Fuzing & Ordnance Systems

FMU-139 C/B BOMB FUZE

Precision Timing Mechanism

The FMU-139 C/B Bomb Fuze is an electronic impact/impact delay fuzing system developed for use by both the U.S. Navy and the Air Force in the MK 80 series and M117 low drag and high drag, guided or unguided, high-explosive bombs. In addition to impact/impact delay, the fuze is capable of accepting a signal from a separate proximity sensor.

The fuzing system consists of a cylindrical fuze and a closure ring in the Navy Application. For the application in Air Force mode, an additional charging well generator (FZU-48) and cable assembly are provided Key features of the FMU-139 C/B include ease of installation and preparation for flight, compatibility with the proximity sensor fire signal, ability to sense a high drag delivery, and the ability to manually set the arming and event times prior to take off or electrically set them by cockpit selection at bomb release.

This cockpit selection is accomplished in the Navy mode when power is transmitted to the fuze from the Fuze Function Control System (FFCS). In the Air Force mode, power is provided by the air driven alternator, which is lanyard activated upon release from the aircraft. Cockpit selection is not available in the Air Force mode.

The FMU-139 C/B has passed the appropriate environmental tests of MIL-STD-331 and MIL-STD-810. The fuzing system meets all U.S. & NATO Navy and Air Force requirements, including the safety criteria for fielding. The FMU-139 C/B fuze is compatible with most U.S. Air Force, Navy, Marine Corps, and NATO Aircraft. All arming functions and fuzing modes are contained in a single fuze that has two independent arming rotor locks, dual independent launch signals (Navy) and an air flow environment sensor (Air Force), and automatic retard deceleration recognition.

L-3 Fuzing & Ordnance Systems is under contract to produce an initial order in excess of 76,290 FMU-139 C/B for the U.S. Navy, Air Force, and NATO Allies. We will also produce in excess of 76,290 FZU-48/B wind turbine generators.

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FMU-139 C/B CHARACTERISTICS

Parameter Settings	Air Force Applications	Aircraft with FFCS (Navy, Marine Corps)
Safe separation times		
– Retarded mode	2.0, 2.6, 4.0, 5.0-sec ground selectable settings	2.6 sec
– Nonretarded mode	4, 6, 7, 10, 14, 20-sec ground selectable settings	5.5, 10.0-sec cockpit selectable settings
Detonation delay times	Instantaneous, 10ms, 25ms, 60ms ground selectable times	Instantaneous, cockpit selectable times Instantaneous, 10ms, 25ms, 60ms, ground set delays
Arming and/or detonation required air speed	Start at 140 kn air speed	N/A
Power supply	FZU-48/B air stream generator	FFCS
Mission duration	5 min.	240 sec minimum
Weight	(1.36kg) – (3lb max)	(1.36kg) – (3lb max)
Length (includes arming wire housing and connector shipping plug)	(22.0cm) – (8.8 in. max)	(22.0cm) – (8.8 in. max)
Fits all standard bomb fuze wells		
Diameter	(7.2cm) – (2.87 in. max)	(7.2cm) – (2.87 in. max)
Storage Life	10 years	10 years
Shelf Life (Out of shipping container)	180 years	180 years

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L-3. Headquartered in New York City, L-3 Communications is a prime contractor in aircraft modernization and maintenance, C³ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, subsystems and systems.

Approved for public release by PMA-201 dated 19 December, 2003. Call for latest revision.