



THE VALUE OF PERFORMANCE.

**NORTHROP GRUMMAN**

## **FMU-139 D/B Bomb Fuze System**

**A**n upgrade from its predecessor, the FMU-139 D/B is a reliable and versatile advanced electronic bomb fuze system designed for high-explosive bomb series. Providing outstanding operational flexibility, the system combines legacy arm and function delay programming methods with new cockpit programming, an improved operating life of 300 seconds (minimum), an updated booster pellet explosive, improved hard target impact survivability and additional Electro Static Discharge (ESD) protection. Safety features include dual independent launch signals (FFCS application), environmental sensing (continuous power application), automatic retard deceleration sampling, an internal self check for arm/safe conditions and it is highly tolerant of power brownout events in high altitude drops.

### **Applications**

The FMU-139 D/B fuze system design is compatible with all U.S. Navy, Air Force and Marine Corps aircraft.

In the U.S. Navy application, power is transmitted to the fuze from the Fuze Function Control Set (FFCS) through the MK-122 arming safety switch upon release from the aircraft.

In the U.S. Air Force and Navy application, power is provided by the FZU-48 A/B air-driven turbine alternator which is lanyard-activated upon release from the aircraft. This version is also the choice of most international users.

### **Product Configuration and Benefits**

#### **Configuration**

Fuze and FZU Pack-Out:

- FMU-139D/B fuze; closure ring; FZU-48A/B bomb fuze initiator; power cable
- Packaged together in sets of six (6)

Fuze Pack-Out:

- FMU-139D/B fuze; closure ring; connector plug with warning label
- Packaged together in sets of nine (9)

#### **Benefits**

- Compatible with all U.S. Air Force, Navy and Marine Corps aircraft
- All arming and detonation event functions included in a single fuze
- Impact penetration survivable for penetrating bomb applications
- Operates through power brown-out events up to 20 seconds
- Solid-state circuitry / no moving mechanical parts
- In-line explosive train
- Passed safety requirements and environmental tests (MIL-STD-1316; MIL-STD-331; MIL-STD-801)

## Key Performance Characteristics

Parameter	FFCS Mode: (U.S. Navy)	Continuous Power Mode: (U.S. Air Force & U.S. Navy)
Weight:	3.36 lb (1.5 kg)	3.36 lb (1.5 kg)
Length:	7.81 in (198.4 mm) max	7.81 in (198.4 mm) max
Diameter:	2.89 in (73.4 mm) max	2.89 in (73.4 mm) max
Power supply:	FFCS at release	FZU-48A/B air driven turbine
Mission duration:	Up to 300 secs	Up to 5 Minutes
Storage life:	20 years	20 years
Service life (out of container):	10 years	10 years
Arm Times:		
Retarded mode	2.6 secs	2.6, 4.0, 5.0 secs
Non-retarded mode	+ Polarity : 10, 14, 20, 25, 30 secs - Polarity: 5.5 secs	Switch: 4, 6, 7, 10, 14, 20, 25, 30 secs
Cockpit Programmable	4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 14, 21, 25, 30 secs	4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10, 14, 21, 25, 30 secs
Detonation delay times:		
300 volt mode	Instantaneous	
195 volt mode	Switch setting	Switch: Instant, 10, 25, 60, 120, 180 ms
Cockpit Programmable	Instant 5, 10, 15, 20, 25, 30, 35, 45, 60, 90, 120, 180, 240 ms	Instant, 5, 10, 15, 20, 25, 30, 35, 45, 60, 90, 120, 180, 240 ms



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