

## MULTIPURPOSE ELECTRONIC FUZES



# Multipurpose Electronic Fuzes

With more than 40 years of experience in fuze manufacturing, EXPAL offers a wide range of fuzes, mechanical and electronic, for medium caliber, artillery, mortar bombs, naval, aviation and rockets. In our effort to fulfill the last requirements demanded on the current missions, EXPAL has developed three new models:

The EC301 MORTAR FUZE for 60, 81 and 120 mm mortar bombs. This electronic time fuze increases time range, offers higher time performance accuracy and provides extra safety with two independent actions to be armed (speed and acceleration).

The EC102 & EC103 ARTILLERY FUZES for artillery projectiles from 105 to 203 mm calibers and also for 120 mm rifled bore mortars. This new electronic time fuzes increase time range with higher performance accuracy and extended mechanical safety distance.

## EC301: ELECTRONIC TIME MORTAR FUZE

### DESCRIPTION

EC301 is an electronic fuze for 60, 81 and 120 mm mortar bombs. It can be programmed by an inductive setter (according to STANAG 4369) in time mode as well as impact mode.

The energy necessary to feed the electronic, is supplied by a turbine activated by the wind during the fly of the mortar bomb. This turbine is also coupled to the safety system, so that the fuze needs two different sources to be armed (acceleration during the shooting and the wing of the mortar bomb). This guaranteed a second independent safety, meeting this specific requirement of the STANAG 4187 and MIL-STD-1316.

#### Function modes:

Time: from 3 to 199.9 sec. in steps of 0.1 sec.,  
with impact mode as back-up.  
Superquick impact mode.

### SAFETIES

#### Mechanical safety distance:

Inertial: 700 g's. min.  
Speed of the mortar bomb for wing safety: 60 m/sec. min.  
Arming distance: 60 m.

#### Electronic safety:

Safety programming mode for transport and storage.  
Arming time: 2 sec.

### BALISTIC DATA

Calibers: from 60 to 120 mm.  
Acceleration levels: 700 to 15,000 g's.  
Speed range: 60 to 450 m/s.

Dimensions according to STANAG 2916.



EC301:  
ELECTRONIC TIME MORTAR  
FUZE



## EC102 & EC103: ELECTRONIC TIME ARTILLERY FUZES

### DESCRIPTION

EC102 & EC103 are electronic fuzes, used in artillery projectiles from 105 to 203 mm calibers and also for 120 mm rifled mortars. They are programmed by an inductive setter according to STANAG 4369.

EC102: Designed for HE projectiles.

EC103: Designed for illuminating and smoke canister projectiles.

#### Function modes:

Time: from 3 to 199.9 sec. in steps of 0.1 sec. with impact as back-up.

Superquick impact mode.

Delay (EC102): from 0 to 100 msec. in steps of 1 msec.

### SAFETIES

#### Mechanical distance safety system:

Safety distance increased to more than 100 m.

Inertial activation: 500 g min.

Centrifugal activation: not arming at 1,000 rpm, arming at 3,000 rpm (100% checked).

The battery that supply the energy to the electronic circuits, keeps inert until the shooting time when set back activates it.

#### Electronic safety:

Safety programming mode for transport and storage that inhibit the activation of the firing trigger circuit in all conditions. Superquick and delay modes: 1 sec. inhibition time of the firing circuit after the activation of the battery (shooting time). Time mode: inhibition of the fire circuit until 3 sec. before the programmed time.



EC102:  
MULTIPURPOSE ELECTRONIC  
TIME ARTILLERY FUZE

### BALISTIC DATA

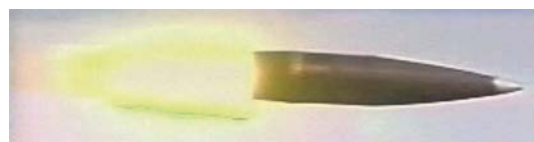
Calibers: artillery from 105 to 203 mm  
and also for 120 mm rifled bore mortars

Setback: 1,500 to 25,000 g's

Rotation: 3,000 to 30,000 rpm.

Velocity: 1,100 m/s max.

Dimensions according to STANAG 2916.



### EXPAL FUZES

MEDIUM CALIBERS	MORTAR BOMBS	ARTILLERY	NAVAL	AVIATION	ROCKETS
BD 225	PDB 332	PD M557C1	PD M572N	M904E3 / M905B	B-70
PD 226	PDB 333	PD M572G1	EF-127	MU05 / MU08	BC-140
	MT M370	MT M565	EF-76	EROS / ERCUS	
	EC301*	MTSQ M564		KAPPA III	
		MTSQ M548		ER-501	
		EC102 / EC103			

\* Under development



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