		✓			
P3		✓				
5P			✓	✓		
6P		✓	✓	✓		
5D			✓		✓	
6D		✓	✓		✓	
PG						✓

NOTES

- Each optional module (OMx) will be provided with its own installation and maintenance instructions.
- All modules except OM13 are available for both single phase and 3-phase voltage versions.
- Bluetooth component is integrated in the OM1, OM9 and OM11 card: not available for integration by local organizations, as a stand alone unit.
- OM13 is not available with 3-phase supply and for LV version (single phase voltage from 24 to 48 V DC/V AC).

KEYSTONE EPI-2 ELECTRIC ACTUATORS

PERFORMANCE AND APPROVALS

OPERATING TIMES

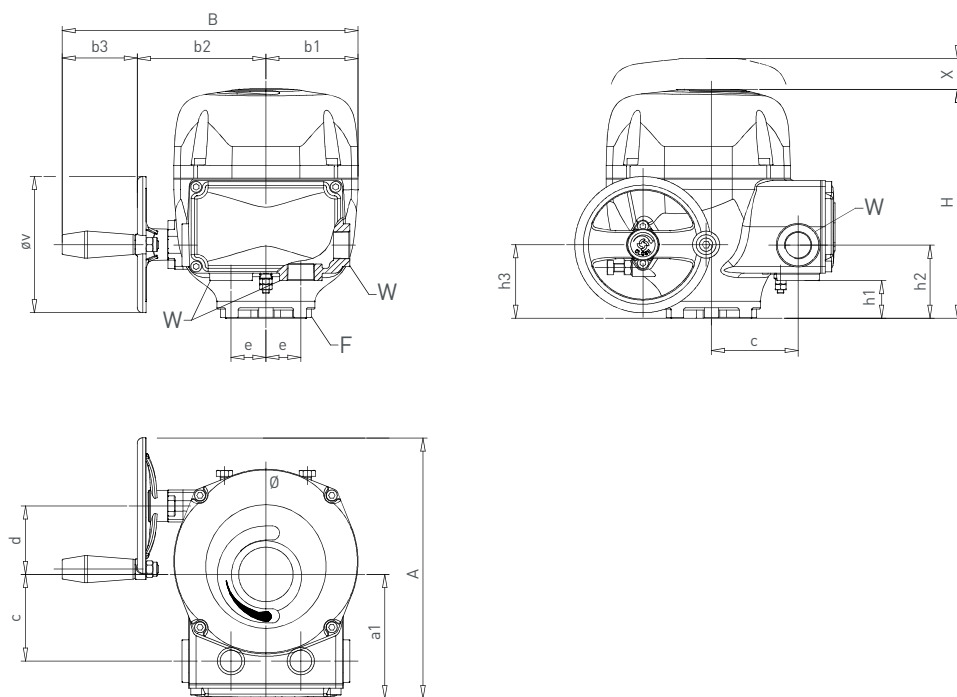
Model	Nominal torque (Nm / lb.in.)	Operating time (secs 90°) at selected step		
		8	6	4
063/E006	63/600	15	28	48
125/E013	125/1300	15	28	48
250/E025	250/2500	15	28	48
500/E051	500/5100	15	28	48
1000/E091	1000/9100	24	45	80
2000/E171	2000/17700	53	100	180

Times are guaranteed with a tolerance of $\pm 10\%$ on the 90° stroke

Approvals	
Waterproof	IP66/68 or NEMA 4/4X/6 (NEMA ICS6/NEMA 250) CAN/CSA C22.2 No 139-10 and UL 429-2009
Explosionproof	Ex d e IIB T5 Gb (gas) Ex tb IIIC T100°C Db (dust) (prefix c for model 2000) NEC 500 (FM approval) Class I, Zone 1 Group IIB Class II, III, Division 1, Groups E, F, G
Painting	ESPC for 1000 hrs salt spray resistance (ASTM D 2247-02 and ASTM B117-97)
Vibration and noise	1 to 500 Hz with 2 g peak acceleration (IEC60068-2-6-appendix B) 65 dB (grade A) (EN 21680)

KEYSTONE EPI-2 ELECTRIC ACTUATORS

OVERALL DIMENSIONS - MODELS 063/E006-125/E013-250/E025-500/E051-1000/E091



NOTES

W = Nr. 4 cable entries M25x1.5 acc. to ISO 724/965-1 (others available as special versions)

X = Space for cover removal

F = ISO 5211 Standard flange (others available)

EPI-2 BASE UNIT MODELS 063/E006 TO 1000/E091 - METRIC (mm / kg)

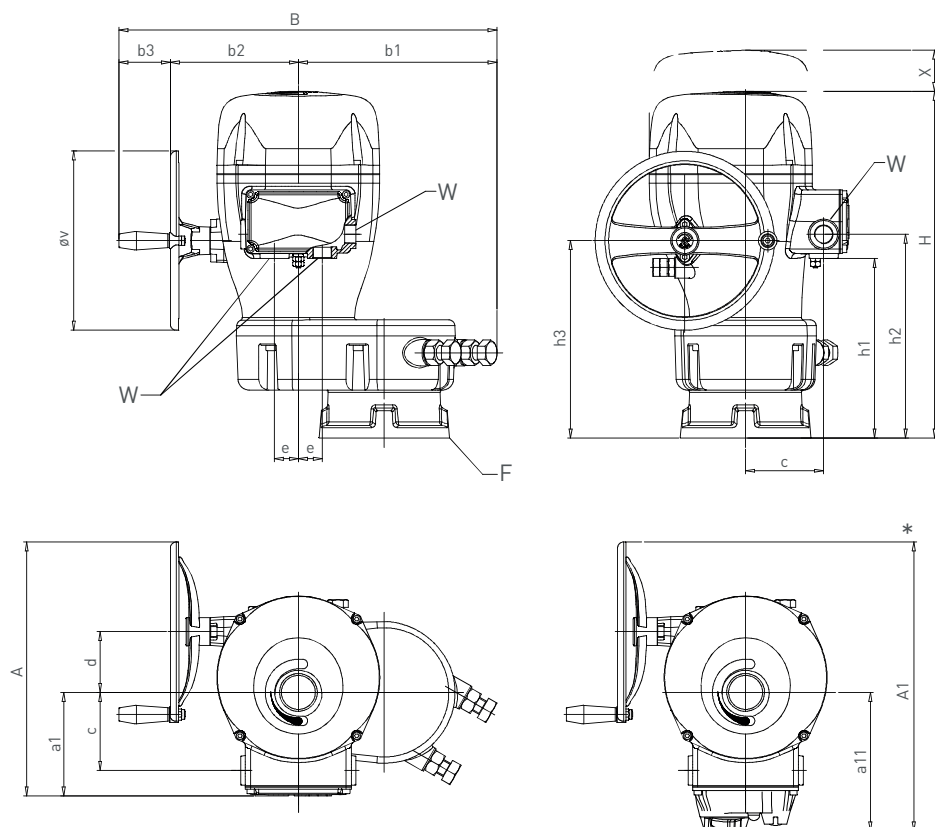
Model	A	B	H	a1	b1	b2	b3	c	d	e	h1	h2	h3	øv	x	F	kg
063/E006	239	272	210	114.0	85	118	69	80.0	63	32	35.5	67.0	67.5	125	175	F07	7.5
125/E013	239	272	230	114.0	85	118	69	80.0	63	32	53.5	86.0	86.5	125	175	F10	9.5
250/E025	295	332	287	129.0	109	154	69	95.0	76	32	63.5	95.0	92.0	180	230	F12	16.5
500/E051	295	332	287	129.0	109	154	69	95.0	76	32	63.5	95.0	92.0	180	230	F12	18.0
1000/E091	340	349	364	138.5	109	171	69	104.5	81	32	140.0	172.5	164.0	240	230	F16	26.0

EPI-2 BASE UNIT MODELS 063/E006 TO 1000/E091 - IMPERIAL (in / lb)

Model	A	B	H	a1	b1	b2	b3	c	d	e	h1	h2	h3	øv	x	F	lb
063/E006	9.4	10.7	8.3	4.5	3.3	4.6	2.7	3.1	2.5	1.3	1.4	2.6	2.7	4.9	6.9	F07	17
125/E013	9.4	10.7	9.1	4.5	3.3	4.6	2.7	3.1	2.5	1.3	2.1	3.4	3.4	4.9	6.9	F10	21
250/E025	11.6	13.1	11.3	5.1	4.3	6.1	2.7	3.7	3.0	1.3	2.5	3.7	3.6	7.1	9.1	F12	36
500/E051	11.6	13.1	11.3	5.1	4.3	6.1	2.7	3.7	3.0	1.3	2.5	3.7	3.6	7.1	9.1	F12	40
1000/E091	13.4	13.7	14.3	5.5	4.3	6.7	2.7	4.1	3.2	1.3	5.5	6.8	6.5	9.4	9.1	F16	57

KEYSTONE EPI-2 ELECTRIC ACTUATORS

OVERALL DIMENSIONS - MODEL 2000/E171



NOTES

W = Nr. 4 cable entries M25x1.5 acc. to ISO 724/965-1 (others available as special versions)

X = Space for cover removal

F = ISO 5211 Standard flange (others available)

EPI-2 MODEL 2000/E171 - METRIC (mm / kg)

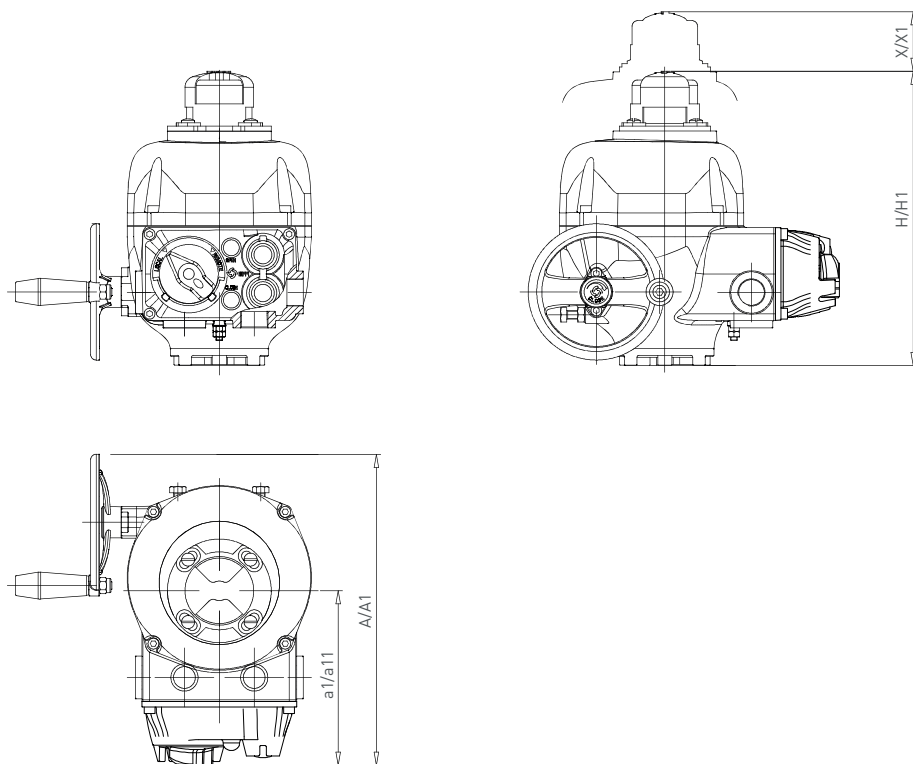
Model	A	A1	B	H	a1	a11	b1	b2	b3	c	d	e	h1	h2	h3	øv	x	F	kg
2000/E171	340	387	506	464	138.5	185.5	266	171	69	104.5	81	32	240	272.5	264	240	230	F10-F14	45.0
2000/E171	340	387	506	464	138.5	185.5	266	171	69	104.5	81	32	240	272.5	264	240	230	F12-F16	46.5

EPI-2 MODEL 2000/E171 - IMPERIAL (in / lb)

Model	A	A1	B	H	a1	a11	b1	b2	b3	c	d	e	h1	h2	h3	øv	x	F	lb
2000/E171	13.4	15.2	19.9	18.3	5.5	7.3	10.5	6.7	2.7	4.1	3.2	1.3	9.4	10.7	10.4	9.4	9.1	F10-F14	99
2000/E171	13.4	15.2	19.9	18.3	5.5	7.3	10.5	6.7	2.7	4.1	3.2	1.3	9.4	10.7	10.4	9.4	9.1	F12-F16	103

KEYSTONE EPI-2 ELECTRIC ACTUATORS

OVERALL DIMENSIONS - OPTIONAL MODULES



NOTES

1. Dimensions a1 and A are for the standard unit.
2. Dimensions a11 and A1 are for the standard unit plus a local interface option.
3. Dimensions H and X are for the standard unit.
4. Dimensions H1 and X1 are for the standard unit plus a Beacon type indicator.
5. X / X1 indicates the space for cover removal.
6. All other dimensions are as the standard unit.

EPI-2 WITH OPTIONAL MODULES - METRIC (mm / kg)

Model	A	A1	a1	a11	H	H1	X	X1	kg ^[1]	kg ^[2]
063/E006	239	285	114.0	160.0	210	270	175	265	7.5	8.0
125/E013	239	285	114.0	160.0	230	290	175	265	9.5	10.0
250/E025	295	341	129.0	175.0	287	347	230	330	15.5	16.0
500/E051	295	341	129.0	175.0	287	347	230	330	17.0	17.5
1000/E091	340	387	138.5	185.5	364	425	230	330	23.0	26.5

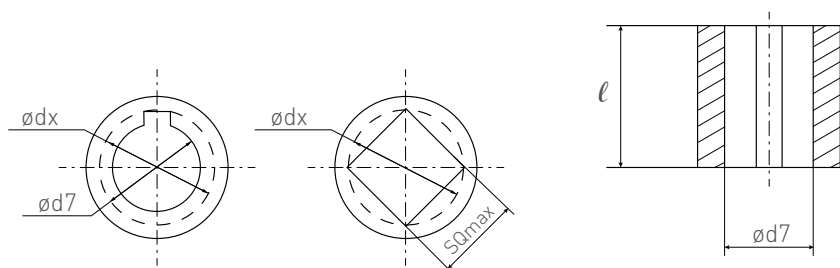
EPI-2 WITH OPTIONAL MODULES - IMPERIAL (in / lb)

Model	A	A1	a1	a11	H	H1	X	X1	lb ^[1]	lb ^[2]
063/E006	9.4	11.2	4.5	6.3	8.3	10.6	6.9	10.4	17	18
125/E013	9.4	11.2	4.5	6.3	9.1	11.4	6.9	10.4	21	22
250/E025	11.6	13.4	5.1	6.9	11.3	13.7	9.1	13.0	34	35
500/E051	11.6	13.4	5.1	6.9	11.3	13.7	9.1	13.0	37	39
1000/E091	13.4	15.2	5.5	7.3	14.3	16.7	9.1	13.0	51	58

1. Weight with Beacon option module
2. Weight with local interface module

KEYSTONE EPI-2 ELECTRIC ACTUATORS

OUTPUT DRIVE DIMENSIONS



NOTES

1. Insert bush supplied with unmachined bore.
Largest bore can be supplied with solid piece bush.
2. Fixing bolts or rods supplied only on request.
3. dx: the maximum accepted diameter described by key, square or flat machining.
4. Position of the shaft with the valve closed.

OUTPUT DRIVE EN ISO 5211 STANDARD

Model	EN ISO 5211 flange	Output drive dimensions (mm/in)		Order code	Output drive dimensions (mm/in)				Order code
		Style square	l*		Flat	Bore diameter	Key	l*	
063/E006	F05-F07	17/0.66	35/1.36	D4	14xD20 / 0.55xD0.78	-	-	35/1.36	E3
125/E013	F07-F10	22/0.86	54/2.11	D5	22xD30 / 0.86xD1.18	-	-	54/2.10	E5
250/E025	F07-F10-F12	22/0.86	54/2.11	D5	22xD30 / 0.86xD1.18	-	-	54/2.11	E5
500/E051	F10-F12	27/1.05	62/2.42	D6	-	D35 / D1.37	10x8 / 0.39x0.31	62/2.42	E6
1000/E091	F10-F14	36/1.41	40/1.56	D7	-	-	-	-	-
1000/E091	F12-F16	36/1.41	40/1.56	DA	-	D50 / D1.96	14x9 / 0.55x0.35	80/3.12	E9
2000/E171	F10-F14	36/1.41	40/1.56	D7	-	-	-	-	-
2000/E171	F12-F16	36/1.41	40/1.56	DA	-	D50 / D1.96	14x9 / 0.55x0.35	80/3.12	E9

* Insert length (mm/in)

OUTPUT DRIVE K TYPE NON-ISO FLANGES

Model	K flange	Output drive dimensions (mm/in)				Order code
		Flat	Bore diameter	Key	l*	
063/E006	44.45-82.55 / 1.75-3.25	12.7xD19 / 0.5xD0.74	-	-	35/1.36	U4
125/E013	82.55 / 3.25	-	D28.7 / D1.12	6.35x6.35 / 0.25x0.25	54/2.11	U8
250/E025	82.55-127 / 3.25-5	-	D28.7 / D1.12	6.35x6.35 / 0.25x0.25	54/2.11	U8
500/E051	82.55-127 / 3.25-5	-	D41.38 / D1.62	9.53x9.53 / 0.375x0.375	62/2.42	UA
1000/E091	127-165 / 5-6.5	-	D47.73 / D1.87	12.7x12.7 / 0.5x0.5	108/4.21	UC
2000/E171	127-165 / 5-6.5	-	D47.73 / D1.87	12.7x12.7 / 0.5x0.5	108/4.21	UC

* Insert length (mm/in)

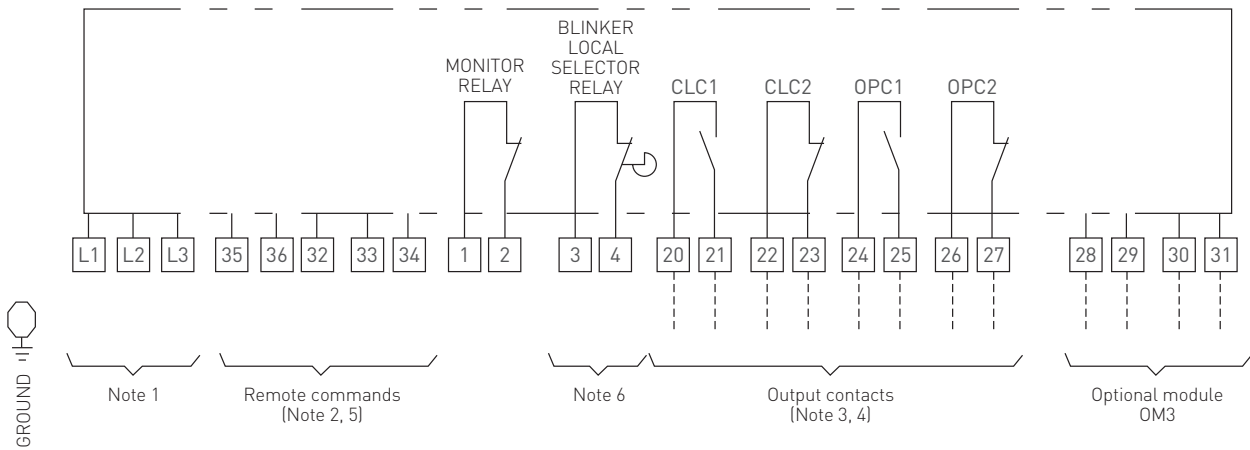
OUTPUT DRIVE NON-STANDARD

Model	Output drive dimensions (mm/in)			
	$\varnothing d7$ max	$\varnothing dx$ max	SQ max	l*
063/E006	17/0.66	23/0.90	17/0.66	35/1.36
125/E013	22/0.89	29/1.13	22/0.89	54/2.11
250/E025	28/1.09	37/1.44	27/1.05	54/2.11
500/E051	28/1.09	37/1.44	27/1.05	62/2.42
1000/E091	40/1.56	49/1.91	36/1.41	108/4.21
2000/E171	40/1.56	49/1.91	36/1.41	108/4.21

* Insert length (mm/in)

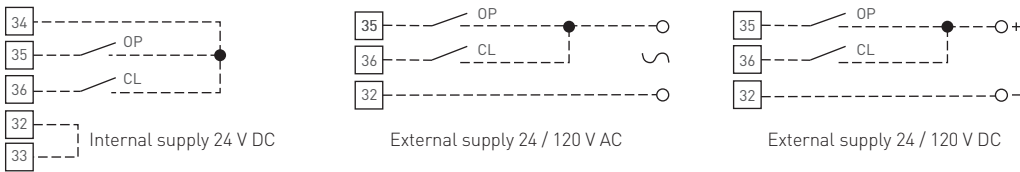
KEYSTONE EPI-2 ELECTRIC ACTUATORS

WIRING DIAGRAM - BASE VERSION



NOTES

1. Power connection L1-L2 for V DC or V AC single phase motor supply from 24 V to 48 V or from 100 V to 240 V.
Power connection L1-L2-L3 for 3 phase motor supply from 208 V to 575 V (check the actuator label for the correct voltage to be applied).
2. Remote command options.



3. Contacts shown in intermediate position CLC1-CLC2 end of travel signaling in closing.
Contacts shown in intermediate position OPC1-OPC2 end of travel signaling in opening.
4. Output contact rating 240 V AC / 5 A ; 30 V DC / 5 A ; 120 V DC / 0.5 A.
5. Control command rating 24 to 120 V AC or DC.
6. Blinker or local selector monitoring function (when OM3 is present) to be configured.

KEYSTONE EPI-2 ELECTRIC ACTUATORS

CURRENT ABSORPTION - SINGLE PHASE AND DC VOLTAGE

CURRENT ABSORPTION - SINGLE PHASE AND DC VOLTAGE

Model	Selected step	Operating time (secs/90°)	Current absorption (A)											
			24 V AC	48 V AC	90 V AC	110 V AC	230 V AC	264 V AC	24 V DC	48 V DC	90 V DC	110 V DC	230 V DC	264 V DC
063/E006	8	15	2.26	1.01	0.590	0.473	0.334	0.289	2.02	1.01	0.605	0.476	0.222	0.196
	6	28	1.60	0.84	0.405	0.334	0.253	0.217	1.53	0.75	0.415	0.343	0.158	0.138
	4	48	1.38	0.73	0.317	0.265	0.209	0.176	1.30	0.64	0.318	0.260	0.120	0.106
125/E013	8	15	4.20	1.70	0.980	0.810	0.430	0.420	4.50	1.81	1.040	0.820	0.390	0.340
	6	28	2.60	1.28	0.780	0.630	0.370	0.340	2.65	1.27	0.810	0.640	0.300	0.260
	4	48	2.04	1.00	0.680	0.560	0.340	0.290	2.10	0.96	0.720	0.570	0.270	0.220
250/E025	8	15	10.30	4.90	2.440	1.970	0.920	0.800	9.70	4.80	2.520	1.950	0.900	0.780
	6	28	8.20	3.80	1.650	1.350	0.640	0.570	7.20	3.60	1.650	1.320	0.630	0.540
	4	48	6.40	3.30	1.440	1.170	0.560	0.500	6.80	3.20	1.460	1.140	0.540	0.470
500/E051	8	15	14.50	6.80	3.200	2.520	1.150	1.000	14.00	7.00	3.220	2.530	1.120	0.980
	6	28	9.50	4.60	1.900	1.550	0.760	0.670	9.30	4.50	1.920	1.540	0.720	0.620
	4	48	7.00	3.40	1.550	1.240	0.600	0.530	7.10	3.40	1.510	1.240	0.580	0.500
1000/E091	8	24	14.50	6.80	3.200	2.520	1.150	1.000	14.00	7.00	3.220	2.530	1.120	0.980
	6	45	9.50	4.60	1.900	1.550	0.760	0.670	9.30	4.50	1.920	1.540	0.720	0.620
	4	80	7.00	3.40	1.550	1.240	0.600	0.530	7.10	3.40	1.510	1.240	0.580	0.500
2000/E171	8	53	14.50	6.80	3.200	2.520	1.150	1.000	14.00	7.00	3.220	2.530	1.120	0.980
	6	100	9.50	4.60	1.900	1.550	0.760	0.670	9.30	4.50	1.920	1.540	0.720	0.620
	4	180	7.00	3.40	1.550	1.240	0.600	0.530	7.10	3.40	1.510	1.240	0.580	0.500

NOTES

1. A = absorbed current (Amp) at nominal conditions (output torque 100%)
2. Max current (Amp) at stall conditions = 1.2 x A
3. Power factor for V AC supply = 0.60
4. Peak current: max 8xIn
5. Peak current duration: less than 0.1 secs

KEYSTONE EPI-2 ELECTRIC ACTUATORS

CURRENT ABSORPTION - THREE PHASE VOLTAGE

CURRENT ABSORPTION - THREE PHASE VOLTAGE

Model	Selected step	Operating time (secs/90°)	Current absorption (A)						
			208 V AC	240 V AC	380 V AC	400 V AC	480 V AC	500 V AC	575 V AC
063/E006	8	15	0.226			0.176			0.107
	6	28	0.165			0.101			0.080
	4	48	0.132			0.083			0.057
125/E013	8	15	0.344			0.227			0.171
	6	28	0.295			0.180			0.143
	4	48	0.245			0.155			0.125
250/E025	8	15	0.800	0.73	0.52		0.49	0.37	0.340
	6	28	0.590	0.56	0.41		0.35	0.29	0.280
	4	48	0.530	0.50	0.37		0.30	0.27	0.250
500/E051	8	15	1.073	0.97	0.65		0.58	0.46	0.430
	6	28	0.720	0.64	0.47		0.39	0.32	0.310
	4	48	0.590	0.55	0.41		0.32	0.29	0.280
1000/E091	8	24	1.073	0.97	0.65		0.58	0.46	0.430
	6	45	0.720	0.64	0.47		0.39	0.32	0.310
	4	80	0.590	0.55	0.41		0.32	0.29	0.280
2000/E171	8	53	1.073	0.97	0.65		0.58	0.46	0.430
	6	100	0.720	0.64	0.47		0.39	0.32	0.310
	4	180	0.590	0.55	0.41		0.32	0.29	0.280

NOTES

1. A = absorbed current (Amp) at nominal conditions (output torque 100%)
2. Max current (Amp) at stall conditions = 1.2 x A
3. Power factor for V AC supply = 0.60
4. Peak current: max 8xIn
5. Peak current duration: less than 0.1 secs

KEYSTONE EPI-2 ELECTRIC ACTUATORS

ORDERING INFORMATION

SELECTION GUIDE

Example	KPD	063	LV	PD	P1	2	D4
Product							
KPD	ISO 5211 with double star insert						
KPE	ISO 5211 with flat or key insert						
KPU	Non-ISO flange						
KPB	ISO 5211 flange - insert not machined						
KPK	Key non-ISO flange - insert not machined						
KEU	(NPT) US version ISO 5211 flange with ISO insert, 4x 1" NPT entries						
Models							
063	Model 063/E006	06B	Model 063/E006 with Beacon				
125	Model 125/E013	12B	Model 125/E013 with Beacon				
250	Model 250/E025	25B	Model 250/E025 with Beacon				
500	Model 500/E051	50B	Model 500/E051 with Beacon				
1K0	Model 1000/E091	1KB	Model 1000/E091 with Beacon				
2K0	Model 2000/E171	2KB	Model 2000/E171 with Beacon				
Voltage							
LV	1-phase 24-48 V AC/DC		3A	3-phases 208-240 V AC			
HV	1-phase 100-240 V AC/DC		3B	3-phases 380-480 V AC			
			3C	3-phases 500-575 V AC			
Speed/Duty							
PD	Standard speed range and standard duties for model 063/E006 to 500/E051						
PE	Standard speed range and standard duties for model 1000/E091						
PF	Standard speed range and standard duties for model 2000/E171						
Option modules							
00	No optional modules		P7	OM1/Bluetooth	5D	OM11/Bluetooth	
P1	OM1		P3	OM3	6D	OM11/OM3/Bluetooth	
PA	OM1/OM3/Bluetooth		5P	OM9/Bluetooth	PG	OM13	
P6	OM1/OM3		6P	OM9/OM3/Bluetooth			
Approvals/Protections							
0	Standard protection NEMA 4/4X/6 (IP66/68M) - CSA certificate T°amb from -40°C to +60°C / -40°F to +140°F						
2	Standard protection NEMA 4/4X/6 (IP66/68M) T°amb from -25°C to +70°C / -13°F to +158°F						
3	Standard protection NEMA 4/4X/6 (IP66/68M) T°amb from -40°C to +70°C / -40°F to +158°F						
4	Explosionproof IP66/68 (NEMA 4/4X/6) + Ex d e IIB T5 Gb - EX tb IIC T100°C Db T°amb from -20°C to +65°C / -4°F to +149°F (prefix c for model 2000)						
9	Explosionproof IP66/68 (NEMA 4/4X/6) + Ex d e IIB T5 Gb - EX tb IIIC T100°C Db T°amb from -40°C to +65°C / -40°F to +149°F (prefix c for model 2000)						
6	Explosionproof NEC 500 (FM approval) Class I, Zone 1 Group IIB , Class II, III, Division 1, Groups E, F,G						
Flange/Insert							
00	No flange insert						
B4	Model 063/E006 flange ISO 5211/F05/F07 - insert not machined (KPB)						
B5	Model 125/E013 flange ISO 5211/F07/F10 - insert not machined (KPB)						
B5	Model 250/E025 flange ISO 5211/F07/F10/F12 - insert not machined (KPB)						
B6	Model 500/E051 flange ISO 5211/F10/F12 - insert not machined (KPB)						
B7	Models 1000/E091-2000/E171 flange ISO 5211/F10/F14 - insert not machined (KPB)						
BA	Models 1000/E091-2000/E171 flange ISO 5211/F12/F16 - insert not machined (KPB)						
D4	Model 063/E006 ISO 5211 (KPD)						
D5	Models 125/E013-250/E025 ISO 5211 (KPD)						
D6	Model 500/E051 ISO 5211 (KPD)						
D7	Models 1000/E091-2000/E171 F10 to F14 ISO 5211 (KPD)						
DA	Models 1000/E091-2000/E171 F12 to F16 ISO 5211 (KPD)						
E3	Model 063/E006 ISO 5211 (KPE)						
E5	Models 125/E013-250/E025 ISO 5211 (KPE)						
E6	Model 500/E051 ISO 5211 (KPE)						
E9	Models 1000/E091-2000/E171 F12 to 16 ISO 5211 (KPE)						
K4	Model 063/E006 flange key 44.45-82.6 - insert not machined (KPK)						
K8	Model 125/E025 flange key 82.6 - insert not machined (KPK)						
K8	Model 250/E025 flange key 82.6-127 - insert not machined (KPK)						
KA	Model 500/E051 flange key 82.6-127 - insert not machined (KPK)						
KC	Models 1000/E091-2000/E171 flange key 127-165 - insert not machined (KPK)						
U4	Model 063/E006 non-ISO (KPU)						
U8	Models 125/E013-250/E025 non-ISO (KPU)						
UA	Model 500/E051 non-ISO (KPU)						
UC	Models 1000/E091-2000/E171 non-ISO (KPU)						

KEYSTONE EPI-2 ELECTRIC ACTUATORS

ORDERING INFORMATION

ORDERING INFORMATION - US MARKETS ONLY

Example	E	006	A	L	W5	00	0
Model							
E	EPI-2 quarter-turn electric						
Size							
006	Model E006						
013	Model E013						
025	Model E025						
051	Model E051						
091	Model E091						
171	Model E171						
Local indicator							
A	Standard window						
Voltage ratings							
L	1-phase 24-48 V AC/DC						
H	1-phase 100-240 V AC/DC						
A	3-phases 208-240 V AC						
B	3-phases 380-480 V AC						
C	3-phases 500-575 V AC						
Classification and temperature rating							
W1	NEMA 4/4X/6 (IP66/68M) Ambient temp: -13°F to 158°F (-25°C to 70°C)						
W2	NEMA 4/4X/6 (IP66/68M) Ambient temp: -40°F to 158°F (-40°C to 70°C)						
W5	CSA 139 (C-US) NEMA 4/4X/6 (IP66/68M) AWWA Ambient temp: -40°F to 140°F (-40°C to 60°C)						
X5	NEC 500 (FM approval) Class I, Zone 1 Group IIB, Class II, III, Division 1, Groups E, F, G Ambient temp: -40°F to 149°F (-40°C to 65°C)						
Option modules							
00	NONE, standard On-Off configuration						
P1	Servoamp w/retransmission (OM1)						
P3	Local interface (OM3)						
P6	Servoamp w/retransmission, local interface (OM1/OM3)						
P7	Servoamp w/retransmission, Bluetooth® communication (OM1/Bluetooth)						
PA	Servoamp w/retransmission, local interface, Bluetooth® communication (OM1/OM3/Bluetooth)						
3D	DeviceNet™ bus communication (OM11)						
5D	DeviceNet™ bus communication, Bluetooth® communication (OM11/Bluetooth)						
6D	DeviceNet™ bus communication, local interface, Bluetooth® communication (OM11/OM3/Bluetooth)						
3P	PDP V0/V1 bus communication (OM9)						
5P	PDP V0/V1 bus communication, Bluetooth® communication (OM9/Bluetooth)						
6P	PDP V0/V1 bus communication, local interface, Bluetooth® communication (OM9/OM3/Bluetooth)						
PG	3-wire interface card (OM13)						
Special option code							
0	Standard						

