

DM84/L166
Multi Option
Artillery Fuze



for high explosive (HE) artillery shells & 120mm rifled mortar systems

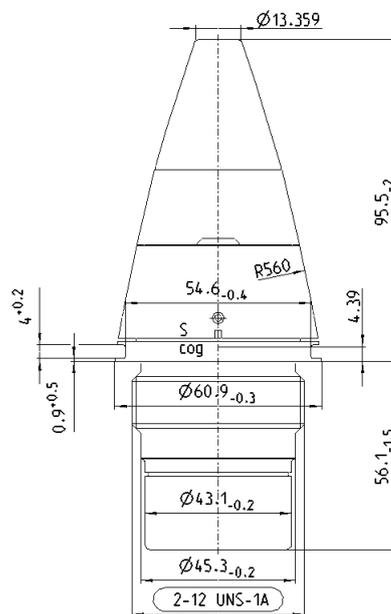
DM84/L166

The DM84 is an inductively set electronic artillery multi option-fuze which has been designed and qualified for use with 105mm and 155mm high explosive artillery shells, including extended range and base bleed ammunition. The fuze is suitable for use with 39, 45 and 52 calibre weapon systems and is safe for flick-ramming. It has also been designed and qualified for use with 120mm rifled mortars, providing full electronic function at all charges including charge 0. The fuze body is made out of steel for increased reliability when used with high velocity shells in high temperature environments.

One of the safety improvements incorporated within the DM84 fuze is the ability to determine the different acceleration impulses generated between a drop and the acceleration produced during firing. This is achieved by the inclusion of a specially designed battery and the associated safety and functioning mechanism. A further improvement is the ability to select two Heights of Burst; either 6m or 12m.

The following modes are inductively settable:

- Prox. High: 12m
- Prox. Low: 6m
- Time: 1s - 199.9s
- Foliage: 3m below canopy
- PD SQ: $\leq 250\mu\text{s}$
- PD Delay: 16ms



Inductive programming of the fuze is achieved by using a fuze setting device designed in accordance with STANAG 4369 and AOP 22. The fuze setting is stored permanently but can be reprogrammed at any time prior to firing. Fuze arming is initiated by transitional and rotational forces after firing, with the fuze rotor moving in-line immediately after the muzzle safety distance has been achieved. The DM84 affords a high level of over-flight safety. In-flight safety is maintained until ~ 3 seconds prior to the programmed flight time. Until this time, the Fuze is prevented from becoming electronically armed. The fuze is highly resistant to electronic countermeasures. Additionally the fuze features of a fully IM compliant firing train.

Technical Data DM84 / L166

Muzzle safety	$\geq 200 \text{ m}$ (155 mm gun) $\geq 150 \text{ m}$ (105mm gun)
Electronic Overhead safety	Prox. Mode T*- 2.8 sec. Time Mode T*- 2.0 sec. Foliage Mode T*- 2.8 sec. PD SQ Mode T*- 3.0 sec. T* = programmed Time of Flight
Required setback for arming	$\geq 850 \text{ g}$
Max. setback	$\leq 26,000 \text{ g}$
Required rotation for arming	$\geq 2,900 \text{ rpm}$
Max. rotation	$< 25,000 \text{ rpm}$
Operational temperature range	-46°C to $+63^{\circ}\text{C}$
Storage temperature range	-54°C to $+71^{\circ}\text{C}$
Dimensions	STANAG 2916
Weight	$700 \pm 20 \text{ g}$
Shelf life	10 years
Compliance with MIL-STD 1316E / STANAG 4187 Ed. 4, MIL-STD 331C / STANAG 4157 Ed. 2 and STANAG 4369 Ed. 1	

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