

DSU-33D/B Proximity Sensor



An All-Weather, Single-Mission Sensor Capable of Operating in ECM Environments

The DSU-33D/B Proximity Sensor is an all-weather, battery operated, active, radio frequency, ranging radar. It is a single-mission device capable of operating in an electronic countermeasure environment.

The sensor mounts on and provides a proximity function for the MK 80 and M117 series general purpose bombs.

The sensor is capable of both high- and low-drag releases and meets the unique requirements of the U.S. Air Force and Navy.

For the Air Force and Navy, bombs are equipped with a FMU-139/B or FMU-152/B Bomb Fuze, a FZU-48/B or FZU-55/B Bomb Initiator, and a filtered power cable assembly.

Mix-and-match combinations of fuze, sensor, and initiator provide a lower cost alternative to fuze/sensor in one hardware package.

The DSU-33D/B has passed the appropriate environmental tests of MIL-STD-331 and MIL-STD-801.D-801.

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DSU-33D/B Key Benefits

Safety

Provisions for both ground and in-flight safety are incorporated as integral design features to ensure that the sensor will operate the fuze only under specific and selected conditions.

Reliability

- Advanced electronics technology
- Solid-state circuit design
- Highly reliable parts
- Extensive testing during all production stages

Accuracy

- Multiple drop configurations
- Sensor processor signal returns from the weapon release all the way to the ground
- When jamming occurs, the ground signal overcomes the jamming signal and initiates an above-ground burst
- When no jamming is present, the sensor provides a very accurate height of burst

Performance Characteristics

Airspeed	250 to 700 KCAS
Delivery altitude	200 to 50,000 ft
Power supply	Battery-initiated by FZU-48 Initiator, FMU-152/B Fuze, FZU-55/B Initiator, or Navy FFCS
Height of burst	14 to 26 ft (2 sigma factory requirement)
Closing velocity for fuzing	75 to 1,400 ft/sec
Weight	Under 5 lb
Reliability	95% after 10 yr
Delivery modes	<ul style="list-style-type: none">• Drop: Single or multiple• Salvo: 6 bombs simultaneous release• Ripple: 24 bomb release• LOFT/TOSS and lateral TOSS• Dive angles: +45° to -60° referenced to horizontal• High or low drag
Operational life	200 sec minimum
Shelf life	10 yr minimum
Service life	5 yr minimum cumulative days outside storage and assembled in a warhead

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