

D3 Ruggedized Camera System: Dust Tight Test Plan

Dust Tight Test

This is a test on the enclosure's and seal's capability to completely protect the enclosed components from the ingress of dust; in other words, it's ability to meet the Ingress Protection Rating 64 (IP64) for solid materials. The test will be conducted by submerging the sealed enclosure in shallow pool of water. The shallow pool of water is defined as having a depth 10mm greater than the height of the enclosure (40.5mm total depth). All components will be removed from within the enclosure before the beginning of the test and the BNC connector mounting hole will be sealed. At the beginning of the test, the enclosure should be placed securely at the bottom of the water tub. When submerged, the enclosure should prevent the formation of air bubbles near the seals for at least 30 minutes; the formation of air bubble around the seals before 30 minutes will be taken as proof that the seals are ineffective at protecting the components from dust.

Start Date: _____

Finish Date: _____

Engineer conducting test: _____

Assistant: _____

Conditions:

- Ambient Temperature: _____
- Humidity: _____
- Other: _____

Observations:

- Visual defects before test?: Yes No
- If yes, explain: _____

Equipment:

- Large Water Tub
- If other, please specify: _____

Test:

1. Submerge Test

- a. Water Depth: _____
- b. Water Temperature: _____
- c. Start time of test: _____

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i. Formation of bubbles at Front/Rear Seal? Yes No
If yes, specify time and comment: _____

ii. Formation of bubbles at Filter Seal? Yes No
If yes, specify time and comment: _____

iii. Formation of bubbles at Connector Seal? Yes No
If yes, specify time and comment: _____
