

MECHATRONIC FUZE FOR (HAND) GRENADE

DRDO lab TBRL, Chandigarh has developed Mechatronic Fuze which is an electrochemical fuze that combines the benefits of rugged and more reliable mechanical safeties and functional operations and timing accuracy of the electronics. The fuze is designed for hand grenade applications and operates in three modes Viz. Time delay, Impact and Dual. Pre-launch safeties have been provided through mechanical components whereas post launch safeties and intelligence have incorporated using embedded system based electronic hardware and software. The detonator is misaligned with the rest of the explosive train during storage and transportation. The Fuze is powered by COTS primary lithium battery.

When the grenade is thrown safety lever flies off and the battery is activated providing power to the electronic circuitry. Simultaneously the detonator gets aligned with the explosive train. If the grenade touches the ground before specified time or accidental drop safety is activated and the grenade is neutralized otherwise the grenade operates as per the selected mode. The time delay of the fuze is factory programmable. If because of any reason the grenade did not function the battery is discharged to neutralize the grenade did not function the battery is discharged to neutralize the grenade permanently.

Salient Features:-

- 1. Selectable mode of operation.**
- 2. Detonator placed out of line with explosive train.**
- 3. Arming delay is incorporated for thrower's Safety.**
- 4. Enhanced safety features like accidental drop safety and self-neutralization provided.**
- 5. Verification of delay time and functionalities before assembly.**

Interested Industries are requested to forward their Expression of Interest (EoI) to Director TBRL, Chandigarh with a copy of Director DIITM, DRDO HQ on following address:-

To,

Director

Terminal Ballistic Research Laboratory (TBRL)

Sector-30, Chandigarh-160030

Phone: 0172-2307100, 2657674

Fax: 0172-2657506

Email ID: **director[dot]tblrl[at]gov[dot]in**

Copy to

Director

Directorate of Industry Interface & technology Management (DIITM)

Room No. 447, DRDO Bhawan, DRDO HQrs, Rajaji Marg, New Delhi-110011

Phone: 011-23013209/23015291

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Industries are requested to enclose supporting document in EoI as per Appendix 'D' of DRDO Policy and Procedure for ToT available at **<https://www.drdo.gov.in/sites/default/files/inline-files/drdo%20Policy%20%26%20Procedure%20%20for%20ToT.pdf>**