



Leaders In Slurry & Bulk Material Handling, Process Instrument & Controls



P1 Quarter Turn Actuator



P4 Quarter Turn Actuator



PL1600 Linear Actuator



PAO Spring Return Actuator



LCS-K Local Control Station

# Reliable Electric Actuation for Industrial Control

## Full Line of Actuators

- Quarter Turn to 40,000 in lb (4,500 Nm)
- Spring Return to 2,300 in lb (260 Nm)
- Linear to 5,300 (23.6 kN force)

## Multiple Configurations

- On/Off/Jog or Proportional Control
- 24VDC through 575/3/60 Applications
- Local Control Stations

## Complete Support

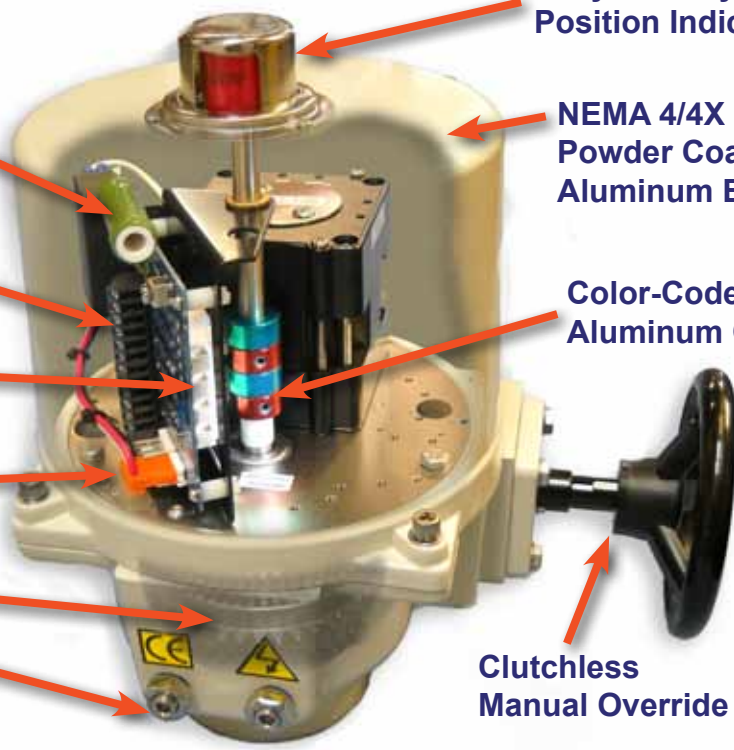
- Full Documentation
- Telephone Support
- Application Specific Solutions



**ProMation Engineering's full line of industrial actuators are designed and constructed to reliably meet the demands of industrial, municipal, and process installations and applications.**

### RuggedBoard Mounted Components

- Anti-Condensation Heater (Standard Equipment)
- Incoming Connections
- Form C Auxiliary and Limit Switches
- Single connection for motor control



Easy to see yellow/red Position Indicator

NEMA 4/4X Rated Powder Coated Aluminum Enclosure

Color-Coded Aluminum Cams

Clutchless Manual Override

Epicyclic Gearing  
 Mechanical End Stops

### RuggedBoard Design

Proprietary PC Boards with industrial grade components soldered into place eliminate 90% of the internal wiring found in most actuation products.

## Quarter Turn Actuators from 135 to 40,000 in lbs

				
<b>P1</b>	<b>P2~3</b>	<b>P4~6</b>	<b>P7~8</b>	<b>P9~13</b>
Torque Value: 135 in lbs~445 in lbs 15 Nm~50 Nm	Torque Value: 600 in lbs~1335 in lbs 67 Nm~150 Nm	Torque Value: 2200 in lbs~5750 in lbs 248 Nm~650 Nm	Torque Value: 8900 in lbs~13250 in lbs 1000 Nm~1500 Nm	Torque Value: 17500 in lbs~40000 in lbs 2000 Nm~4500 Nm

# Engineered for Installation Ease, Reduced Maintenance and Exceptional Reliability -- Backed by ProMation Customer Service

## RuggedBoard Means Reliability

RuggedBoard electronics increase reliability.

- Greatly reduces terminal block and crimped connections
- Reduction of excessive wiring
- Installation and maintenance are easier
- Reduces the potential for electromagnetic interference

## Industrial Grade Components

- All steel permanently lubricated gearing
- Industrial switches
- Thermally protected heavy duty motor
- Stainless steel hardware

## Highly Functional

- Clutchless manual override requires no levers or switches to engage handwheel
- Epicyclic gearing requires no motor brake.

## Field Compatibility

Reduced installation and set up problems.

- ISO 5211 mountings
- Easily accessible connection points
- Complete field installation documentation

## Customer Service

Telephones and emails promptly answered by our onsite experts to assist you at every step.

## Project Pricing

Working on a complex project? Let us assist you with actuator expertise and competitive project pricing.

## Partnering

ProMation has a network of responsive distributors and vendors worldwide. Contact us to see how ProMation aligns with your needs.

## Linear Actuators



**PL960~PL5300**  
Standard Location  
960 lbs~5300 lbs  
4.3kN~23.6kN



**PL960~PL5300**  
Hazardous Location  
960 lbs~5300 lbs  
4.3kN~23.6kN

## Mechanical Fail Safe Actuators



**D Series**  
45 in lbs~445 in lbs  
5 Nm~50 Nm





**PA~PD**  
445 in lbs~2300 in lbs  
50 Nm~260 Nm

## P Series Quarter Turn Actuators

Industrial actuators featuring epicyclic gear drives and RuggedBoard internal connections. All P Series actuators come with a standard anti-condensation heater, 2 auxiliary switches, clutchless manual override hand wheel and NEMA 4/4X/IP67 enclosure.



## Quarter Turn Actuators

Product Family	Torque Output		Draw (amps)	Actuator Run Time (sec)			Mounting Information		Height (in / mm)	Weight (lbs / kg)	
	in lbs	Nm		50Hz	60Hz	VDC	ISO 5211	8pt dbl-sq (female mm) 			
PZ6	55	6	0.3	11	8	8	F03 / F05	14	5 / 126	4 / 2	
PZ15	135	15	0.3	22	19	19	F03 / F05	14	5 / 126	4 / 2	
P1	300	35	0.6	13	12	15	F03 / F05	14	6 / 152	5 / 3	
P1.A	445	50	0.6	24	20	20	F05 / F07	17	9 / 196	7 / 4	
P1.B	135	15	0.6	10	8	8	F03 / F05	14	6 / 152	5 / 3	
P1.C	135	15	1.8A at 24VDC	--		3	F03 / F05	14	6 / 152	5 / 3	
P2	800	90	1.0	17	15	15	F07	22	11.4 / 289	26 / 12	
P3	1,335	150	1.2	26	22	22	F07	22	11.4 / 289	26 / 12	
P4	3,500	400	1.9	18	16	16	F10	35	12.5 / 317	47 / 22	
P5	4,400	500	2.0	25	22	22	F10	35	12.5 / 317	47 / 22	
P6	5,750	650	2.1	31	28	28	F10	35	12.5 / 317	47 / 22	
P7	8,900	1,000	3.1	55	46	46	F12	36	16 / 406	82 / 37	
P8	13,250	1,500	3.3	55	46	46	F12	36	16 / 406	82 / 37	
P9	17,500	2,000	3.3	70	58	--	F16	75 x 100mm		21.8 / 554	145 / 66
P10	22,000	2,500	4.0	70	58	--	F16	75 x 100mm		21.8 / 554	145 / 66
P11	26,500	3,000	4.5	70	58	--	F16	75 x 100mm		21.8 / 554	157 / 72
P12	31,000	3,500	4.0	70	58	--	F16	75 x 100mm		21.8 / 554	157 / 72
P13	40,000	4,500	4.2	95	80	--	F25	72 x 110mm		22.5 / 571	240 / 109

Running Amps: 120VAC @ 60Hz. Actuator Run Times are given for 120VAC and 12 and 24 VDC.

P9~13 have round female receiver with keyways

Shipping weight

### Voltage Options

Low Voltage Modification	P1-6	12 vac or 24 vdc
Low Voltage Modification	P1-8	24 vac or 24 vdc
3 Phase Modification	P2-8 P9-13	3 Phase 230V, 315V, 380V, 440V, or 480V (does not include MCC)

### Control Options

Proportional Control -P	P1, P1.A	Standard Controller 24 vac, 120 vac or 230 vac
Proportional Control -P	P2-13	Premium Controller 24 vac 120 vac or 230 vac, three phase

### Options with Product Suffix (Factory Installed Only)

-ED	P1, P1A, P2-8	Extended Duty Motor, 120 vac or 230 vac only 75% Duty Cycle - On/Off/Jog
-ED	P9-13	Extended Duty Motor, 120 vac or 230 vac only 50% Duty Cycle - On/Off/Jog
-RO	All but 1.B, P1.C, PZ	Single Wire Control Relay (Internal) Units. NORMALLY CLOSED - ENERGIZE TO OPEN.
-RC	All but 1.B, P1.C, PZ	Single Wire Control Relay (Internal) Units. NORMALLY OPEN - ENERGIZE TO CLOSE.
-TS	P2-8, P9-13	Torque Switch Assembly (On/Off/Jog or Select Proportional Controllers)
-MCC*		Motor Control Center for 3 Phase Voltage
-68	P2-8	IP68, tested to 0.7kgf/cm <sup>2</sup> for 72 hours.

Not all combinations of options are available.

\* Remote mounted MCC and LCS units are the only field mountable Options or Accessories -- customer required to make field connections.

## P Series Options and Accessories

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



## Options and Accessories

### Options specific to P1 Series (Factory Installed Only)

MOD 0-45-90 DEG	Modify actuator 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	Modify actuator 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	Modify actuator for 0-180° rotation. Available on On/Off/Jog models only.
OPT-COLD P1 HV	Cold weather PTC (positive temperature coefficient) auxiliary heater kit. Factory installed, 120 VAC or 230 VAC On/Off/Jog type actuators. 10 W Internal Heater.
OPT-P1-1K	1kΩ Feedback Option. Factory installed option consists of a 1kΩ position feedback potentiometer connected to a convenient 3 terminal block.
OPT-P1-5K	5kΩ Feedback Option. Factory installed option consists of a 5kΩ position feedback potentiometer connected to a convenient 3 terminal block.
OPT-P1-10K	10kΩ Feedback Option. Factory installed option consists of a 10kΩ position feedback potentiometer connected to a convenient 3 terminal block.
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. (Contact factory for application assistance)
OPT-LCS-ALL	Local Control Stations. See page 11 for a complete listing of all Local Control Station solutions

### Options common to P2-13 (Factory Installed Only)

MOD 0-45-90 DEG	0-45-90° rotation.
OPTION-X	3rd and 4th Auxiliary Switch set
OPT-P213-1K	1kΩ Feedback Option. Factory installed option consists of a 1kΩ position feedback potentiometer connected to a convenient 3 terminal block.
OPT-P213-5K	5kΩ Feedback Option. Factory installed option consists of a 5kΩ position feedback potentiometer connected to a convenient 3 terminal block.
OPT-P213-10K	10kΩ Feedback Option. Factory installed option consists of a 10kΩ position feedback potentiometer connected to a convenient 3 terminal block.
OPT-TIMER-LI-P213	Timer set for duration and frequency to slow cycle time. (Contact factory)
OPT-COLD-P213	Cold weather auxiliary heater. On at 0°C (+32°F), off at 10°C (+50°F).
OPT-420FB-24A-P28	4-20mA feedback generator for On/Off/Jog, 24 VAC, 24VDC, 120 VAC or 230 VAC

### P7 Controlling Chiller Flow



### P2-120PN4 Quarter Turn Actuator

### Options specific to P2-8 (Factory Installed Only)

MOD 0-90-180 DEG	0-90-180° rotation.
MOD 0-180 DEG	0-180° rotation. On/Off only.

## P2-8 Series Explosion Proof Quarter Turn Actuators

Industrial actuators featuring epicyclic gear drives and RuggedBoard internal connections. All P2-8 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)
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	2.2	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

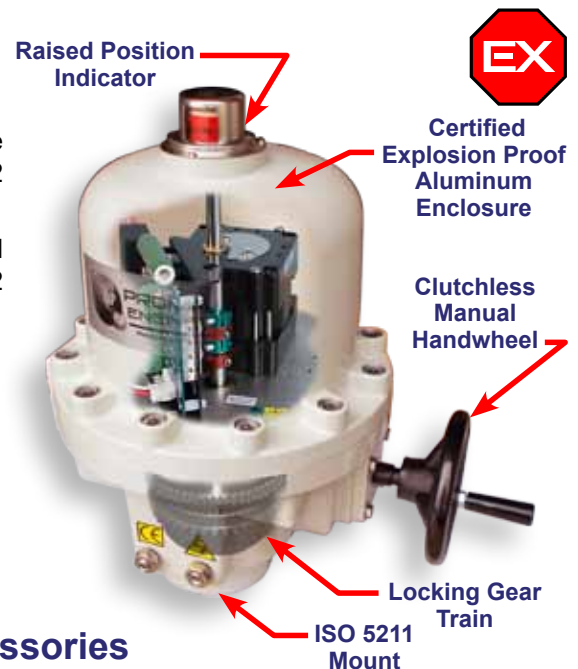
Actuator Run Times and Running Amps: 120VAC @ 60Hz.

## 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  
Zone 21, AEx tb IIIC T85°C Db**



## P2-8 Series 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 application assistance.

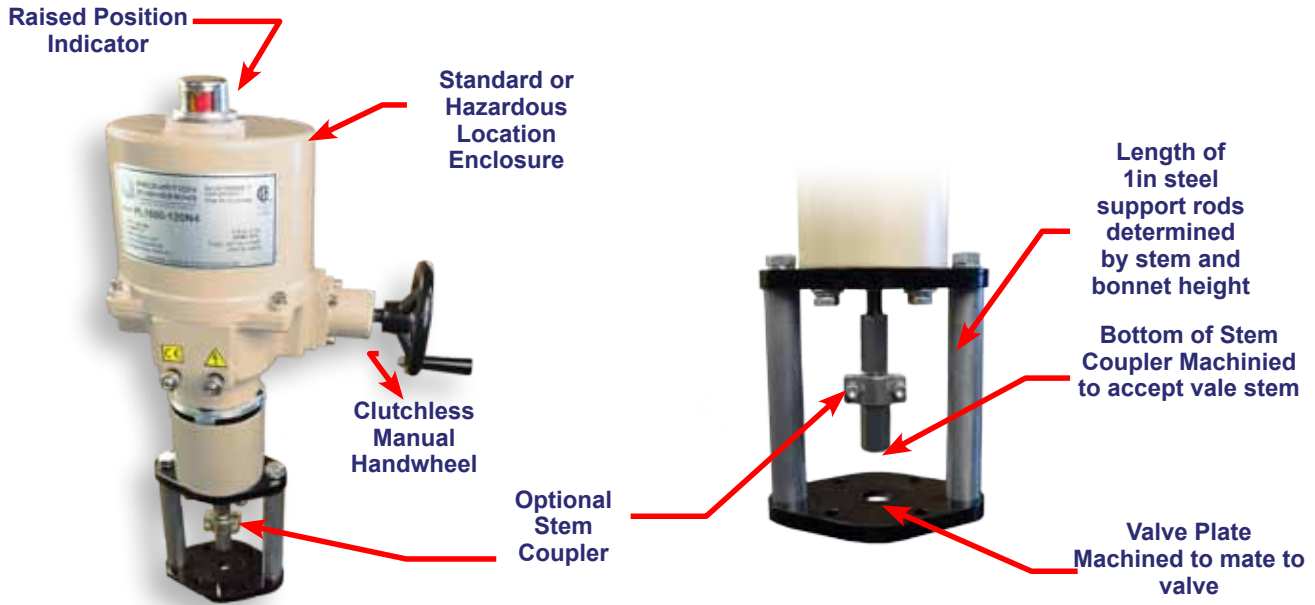
### N7 Specific Options P2-8 (Factory Installed Only)

Low Voltage Modification	24 vac or vdc
High Voltage Modification	230 vac Single Phase
Proportional Control -P	ProMation Premium Proportional Controller 24 vac, 120 vac or 230 vac
-TS P2-8	Torque Switch <b>(Not available for P2/3 with Premium Proportional Control)</b>
MOD 0-45-90 DEG	0-45-90 degree rotation.
OPTION-X	3rd and 4th Auxiliary Switch set
MOD 0-90-180 DEG	0-90-180 degree rotation.
MOD 0-180 DEG	0-180 degree rotation. On/Off only.

## Linear Actuators

Designed for use on rising stem control valves, PL Series actuators provide up to 5300 lbs. (23.6kN) 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 (in/mm)	Speed		Force		Wgt* (lbs/kg)		Height* (in/mm)	
		mm/sec	in/sec	lbs	kN	Standard	Harzardous	Standard	Harzardous
PL960	2/50	1.1	0.044	960	4.3	39/18	60/28	16.4/417	19.3/489
PL1600	2/50	0.8	0.030	1600	7.1	39/18	60/28	16.4/417	19.3/489
PL4200	2/50	1.0	0.041	4200	18.7	44/23	65/33	17.4/442	20.4/519
PL5300	2/50	0.8	0.030	5300	23.6	44/23	65/33	17.4/442	20.4/519

\* without linkage

### Options common to PL Series (Factory Installed Only)


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 +32°F, off at +50°F. (Contact factory)
OPT-P-5K	Potentiometric Feedback Option. Factory installed 1, 5 Or 10kΩ position feedback
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. See page 11 for a complete listing of all Local Control Station solutions

## 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-declutchable manual override handwheel. Specify **CW** or **CCW** model when ordering, they are not interchangeable. The PA-D Series actuators are available Standard or Hazardous (Class 1 Division 1) location enclosures



## Fail Safe Solutions

Product Family	Torque Output		Draw (amps)	Actuator Run Time (sec)			Spring Return Time (sec)		Mounting Information		Height (in / mm)	Weight (lbs / kg)
	in lbs	Nm		50Hz	60Hz	VDC	120V / 230V	24V	ISO 5211			
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	23 / 577	209 / 95
<b>With Manual Override</b>												
PAO	445	50	1.0	9	7	7	3	3	F07	17mm	21.1 / 535	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

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

8pt dbl-sq (female mm)

Shipping weight

### 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 (24V 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

## 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 (lbs/kg)
D2-310S4-0	45/90	5/10	3/15/30/60/120	3 or 10 (Sel)	On/Off/Jog	3.15 / 80	10 / 5
D2-310S4-2	45/90	5/10	3/15/30/60/120	3 or 10 (Sel)	On/Off/Jog w/ Aux	4.72 / 120	11 / 5
D2-P310S4-0	45/90	5/10	3/15/30/60/120	3 or 10 (Sel)	Proportional	3.15 / 80	10 / 5
D3-310S4-0	133	15	3/15/30/60/120	3 or 10 (Sel)	On/Off/Jog	3.15 / 80	10 / 5
D3-310S4-2	133	15	3/15/30/60/120	3 or 10 (Sel)	On/Off/Jog w/ Aux	4.72 / 120	11 / 5
D3-P310S4-0	133	15	3/15/30/60/120	3 or 10 (Sel)	Proportional	3.15 / 80	10 / 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
D4-P20S4-0	265	30	40/60/90/120/150	20 (Fixed)	Proportional	4.57 / 116	24 / 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
D5-P20S4-0	445	50	40/60/90/120/150	20 (Fixed)	Proportional	4.57 / 116	24 / 11

Shipping weight



## Power Backup Units (PBU) for Electric Fail Safe

PBU's 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 a NEMA 4/4X enclosure. Some assembly is required and customer is required to make field connections.



## Fail Safe Solutions

	Part Number	For Actuator Series	Output Voltage	Required Supply Voltage	Replacement Battery	Height (in/mm)	Weight (lbs/kg)
On/Off/Log Solutions	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
	PBU505-120-4	PL550 / 1100	120 vac	120 vac	RBC-35	16.04 / 407.4	30 / 14
	PBU505-230-4	PL550 / 1100	230 vac	230 vac	RBC-35	16.04 / 407.4	30 / 14
	PBU505-24A-4	PL550 / 1100	24 vac	120 vac	RBC-35	16.04 / 407.4	45 / 20
	PBU506-120-4	PL2200 / 4400	120 vac	120 vac	RBC-35	16.04 / 407.4	30 / 14
	PBU506-230-4	PL2200 / 4400	230 vac	230 vac	RBC-35	16.04 / 407.4	30 / 14
	PBU506-24A-4	PL2200 / 4400	24 vac	120 vac	RBC-35	16.04 / 407.4	45 / 20
Proportional Solutions	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 / 20
	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
	PBU606-120P-4	PL550 / 1100 / 2200 / 4400	120 vac	120 vac	RBC-35	16.04 / 407.4	30 / 14
	PBU606-230P-4	PL550 / 1100 / 2200 / 4400	230 vac	230 vac	RBC-35	16.04 / 407.4	30 / 14
PBU606-24AP-4	PL550 / 1100 / 2200 / 4400	24 vac	120 vac	RBC-35	16.04 / 407.4	45 / 20	

Proportional Signals can be 2-10 vdc OR 4-20 mA and are field selectable.  
230 vac versions not available in PBU100 or PBU600.

### PBU102-120P-4 Power Backup Units



### Options common to PBU Series (Factory Installed Only)

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

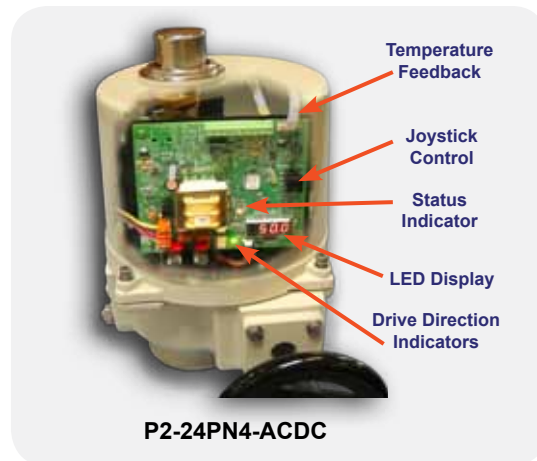
## Process Control Options

ProMation Engineering offers a wide range of control for nearly all products. From On/Off products, 2 Wire Control, and Feedback Kits to communication options and proportional control -- the features you need are available for your product.

**Premium Controller** Full proportional control utilizing multiple input and feedback signals. Features an alphanumeric readout, several fault indicators for operational diagnostics and extensive on board data logging. It has autocalibration for fast accurate setup and a simple intuitive interface for programming. ModBus communications are also an option on this controller.

### Proportional Control Featuring:

- Autocalibration
- Programmable
- High resolution
- Alarm Outputs
- Data logging
- Simple User Interface
- Thermal Management



## Proportional Solutions

Control Options for the P2~13 Series:

- 4-20 mA, 0-10vdc, 2-10vdc, 1-5vdc Input and Feedback
- Modbus Communication
- Profibus Communication
- Separate Feedback Circuit
- Local Control Station options available

## On/Off/Jog Solutions

Control Options for the P2~13 Series:

- 2 Wire Control
- Potentiometric or 4-20 Feedback
- Rotation modifications
- Wireless Transmitter
- Local Control Station options available

## PreWired

Both On/Off and Modulating actuators can be Pre-Wired with a 10 conductor 16 AWG cable for power and auxiliary switch monitoring for On/Off and modulating control and a 4 conductor 18 AWG shielded cable for incoming and return control signals for modulating control.



35ft of PreWire with quick disconnects Option on a Modulating P3

## Wireless Control

The Wireless Control option allows control of On/Off actuators with a range of up to 1000 ft. The control can be hand operated from a key fob, or a timer function started by the key fob or other wireless signal. Local control stations can be integrated to provide local control independent of the wireless signal.



P4 with LCS and Wireless Option

## Local Control Stations (LCS)

ProMation LCSs are designed to be remotely located or directly mounted to the actuator. Standard with NEMA 4 steel enclosure, also available with NEMA 4/4X stainless or fiberglass enclosures. Customer is required to make field connections. **Customers with proportional actuators specify when ordering: 4-20mA or DC 2-10 V control.**



LCS Model	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK
<b>for Product</b> →	All	All	All	All	All	P1,PA	P2-13	P1,PA	P2-13	P1,PA	P2-13
For On/Off/Jog Actuators Only	X	X	X	X							
For Proportional Actuators Only					X	X	X	X	X	X	X

### Standard LCS Component Features common to LCS models listed (Factory Installed Only)

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

### Local Control Station Options

ProMation can configure Local Control Stations 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 the factory for application assistance.

Option	Description
Actuator Type	Nearly all our actuators can be optioned with a Local Control Station (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 12vac/vdc, 24 vac/vdc, 120vac, 230vac, 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	4-20mA 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 blocks, and enclosures.

# Product Family Matrix

The ProMation Family of actuators has a specific customized solution to meet most users needs. This matrix gives a quick overview of the entire line at a glance. Please contact a factory representative with questions or to request a quote for your specific application.

Product Family	Torque Output		Voltage Options				3 Phase Options	Control		Environment					
	in lbs	Nm	12 AC	24 DC	120 AC	230 DC		On/Off/ Jog	Proportional	Standard	Premium	Local Control Stations	NEMA 4/4X/IP67	IP 68	Explosion Proof (Gas)
<b>Quarter Turn Actuators</b>															
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			✓	✓	✓	✓		✓	✓	✓			
<b>Spring Return Actuators</b>															
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		✓	✓
<b>Linear series</b>															
	<b>Force lbs</b>	<b>Force kN</b>													
PL960	960	4.3		✓	✓	✓	✓	✓		✓	✓	✓		✓	✓
PL1600	1600	7.1		✓	✓	✓	✓	✓		✓	✓	✓		✓	✓
PL4200	4200	18.7		✓	✓	✓	✓	✓		✓	✓	✓		✓	✓
PL5300	5300	23.6		✓	✓	✓	✓	✓		✓	✓	✓		✓	✓

✓ Options available

④ Only available with NEMA 4 Enclosure