
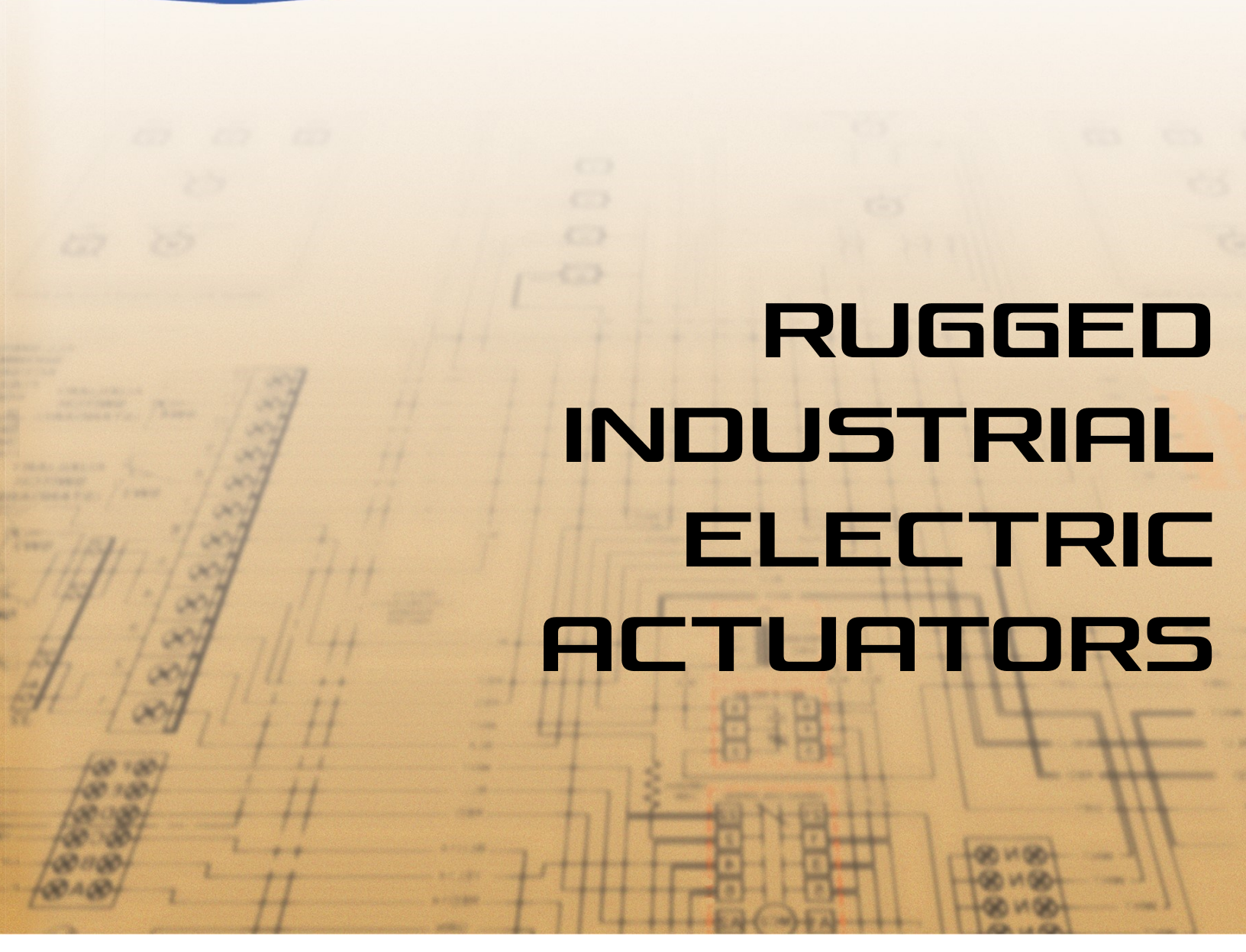


PROMATION ENGINEERING

Precision Actuation for Industry



**RUGGED
INDUSTRIAL
ELECTRIC
ACTUATORS**

The background of the lower half of the page is a faded, technical drawing or circuit board. It features various lines, grids, and components, typical of an engineering blueprint. The drawing is oriented vertically and horizontally, with some text and symbols visible but mostly illegible due to the fading.



PROMATION ENGINEERING

Precision Actuation for Industry

ProMation Engineering offers a full range of industrial actuators that are designed and constructed to meet the demands of the most demanding installations and applications.

Printed Circuit Board Mounted Components

Anti-Condensation Heater (Standard Equipment)

Incoming Connections

Form C Auxiliary and Limit Switches

Single Connection for Motor

Epicyclic Gearing

Mechanical End Stops

Easy to see yellow/red 360° Position Indicator

NEMA 4/4X/IP67 Rated Powder Coated Aluminum Enclosure

Color-Coded Aluminum Cams

Clutch-less Manual Override

Quarter Turn Actuators

from 135 to 40,000 in lbs



P1

Torque Value:
135 in lbs-445 in lbs
15 Nm-50 Nm



P2-3

Torque Value:
600 in lbs-1335 in lbs
67 Nm-150 Nm



P4-6

Torque Value:
2200 in lbs-5750 in lbs
248 Nm-650 Nm



P7-8

Torque Value:
8900 in lbs-13250 in lbs
1000 Nm-1500 Nm



P9-13

Torque Value:
17500 in lbs-40000 in lbs
2000 Nm-4500 Nm



PROMATION ENGINEERING

Precision Actuation for Industry

Engineered for Installation Ease, Reduced Maintenance, and Exceptional Reliability

Multiple mounting designs to reduce assembly costs

- Multiple mount patterns on P2-P6 actuators
- ISO 5211 and Imperial Mount patterns

Industrial Grade Components and Design Increase Reliability

- Carbon steel permanently lubricated gearing
- 15A Industrial Switches mounted on PCB
- Thermally protected NEMA Class F motor
- Stainless steel hardware

Industrial Design reduces failure modes

- No Clutch
- Reduced electrical connections
- No switching power supplies
- No Motor Brake
- Modular control components

Many Different Control Modes to fit your Application

- Several Modulating Control Options
 - Standard Controller
 - Premium Controller
 - High Resolution Controller
- Bus Control Options
 - Modbus
 - Profibus
- Multiple Open/Close Control Options
 - Single wire control—Hot control signal to Open, no control signal to Close, no control signal to Open
 - 3.3 to 24v DC or 24-230v AC control to Open or Close regardless of line power.
- Three location stops: 0-45-90, 0-90-180, or three custom degree stop points
- Up to 270° rotation Open/Close or Modulating
- Timer function for autonomous operation
- Potentiometer or 4-20mA Feedback for position sensing
- Wireless control for Open/Close control



PL 680—PL2000

Standard Location
680 lbs - 2000 lbs
4.3 kN - 23.6 kN



PL 680—PL2000

Hazardous Location
680 lbs - 2000 lbs
4.3 kN - 23.6 kN



D Series

45 in lbs - 445 in lbs
5 Nm - 260 Nm



PA - PD

445 in lbs - 2300 in lbs
50 Nm - 260 Nm



PROMATION ENGINEERING

Precision Actuation for Industry

Quarter Turn Actuators

P Series Quarter Turn Actuators

Industrial actuators featuring epicyclic gear drives and high reliability internal connections. Two Mounting patterns are available –ISO 5211 and Imperial. All our actuators come with a standard anti-condensation heater, 2 auxiliary switches, clutchless manual override handwheel and NEMA 4/4X/IP67 enclosure.

Product family	Torque Output			Actuator Run Time (sec)			ISO 5211 Mount		Imperial Mount		Shipping Weight (lbs/kg)
	In lbs	Nm	Draw (amps)	50 Hz	60 Hz	VDC	ISO Pattern	Receiver (mm)	BHC (in)	Receiver (in)	
PZ6	55	6	0.3	11	8	8	F03/F05	14Sq			4/2
PZ15	135	15	0.3	22	19	19	F03/F05	14 Sq			4/2
P1	300	35	0.6	13	12	15	F03/F05	14 Sq	1.71/3.25	9/16 x 3/8 DD	5/3
P1.A	445	50	0.6	24	20	20	F05/F07	17 Sq	3.25	9/16 x 3/8 DD	7/4
P1.B	135	15	0.6	10	8	8	F03/F05	14 Sq		9/16 x 3/8 DD	5/3
P1.C	135	15	1.8Aat24V	n/a	n/a	3	F03/F05	14 Sq		9/16 x 3/8 DD	5/3
P2	800	90	1.0	17	15	15	F07/F10	22 Sq		3/4 x 1/2 DD	26/12
P3	1,335	150	1.2	26	22	22	F07/F10	22 Sq		3/4 x 1/2 DD	26/12
P4	3,500	400	1.9	18	16	16	F10/F12	35 Sq		Rnd 1.125	47/22
P5	4,400	500	2.0	25	22	22	F10/F12	35 Sq		Rnd 1.125	47/22
P6	5,750	650	2.1	31	28	28	F10/F12	35 Sq		Rnd 1.125	47/22
P7	8,900	1,000	3.1	55	46	46	F12	36 Sq		Rnd 1.375	82/37
P8	13,200	1,500	3.3	55	46	46	F14	36 Sq		Rnd 1.625	82/37
P9	17,500	2,000	3.3	70	58	n/a	F16	Rnd 75			145/66
P10	22,000	2,500	4.0	70	58	n/a	F16	Rnd 75			145/66
P11	26,500	3,000	4.5	70	58	n/a	F16	Rnd 75			157/72
P12	31,000	3,500	4.0	70	58	n/a	F16	Rnd 75			157/72
P13	40,000	4,500	4.2	95	80	n/a	F25	Rnd 75			240/109

Running Amps: 120 VAC unless otherwise noted

Round female receivers have keyways

Voltage Options			Options with Product Suffix (Factory Installed Only)		
Family	Voltages		Item	Family	Description
P1-P6	12 VAC or 24 VDC	Low Voltage Modification	-ED	P1, P1A, P2-P8	Extended Duty Motor, 120 VAC, or 230 VAC only, 75% Duty Cycle—on/off/jog
P1-P8	24 VAC or 24 VDC	Low Voltage Modification	-ED	P9-P13	Extended Duty Motor, 120 VAC or 230 VAC only, 50 % Duty Cycle—on/off/jog
P2-P13	3 Phase 230v, 315v, 380v, 440v, 480v (doesn't include MCC)	3 Phase Modification	-RO	All but P1.B, P1.C, PZ	Single wire Control Relay (internal Units). OPEN—ENERGIZE TO CLOSE
P1, P1A	24 VDC, or 24, 120, or 230 VAC	Standard Control - P	-RC	All but P1.B, P1.C, PZ	Single wire Control Relay (internal Units). CLOSED—ENERGIZE TO OPEN
P2-P13	24, 120, or 230 VAC	Premium Control - P	-TS	P2-P9	Torque Switch Assembly (on/off/jog or Select Proportional Controllers)
P2-P13	24 VDC Optional for 24, 120, or 230 VAC	High Resolution Control	-MCC*		Motor Control Center for 3 Phase Voltage
			-68	P2-P8	IP68, tested to 0.7 kgf/cm ² for 72 hours

Not all combinations of options are available. *Remote mounted MCC and LCS units are the only field mountable options or accessories where customers are required to make field connections.



PROMATION ENGINEERING

Precision Actuation for Industry



Options and Accessories

P1 Series Options (Factory Installed Only)

Item	Description
MOD 0-45-90 DEG	Actuator modification for 0-45-90° rotation. Available on 120 VAC or 230 VAC only, (unit will not support field use of auxiliary switches)
MOD 0-90-180 DEG	Actuator modification for 0-90-180° rotation. Available on 120 VAC or 230 VAC only, (unit will not support field use of auxiliary switches)
MOD 0-180 DEG	Actuator modification for 0-180° rotation. Available on on/off/jog models only.
OPT-COLD P1	Cold weather Positive Temperature Coefficient (PTC) auxiliary heater kit. Factory installed, 120 VAC or 230 VAC on/off/jog type actuators. 10 W internal heater.
OPT-P1-1-10K	Factory installed option consists of a 1k-10KΩ feedback potentiometer connected to a convenient 3 terminal block.
OPT-RO-P1	Relay to Open or Relay to Close.
OPT-THERMOSTAT-P1	Integral thermostat for heater control—turns existing heater on at 0°C (+32°F), off at 10°C (+50°F)
OPT-TIMER-LI-P1	Timer set for duration and frequency to slow cycle time or continuous open/close time cycle.

Commonly Used Options for P2-P13 (Factory Installed Only)

Item	Description
OPTION-X	Additional third and fourth auxiliary switch set
OPT-P213-1-10K	Factory installed option consists of a 1k-10kΩ feedback potentiometer connected to a convenient 3 terminal block.
OPT-ROP213	Relay to Open
OPT-RCP213	Relay to close
OPT-DRP213	Dual Relay to isolate incoming control signal for Open/Closed position.
OPT-TIMER-LI-P213	Timer set for duration and frequency to slow cycle time or continuous open /close cycle time.
OPT-COLD-P213	Cold weather auxiliary heater to -40°C/F On at 0°C (+32°F), off at 10°C (+50°F)
OPT-420FB	4-20mA feedback generator for on/off/jog, 24 VAC, 24 VDC, 120 VAC, or 230 VAC
MOD 0-45-90 OR MOD 0-90-180	0° or 45° or 90° OR 0° or 90° or 180°, 3 position stop points in rotation
MOD 0-180	0° or 180°, 2 position stop points in rotation

P Series Options and Accessories

Not all options are available for all actuators and not all accessories work currently with other accessories. Other options are available. Please contact your ProMation representative for product and application assistance.



PROMATION ENGINEERING

Precision Actuation for Industry

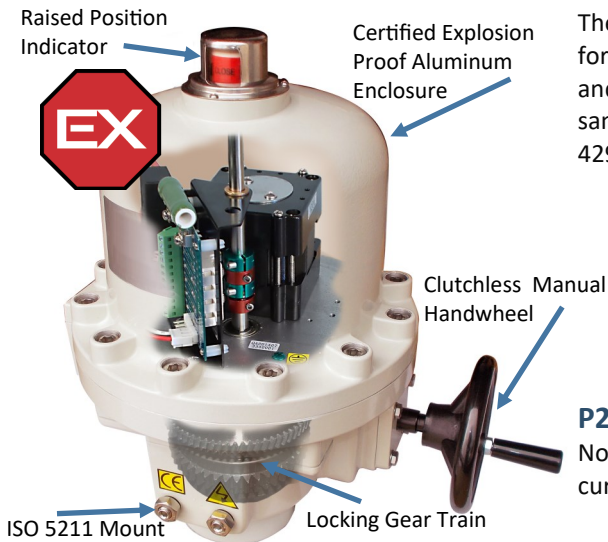
P2-P8 Series explosion Proof Quarter Turn Actuators

Industrial actuators featuring epicyclic gear drives and high reliability internal connections. All P2-P8 explosion proof actuators come with a standard anti-condensation heater, 2 auxiliary switches, clutchless manual override hand wheel and NEMA 7/9 enclosure.

Product Family	Torque (in lbs)	Torque (Nm)	Draw (Amps)	Runtime	ISO 5211	8pt dbl-sq	Height (in/mm)	Weight (lbs/kg)
PX1-120N7	300	35	0.6	12	F03/F05	14	6.6/168	4/2
PX1.A-120N7	450	50	0.6	24	F05/F07	17	8.5/215	7/3
P2-120N7	800	90	1.0	15	F07	22	14.1/359	40/18
P3-120N7	1,335	150	1.2	22	F07	22	14.1/359	40/18
P4-120N7	3,500	400	1.9	16	F10	35	15.3/389	58/26
P5-120N7	4,400	500	2.0	22	F10	35	15.3/389	58/26
P6-120N7	5,750	650	2.1	28	F10	35	15.3/389	58/26
P7-120N7	8,900	1,000	3.1	46	F12	36	18.8/478	93/42
P8-120N7	13,250	1,500	3.3	46	F12	36	18.8/478	93/42

Explosion Proof

The ProMation Engineering explosion/ignition proof actuators are certified for use in hazardous locations per UL 1203 and CSA 22.2 No. 30 and No. 31, and meets NEMA 7 and 9 criteria: The hazardous location actuators share the same electronic and mechanical components as our standard location (UL 429/CSA 22.2 No. 139) products.



Class I, Division 1, Groups C and D
Class II, Division 1, Groups E, F, and G
Class III; T6
Ex d IIB Gb T6, Ex tb IIIC T85°C Db
Class I, Zone 1, AEx d IIB Gb T6

P2-P8 Series of Explosion Proof Options and Accessories

Not all options are available for all actuators and not all accessories work concurrently with other accessories. Please contact the factory for product and

Hazardous Location Options P2-P8 (Factory Installed Only)

Low Voltage Modification	24 VAC or VDC
High Voltage Modification	230 VAC Single Pulse
Proportional Control—P	ProMation Premium Proportional Controller 24 VAC, 120 VAC, or 230 VAC
-TS P2-P8	Torque Switch (not available for P2/P3 with Proportional Control)
MOD 0-45-90 DEG	0-45-90 degree rotation
MOD 0-90-180 DEG	0-90-180 degree rotation
MOD 0-180 DEG	0-180 degree rotation (on/off only)
OPTION-X	Third and fourth Auxiliary Switch set



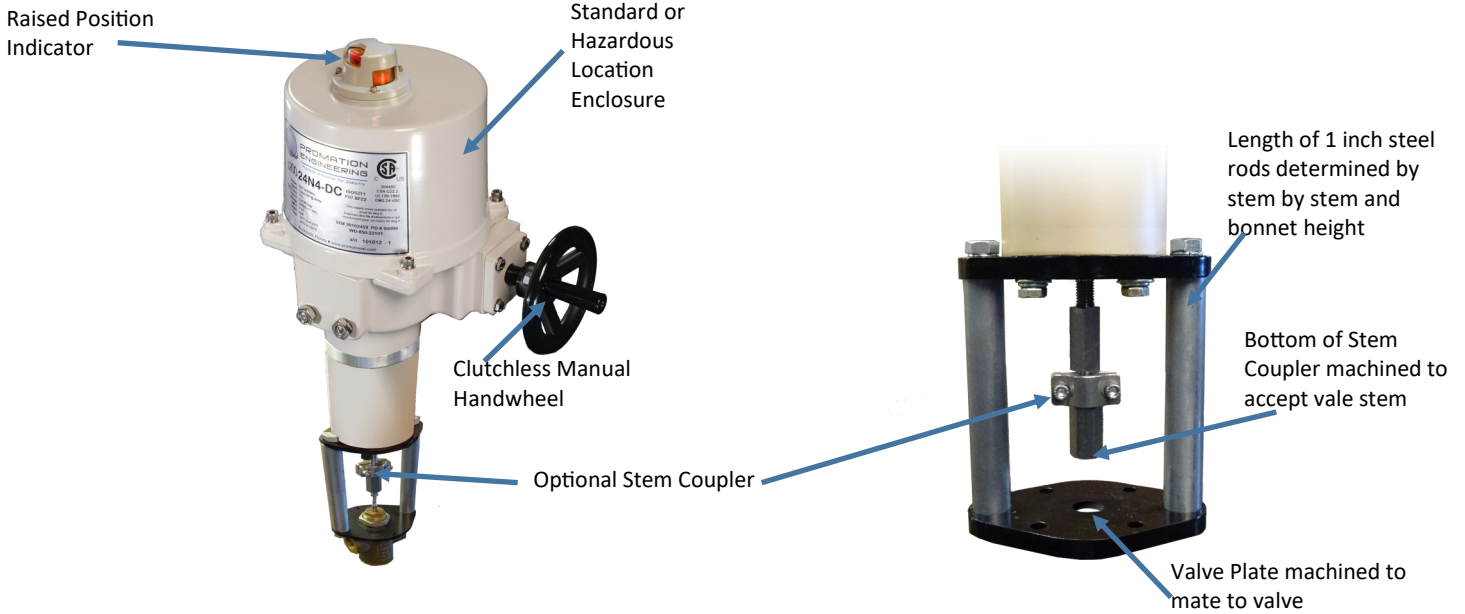
PROMATION ENGINEERING

Precision Actuation for Industry

Linear Actuators

Designed for use on rising stem control valves, PL Series actuators provide up to 2000 lbs. (8kN) of force and up to 2 inches (50 mm) travel. The PL Series is available Standard or Hazardous (class 1, Division 1) location enclosures with standard anti-condensation heater, auxiliary switches and manual override hand wheel.

Linear Actuators



Product Family	Max Stroke		Speed		Force		Weight (lbs/kg)		Height (in/mm)	
	mm	in	Mm/sec	In/sec	Lbs	kN	Standard	Hazardous	Standard	Hazardous
PL680	32	1.25	0.8	0.033	680	kN	20/9	20/9	13.4/339 14.6/371*	13.4/339 14.6/371*
PL1200	50	2	1.1	0.044	1200	kN	39/18	60/28	16.4/417	19.3/489
PL2000	50	2	0.8	0.033	2000	kN	39/18	60/28	16.4/417	19.3/489

*Proportional

N7 Specific Options P2-P8

Line Voltage	24 VAC or VDC, 120, 230 VAC
3 Phase Voltage	3 Phase 230, 315, 380, 440, 480, or 575, Standard Location Only
Proportional Control	4-20mA, 1-5VDC, 2-10VDC, 0-10VDC control and feedback, field selectable).
OPT-COLD-PL	Cold weather auxiliary heater. On at 0°C (+32°F), off at 10°C (+50°F). (Contact ProMation)
OPT-P-5K	Potentiometric Feedback Option. Factory installed, 1kΩ, 5kΩ, or 10kΩ
OPT-420FB	4-20mA feedback generator for on/off/jog, 24 VAC, 24VDC, 120 VAC, or 230 VAC
OPT-THERMOSTAT	Thermostat for heater control—turns existing heater on at 0°C (+32°F), off at 10°C (+50°F).
OPT-TIMER-LI	Timer set for duration and frequency to slow cycle time.
OPT-LCS-ALL	Local Control Stations (LCS). See page 11 for a complete listing of all LCS solutions.



PROMATION ENGINEERING

Precision Actuation for Industry

Fail Safe Solutions—Spring Return

PA-PD Series Mechanical Fail Safe Actuators

The PA-PD Series Spring Return Actuators utilize springs to drive rack and pinion gears. Available with and without non-clutchable manual override hand-wheel. Specify **CW** or **CCW** model when ordering, **they are not interchangeable**. The PA-PD Series actuators are available **Standard or Hazardous (Class 1 Division**



Product Family	Torque Output		Draw	Actuator Run Time (sec)			Spring Return Time (sec)		Mounting Information		Height	Shipping Weight
	In lbs	Nm	amps	50 Hz	60 Hz	VDC	120V/230V	24V	ISO 5211	8pt dbl sq	in/mm	lbs/kg
PA	445	50	1.0	9	7	7	3	3	F07	17mm	17/425	65/30
PB	1,150	130	3.8	9	7	8	8	3	F10	22mm	20/503	124/57
PC	1,750	200	3.8	13	11	11	12	3	F12	27mm	23/577	209/95
PD	2,300	260	3.8	17	14	17	12	3	F12	27mm	25/577	209/95
PE	3,185	360	3.8	23	24	24	23	8	F12	36 mm	29/743	228/103

With Manual Override

PAO	445	50	1.0	9	7	7	3	3	F07	17mm	21.1/55	88/40
PBO	1,150	130	3.8	9	7	8	8	3	F10	22mm	25.3/638	184/84
PCO	1,750	200	3.8	13	11	11	12	3	F12	27mm	29.1/732	297/135
PDO	2,300	260	3.8	17	14	17	12	3	F12	27mm	29.1/732	297/135
PEO	3,185	360	3.8	23	24	24	23	8	F12	36 mm	33.5/852	336/152

Running Amps: 120 VAC@ 60 Hz. Actuator Run Times are given for 120 VAC and 24 VDC

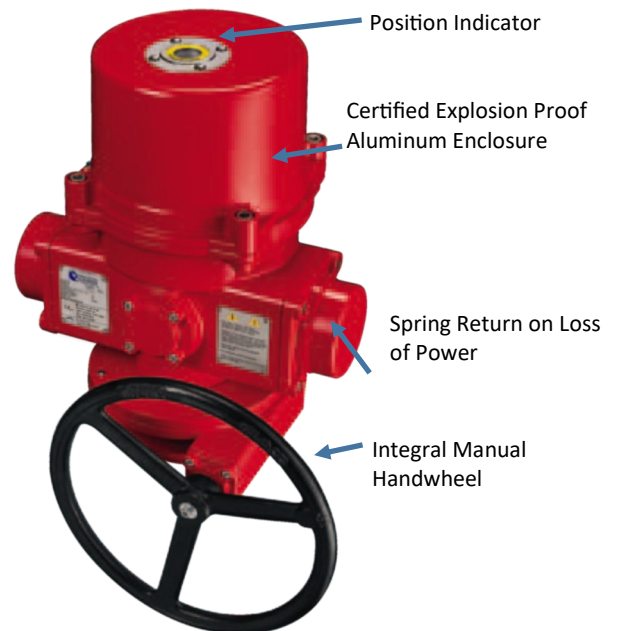
Options common to PA-PD Series (Factory Installed Only)

Low Voltage Modification	24 VAC or 24VDC (12V option NOT AVAILABLE)
3 Phase Voltage Modification	3 Phase 230V, 315V, 380V, 440V, or 480V with custom transformer enclosure
Proportional Control—P	Standard Proportional Controller 120 VAC or 230 VAC (24 V option NOT AVAILABLE)
OPT-COLD-PAD	Cold weather auxiliary heater: On at 0°C (+32°F), off at 10°C (+50°F)
OPTION-X-PA	2 additional Auxiliary Switches

Spring Return Explosion Proof Actuators

Hazardous Location Applications

ProMation Engineering actuators spring return mechanical fail-safe actuators have critical applications in isolation and shut off valves in the Oil and Gas industry in midstream processing, tank isolation, and gas delivery, to name just a few applications. Below grade applications in Waste Water Treatment, Mining, and Chemical Processing many times require failsafe actuation.





PROMATION ENGINEERING

Precision Actuation for Industry
Fail Safe Solutions—Battery

Power Backup Units (PBU) for Electric Fail Safe

PBUs are designed for P and PL series actuators. Replaceable sealed lead-acid battery packs provide backup power for positive positioning in critical applications. Standard with NEMA 4/4X enclosure. Some assembly is required and customer is required to make field connections.



	Part Number	For Actuator Series	Output Voltage	Required Supply Voltage	Replacement Battery	Height (in/mm)	Weight (lbs/kg)
ON/OFF/JOG	PBU100-120-4	P1-P3	120 VAC	120 VAC	RBC-35	14.50/368.3	25/11
	PBU100-24A-4	P1-P2	24 VAC	120 VAC	RBC-35	14.50/368.3	39/18
	PBU102-120-4	P4-P6	120 VAC	120 VAC	RBC-110	16.04/407.4	30/14
	PBU102-230-4	P1-P6	230 VAC	230 VAC	RBC-51	16.04/407.4	30/14
	PBU102-24A-4	P3-P6	24 VAC	120 VAC	RBC-110	16.04/407.4	45/20
	PBU104-120-4	P7-P13	120 VAC	120 VAC	RBC-17	16.04/407.4	30/14
	PBU104-230-4	P7-P13	230 VAC	230 VAC	RBC-51	16.04/407.4	30/14
PROPORTIONAL	PBU600-120P-4	P1-P3	120 VAC	120 VAC	RBC-35	14.50/368.3	25/11
	PBU600-24AP-4	P1-P2	24 VAC	120 VAC	RBC-35	14.50/368.3	45/20
	PBU602-120P-4	P4-P6	120 VAC	120 VAC	RBC-110	16.04/407.4	30/14
	PBU602-230P-4	P1-P6	230 VAC	230 VAC	RBC-110	16.04/407.4	30/14
	PBU602-24AP-4	P3-P6	24 VAC	120 VAC	RBC-51	16.04/407.4	45/30
	PBU604-120P-4	P7-P13	120 VAC	120 VAC	RBC-17	16.04/407.4	30/14
	PBU604-230P-4	P7-P13	230 VAC	230 VAC	RBC-51	16.04/407.4	30/14

Control Signals can be 2-10 VDC **OR** 4-20 mA and are field selectable. 230 VAC versions not available in PBU100 or PBU60

Options common to PBU Series (Factory Installed Only)

OPT-COLD-PBU	Cold weather auxiliary heater. On at +32°F, off at +50°F. (Contact ProMation)
OPT-PBU-MON	Remote Status Monitoring option.

D Series Spring Return Actuators

Spring return actuators designed for use on valves and dampers. Featuring field adjustable open and close rates and auto switching power supplies which accept AC or DC from 24V to 230V. The D Series actuators are available Standard or Hazardous (Class 1 Division 1) location enclosures.



Part Number	Torque (in/lbs)	Torque (Nm)	Runtime (sec) Field Selectable	Spring Drive Speed (sec, 90°)	Control	Height (in/mm)	Weight (lins/kg)
D2-310S4-0	45/90	5/10	5/15/30/60/120	3 or 10 (Sel)	On/off/jog	3.15/80	10/5
D2-310S4-2	45/90	5/10	5/15/30/60/120	3 or 10 (Sel)	On/off/jog w/aux	4.72/120	11/5
D3-310S4-0	133	15	5/15/30/60/120	3 or 10 (Sel)	On/off/jog	3.15/80	10/5
D3-310S4-2	133	15	5/15/30/60/120	3 or 10 (Sel)	On/off/jog w/aux	4.72/120	11/5
D4-20S4-0	265	30	40/60/90/120/150	20 (Fixed)	On/off/jog	4.57/116	24/11
D4-20S4-2	265	30	40/60/90/120/150	20 (Fixed)	On/off/jog w/aux	6.14/156	25/11
D5-20S4-0	445	50	40/60/90/120/150	20 (Fixed)	On/off/jog	4.57/116	24/11
D5-20S4-2	445	50	40/60/90/120/150	20 (Fixed)	On/off/jog w/aux	6.14/156	25/11



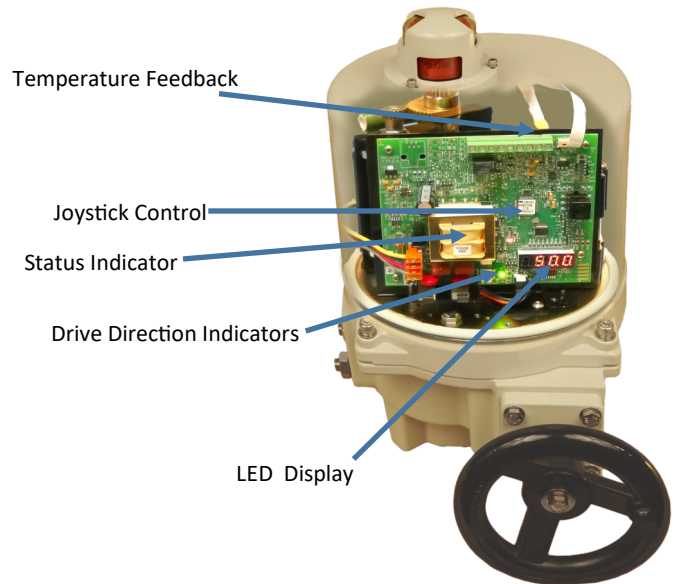
PROMATION ENGINEERING

Precision Actuation for Industry

Modulating Control Options

ProMation Engineering offers a wide range of control for nearly all products.

ProMation offers full modulating control utilizing multiple input and feedback signals. Three different control boards offer different resolution settings for different applications. The high resolution controller has additional filter and circuit controllers that give high accuracy while reducing actuator hunting around a setpoint. Other features include fault indicators, data logging and direction indicators to name a few. Profibus and Modbus communications are also available.



Feature	Parameter	Standard	Premium	High Resolution
Power Indicator	On/off LED	✓	✓	✓
Drive CW Indicator	On/off LED	✓	✓	✓
Drive CCW Indicator	On/off LED	✓	✓	✓
Programmable Loss of Signal Positioning	Stay in Place; Go Open: Go Closed	✓	✓	✓
Resolution	Percent	1%	0.5%	0.25%
Input and Feedback Signal	1-5 VDC	✓	✓	✓
	2-10 VDC	✓	✓	✓
	4-20 VDC	✓	✓	✓
	0-10 VDC		✓	✓
Feedback	DC Voltage Supply	✓	✓	✓
	Loop Current			10-24 VDC
Diagnostic and Fault Indicators	Motor Stall		✓	✓
	Low Voltage		✓	✓
	High Current		✓	Adjustable to limit torque (DC only)
	Motor Temperature		✓	✓
	Cycle Count		✓	
	AutoCal Fail		✓	
	Incorrect Input			✓
Auto Calibration			✓	
Self Tuning Feedback Signal			✓	✓
Datta Logger			✓	
Alarm Contact Output			✓	
Alphanumeric Display			✓	



PROMATION ENGINEERING

Precision Actuation for Industry

Local Control Stations (LCS)

ProMation LCSs are designed to be remotely located or directly mounted to the actuator. Standard with NEMA 4 steel enclosure. Customer is required to make field connections.

Customers with proportional actuators specify when ordering: 4-20mA or DC 2-10V control.



LCS Models	LA	LD	LF	LG	LJ	LK
Product	All	All	P1, PA	P2-P13	P1, PA	P2-P13
On/off/jog Actuators only	✓	✓				
Proportional Actuators only			✓	✓	✓	✓

Standard LCS Component Features: Common to LCS models listed (Factory Installed Only)

Local/off/Remote Mode Switch	✓	✓	✓	✓	✓	✓
Close-Stop-Open Switch	✓	✓				
Close-Open Switch (2 pos)			✓	✓		
Close/Open Indicator Lights		✓	✓	✓	✓	✓
End of Travel (EOT) outputs to Controller		✓	✓	✓	✓	✓
Mode Switch Position Signal to Controller		✓	✓	✓	✓	✓
Illuminated Power Indicator		✓	✓	✓		
Full Proportional Control via Potentiometer					✓	✓
LCD Display for Incoming Signal					✓	✓
LCD Display for Feedback Signal					✓	✓

LCS Options

ProMation can configure LCSs to fit your specific needs. Below are the general options that can be changed from our standard LCS offerings. All prices are determined by the scope of the project. Please contact ProMation for application assistance.

Option	Description
Actuator Type	Nearly all our actuators can be optioned with a LCS. LCS can be assembled for ProMation actuators as well as other brand electric actuators.
Control Mounting	Direct Mount (to the actuator) or Remote Mount
Supply Voltage	Supply Voltages including 12 VAC/VDC, 24 VAC/VDC, 120 VAC, 230 VAC, and 3 phase. 3 phase voltages: 230, 315, 380, 440, 480, 575. Not all voltages are compatible with all actuators
Control Type	4-20mA, 2-10VDC, 0-10VDC, 1-5VDC, or 0-135ohm
Enclosure Type	Painted Steel NEMA 4, Stainless Steel NEMA 4/4X, or Fiberglass NEMA 4/4X
Mode Select Switch	2 position knob, 3 position knob, 2 position key, 3 position key, no knob, or custom
Movement Select	2 position switch, variable position potentiometer, no device, or custom
Visual Indicators	Indicator colors: red, green, blue, yellow, and white LEDs are available
Actuator Contacts	Pass through auxiliary switches, EOT Status Dry Contacts, EOT Hot Outputs, or none.
Mode Feedback	Remote, Auto, and Monitor modes with Dry Contacts (relays), Hot Outputs, or none.
Position Readout	4-20 mA or 0-100% Signal Input and Outputs
Other Custom Components	External modular power cabling, remote location of proportional controller (in the LCS enclosure), custom indicators, switches, contact locks, and enclosures.



PROMATION ENGINEERING

Precision Actuation for Industry

Product Family Matrix

The ProMation Product Family Matrix gives a quick overview of the entire line at a glance. Please contact ProMation with questions or to request a quote for your specific application.

PRODUCT FAMILY	Torque Output		Voltage Options						Mount		Control			Environment					
	In lbs (force lbs)	Nm (force kN)	12 AC	12 DC	24 CA	24 DC	120 AC	230 AC	3 PHASE	ISO 5211	IMPERIAL	ON/OFF/JOG	PROPORTIONAL	HIGH RES. PROP.	LCS	NEMA 4/4X/IP67	IP 68	EXPL. PROOF GAS	IGNIL. PROOF DUST
QUARTER TURN	PZ6	135	15			✓		✓	✓	✓		✓			✓				
	PZ15	135	15			✓		✓	✓	✓		✓			✓				
	P1	300	35	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓
	P1.A	445	50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓
	P1.B	135	15	✓	✓	✓	✓	✓	✓	✓		✓			✓				
	P1.C	135	15		✓		✓			✓		✓				✓			
	P2	800	90	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	P3	1,335	150	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	P4	3,500	400		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	P5	4,400	500		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	P6	5,750	650		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
	P7	8,900	1,000			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	P8	13,250	1,500			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
P9	17,500	2,000					✓	✓	✓		✓	✓	✓	✓	✓				
P10	22,000	2,500					✓	✓	✓		✓	✓	✓	✓	✓				
P11	26,500	3,000					✓	✓	✓		✓	✓	✓	✓	✓				
P12	31,000	3,500					✓	✓	✓		✓	✓	✓	✓	✓				
P13	40,000	4,500					✓	✓	✓		✓	✓	✓	✓	✓				
SPRING RETURN	PA/PAO	445	50			✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓
	PB/PBO	1,150	130			✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓
	PC/PCO	1,750	200			✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓
	PD/PDO	2,300	260			✓	✓	✓	✓	✓		✓	✓		✓	✓		✓	✓
	D2	45 or 90	5 or 10									✓	✓			④		✓	✓
D3	133	15									✓	✓			④		✓	✓	
D4	265	30									✓	✓			④		✓	✓	
D5	445	50									✓	✓			④		✓	✓	
LINEAR	PL680	(550)	(2.45)			✓	✓	✓	✓	✓		✓			✓			✓	✓
	PL1200	(1,100)	(4.89)			✓	✓	✓	✓	✓		✓			✓			✓	✓
	PL2000	(2,200)	(9.79)			✓	✓	✓	✓	✓		✓			✓			✓	✓
	PL4400	(4,400)	(19.57)			✓	✓	✓	✓	✓		✓			✓				

Auto-switching power supplies automatically connect to AC or DC power sources from 24V to 230V

✓ Options available ④ only available with NEMA 4 Enclosure