

MODEL 218 DC BRUSHLESS LINEAR ACTUATOR



Due to its extremely small size, light weight and reasonable cost, the Model 218 DC brushless linear actuator is ideally suited for manipulators, control surfaces, tool packages, pan & tilts and a variety of other subsea applications. The Model 218's reliability has been proven over many years service in the worlds harshest offshore environments.

Delivering 115kg of force at variable speeds to 50mm per second, the Model 218 linear actuator requires only 250 watts of input power and weighs 1kg in water. The Model 218 is available with stroke lengths of 100mm and 200mm and, due to its small size, it can be installed in systems as a replacement for hydraulic actuators.

The 850 meter, 1,500 meter and 3,000 meter versions of the Model 218 linear actuator fit the pressure tolerant control electronics module within the actuator housing. The full ocean depth version requires that the electronics module be installed in a customer furnished 1-atmosphere housing (or Tecnadyne can furnish a suitable 1-atmosphere housing).

The Model 218 is available to operate from voltages ranging from 24vdc to 300vdc (150vdc standard) supplied by a well filtered battery bank, rectified and filtered AC or a DC power supply. The rate of stroke is controlled with a 0-5v analog speed control signal. Alternately, the motor can be wired so that it operates at full speed only when the main power is applied, which reduces the control and connector complexity in some installations. Also, a full servo RS232 or RS485 input controller is available but this must be installed in a remote, one atmosphere housing. Please refer to the Tecnadyne website for detailed installation and interface instructions.

The Model 218 employs a high efficiency ball screw that has virtually no backlash. If zero backlash is required, an optional, hand fitted ball screw and nut assembly is available. The unit can also be fitted with external limit switches which can be adjusted so that the available stroke length is within that allowable limits of the equipment being actuated.

The external housings of the Model 218 linear actuator are manufactured from hard anodized aluminum, Delrin plastic and Type 303 stainless steel. The unit is oil filled and has a pressure compensator to adjust for volume changes with depth and as the rod is extended and retracted.

Optional housing materials include stainless steel and titanium. Customer specified connectors can be supplied. The unit is available on special order with alternate stroke lengths, although strokes longer than 200mm reduce the maximum force of 115kg. For larger actuators, please consult the Tecnadyne website.

MODEL 218 SPECIFICATIONS

Output

250lbf (115kg) force
4in (100mm) stroke or
8in (200mm) stroke
0-2in (0-50mm) / second
rate

Input

150vdc, 1.5A power
(250 watts at alternate
voltages)
12vdc, 200mA isolated
instrumentation power
+/-5v analog speed
command

Weight

3.0lb (1.4kg) in air
2.1lb (1.0kg) in water

Depth Rating

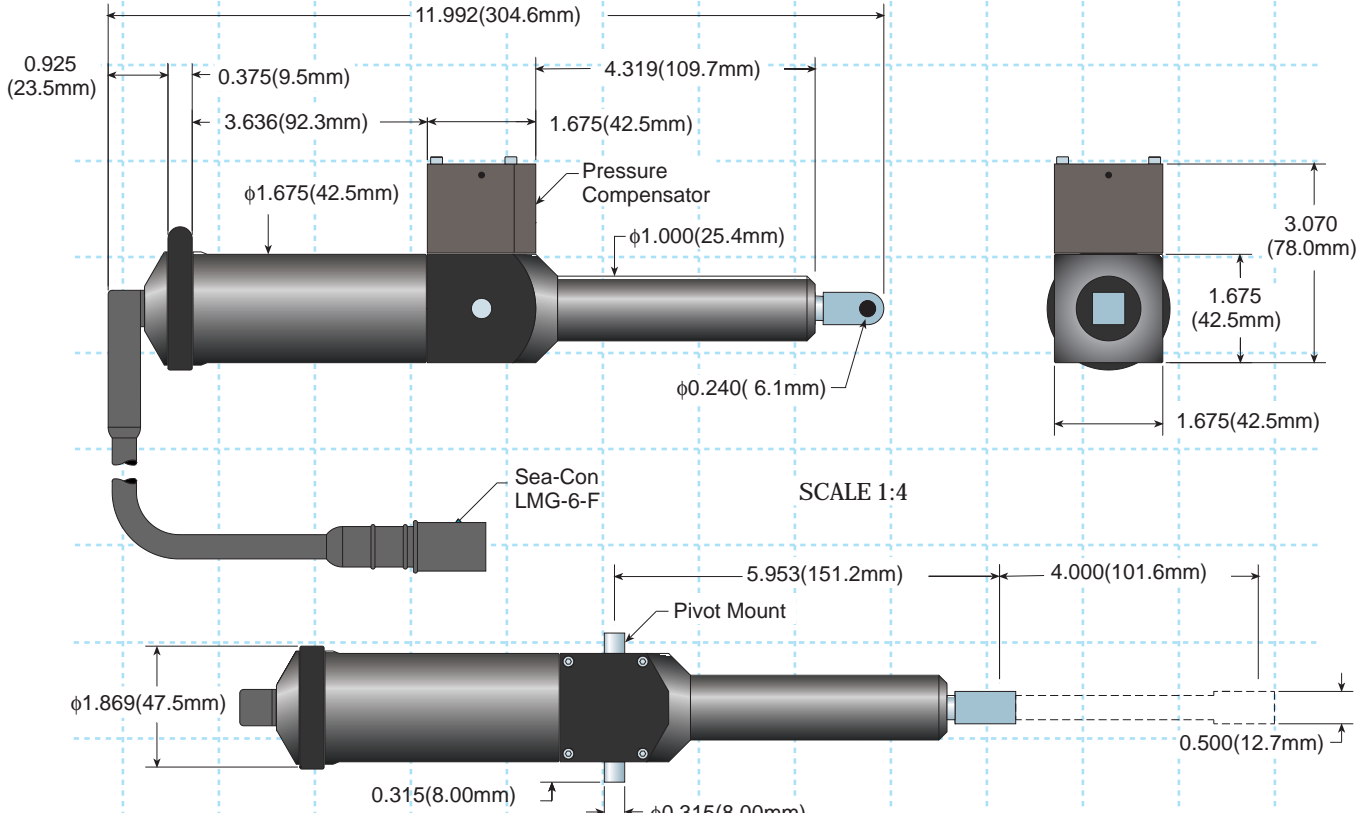
2,750ft (850m) standard
5,000ft (1,500m),
10,000ft (3,000m) & full
ocean depth (oil filled)
optional

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Part Number: 218 -

- (24-28vdc) 024
- (48-55vdc) 048
- (68-75vdc) 070
- (85-95vdc) 090
- (100-110vdc) 105
- (145-165vdc) 150
- (200-220vdc) 210
- (250-280vdc) 260

- 4 (100mm stroke)
- 8 (200mm stroke)
- 0850 (850m depth)
- 1500 (1500m depth)
- 3000 (3000m depth)
- OFRE (oil filled remote electronics)
- M (SeaCon MCBH-5M)
- F (SeaCon FAWL-5P-BC-RA)
- Ln (SeaCon LMG-6FS w/ cable length of n meters)
- Mn (SeaCon LMG-6MP w/ cable length of n meters)
- X (Customer specified connector)



Note: Due to motor tolerances, voltage required to achieve rated performance can vary +/-5%

Specifications subject to change without notice