



# PROMATION ENGINEERING

Precision Actuation for Industry

Data Sheet

## PZ6, PZ15 Series

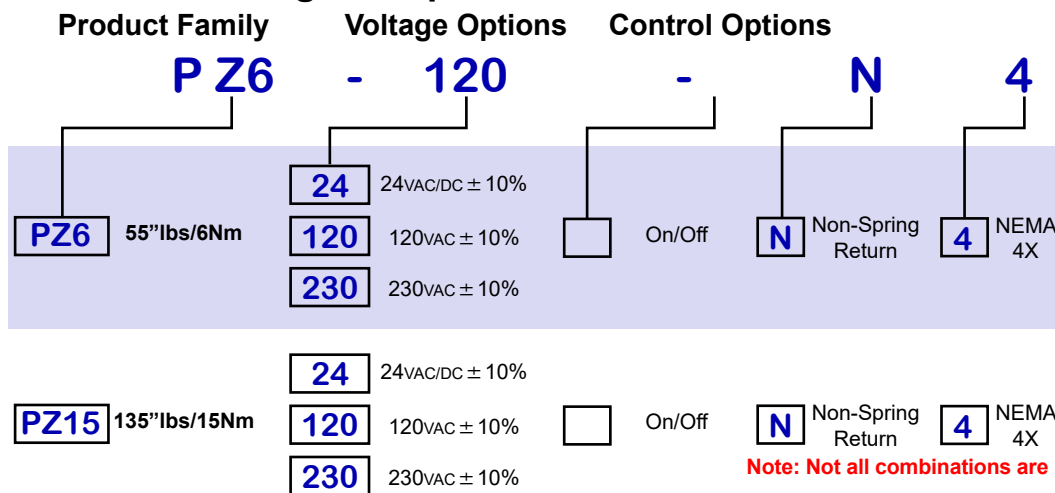
On/Off/Jog  
ISO5211 F03/F05 8P14

Actuator Specifications	PZ6			PZ15		
Torque "lb/Nm	<b>55"lbs/6Nm</b>			<b>135"lbs/15Nm</b>		
Supply Voltage	24vac/ dc	120vac	230vac	24vac/ dc	120vac	230vac
Max Inrush Current	1.5A	0.4A	0.3A	1.5A	0.4A	0.3A
Running Current	1.1A	0.3A	0.2A	1.1A	0.3A	0.2A
Motor	Synchronous AC			Synchronous AC		
Runtime (90°@60Hz/vdc)	8 sec			17 sec		
Runtime (90°@50Hz)	11 sec			20 sec		
Duty Cycle	25%					
Motor Starts	1200 per hour					
Weight	4lbs/2kg					
Mechanical Connections	ISO5211 F03/F05 8pt 14mm					
Electrical Entry	1/4" PF Gland					
Electrical Terminations	1m 6c 18ga connection lead					
Environmental Rating	NEMA 4/4X					
Manual Override	OVD Tool (provided)					
Control	On/Off/Jog <b>ONLY</b>					
Actuator Case material	Aluminum Alloy, Powder coated					
Motor Protection	230°F/110°C Thermal F* Class *Totally Enclosed Non-Ventilated Motors					
Ambient Temperature Operating Range	-22°F to +125°F -30°C to +52°C					



The PZ6 and PZ15 are compact electric actuators designed for load requirements up to **55"lbs** and **135"lbs** respectively. They are compact actuator designed for small space areas. The PZ series has a NEMA 4/4x environmental rating, comes standard with an ISO5211 F03/F05 mounting pattern and a 14mm double-square female drive shaft -- making either one an ideal actuator for small valve and damper applications. Available in 24vac, 120vac and 230vac supply voltages, the PZ6 and PZ15 are available **ONLY** as on/off (two position) models that can also be used in bump/jog applications. Auxiliary switches, heaters, and proportional control cards are not available in this series.

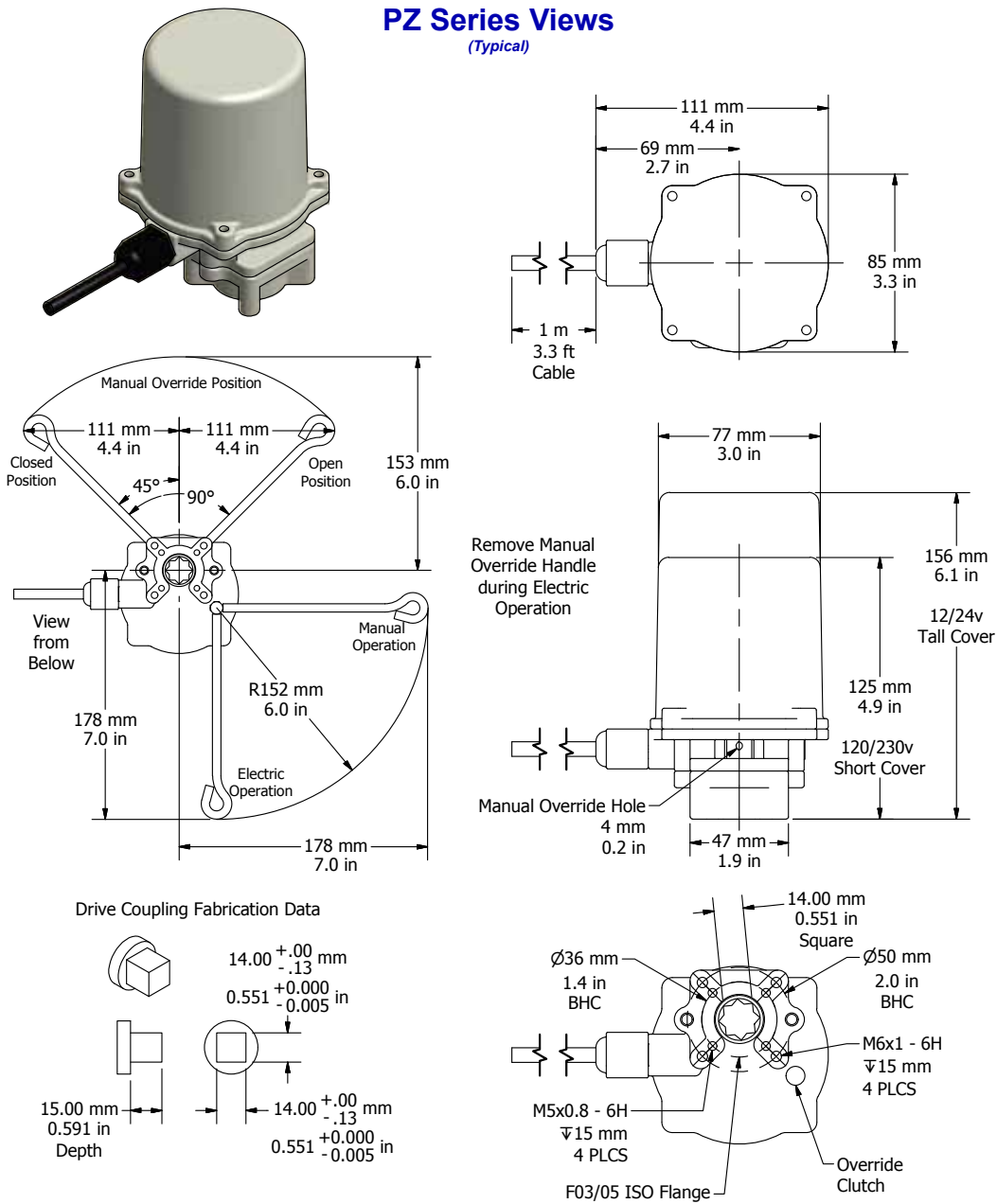
### Product Ordering Example:



SD\_PZ6/15\_Ver O\_031920

# PZ Series Dimensional Data

## PZ Series Views (Typical)

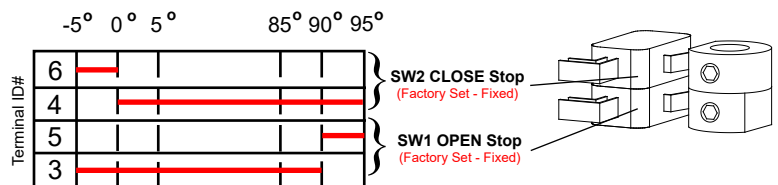


### Application Notes:

1. These actuators are designed to be used in either a horizontal or upright position. Do NOT mount the actuator with the top below a horizontal position.
2. 1/4" PF conduit gland MUST be used to protect the NEMA 4X integrity of the housing.
3. Use proper wire size to prevent actuator failure (see chart on page 3 for proper wire sizing).
4. There are no mechanical stops to set.

Switch sequencing data is provided in the table below to show the change-of-state points during the rotation of the actuator from OPEN to CLOSED and back again. Switches for terminals 3 thru 6 are set at the factory and should NOT be changed.

### Switch Logic Map and Switch/Cam Arrangement



# Wiring Diagrams for PZ Series

## On/Off/Jog Control

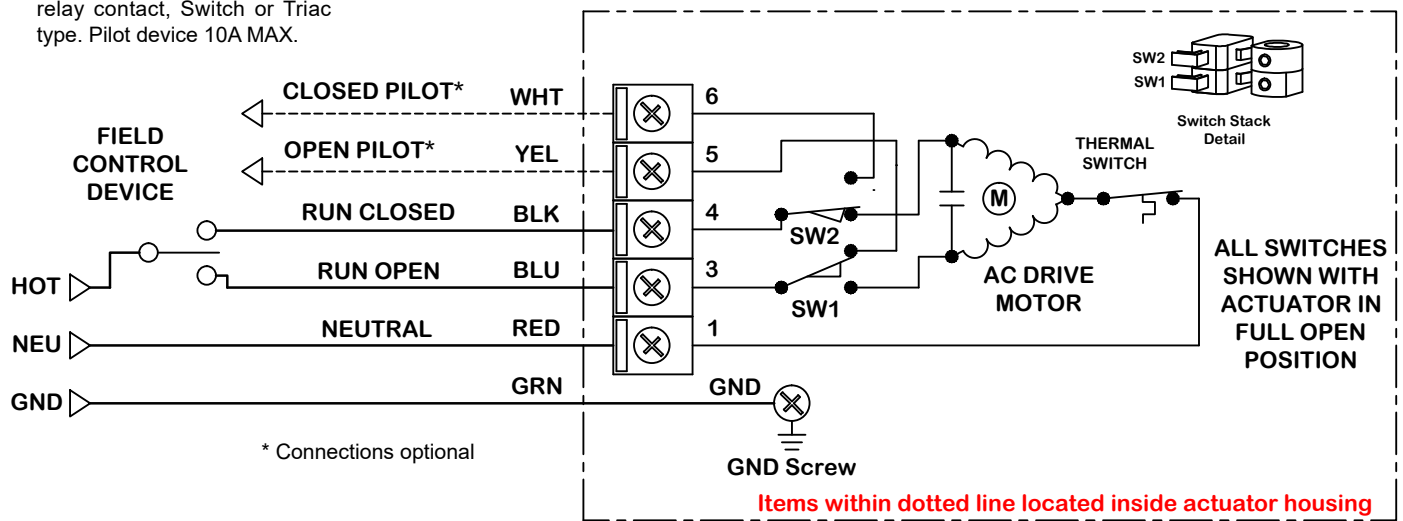
### SAMPLE DIAGRAM

Refer to the proper IOM for your actuator for the correct wiring diagram or visit [www.promotionei.com](http://www.promotionei.com).

Field Control Device may be relay contact, Switch or Triac type. Pilot device 10A MAX.

### PZ Series 120N4 Wiring Diagram

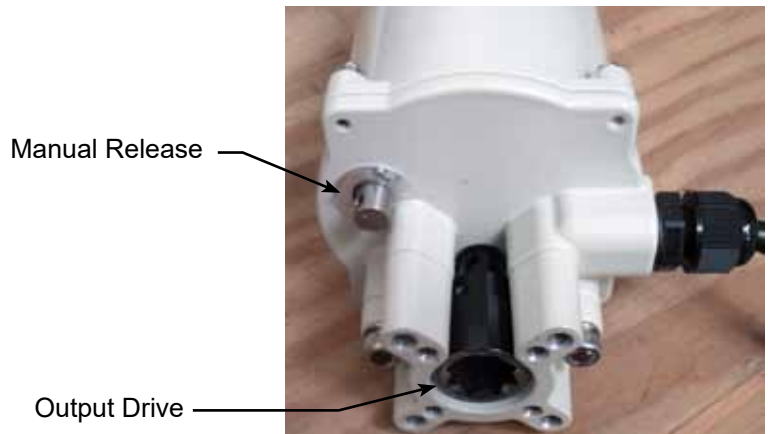
Please Note 24VDC is negative switched



### Wire Sizing Data

MAX distance between Actuator and Supply (feet)			
Actuator/ Voltage Amps	PZ6/P15 24VAC/ DC	PZ6/P15 120VAC	PZ6/P15 230VAC
Wire Gage	1.5A	0.4A	0.3A
18	110	2066	5280
16	173	3247	8297
14	280	5245	13403
12	428	8021	20499

Wire sizing data is provided in the table above to assist in the selection of the proper wire size for ProMation PZ Series actuators using various wire sizes over distance. Please make sure to reference the correct voltage and do not exceed the indicated length of the wire run for each model.



The manual release protects the motor during manual override operations. The mounting system is ISO 5211 compliant with a 14mm double square drive.



The manual override tool in use (shown in the CLOSED position).

**DO NOT operate the actuator under power with the override tool installed. Cams set at other than factory settings will damage the override tool if left in place while the motor is driving.**



For sizing reference, the PZ6/PZ15 is shown mounted onto a 3/4" 3 piece SS body ball valve. The ISO5211 F03/F05 pattern provides for direct mounting onto ISO compliant valves, and the 14mm double-square drive socket easily adapts to various stem patterns through the use of available drive inserts.

## ProMotion Product Line



**PL Series Linear Drive**

Up to 4400lbs down/up force and up to 100mm (4") stem travel for globe valves, gate valves and linear travel devices. With override handwheel. Available with On/Off/Jog or Proportional control for 24vac, 120vac & 230vac supplies.



**P Series Non-Spring Return**

55"lbs through 40,000"lbs. Quarter-Turn, w/ manual Override Available with On/Off/Jog or Proportional control for 12vac/dc, 24vac/dc, 120vac, 230vac, 230v/3 phase, 380v/3 phase & 460v/3phase supplies.



**PA~PD Series Spring Return**

450"lbs through 2300"lbs. Quarter-Turn, both with and w/o manual override handwheel. Spring either CW or CCW Available with On/Off or Proportional control for 24vac/dc, 120vac & 230vac supplies. Stepdown for 3ph available.



**PBU Battery Back-Up Systems**

Provides power sufficient to drive P Series actuators to field-selectable fail-safe positions. For P Series & PL Series actuators in On/Off and Proportional control modes Available for 24/120vac actuators. Requires 120vac supply.

SD\_PZ615\_Ver O\_031920

ProMotion Engineering follows a policy of continual product updates and enhancements. Our website is the best place to obtain the latest product documentation, including the wiring diagrams for these controllers.

Visit us at [www.promotionei.com](http://www.promotionei.com) or use the code to link to the site.



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