

"Smart" Shutter

Functional Design Requirements

1. The shutter must minimize bio fouling of it's sensor head.
2. Electronics shall allow the motor to Open/Close the shutter
3. The Open/Close process shall take no more than 40 seconds
4. The Open/Close process shall not occur more often than every 10 minutes
5. The shutter shall not occlude the optical window of the sensor
6. The shutter must fit in the mooring elevator cage
7. The shutter must survive a deployment duration of 1 year.
8. The shutter must withstand a depth of 20m.
9. The shutter must be compatible with both the old OASIS and new mooring controllers.
10. The shutter should be controlled via a serial (either RS-232 or RS-485) 9600-8-N-1 data stream.
11. The shutter should run off of a 12V battery (15V max.)
12. The shutter must consume no more than 2A (nominally 0.5A).
13. The shutter must be able to be power cycled while deployed.
14. The shutter must run in a temperature range of 0°F to 90°F.