

RDB4-MK3 Muzzle Velocity Radar (MVR)



IN-SNEC®

The MVR is designed for army muzzle velocity measurements. It forms an integral part of the land-based or sea-borne artillery system, alongside Fire Control Systems, meteorological stations, navigation and communications systems.

A single compact housing integrates the Radio Frequency Head (antenna + transceiver) and the Data Processing Unit.

A Man Machine Interface (DKU) is available in option.

Improve artillery accuracy

Main Applications

- Artillery performance improvement, providing :
 - ◆ Firing accuracy
 - ◆ Short firing adjust
 - ◆ Amunition savings

Main Features

- Real time analysis
- Digital processing
- Stand alone operating or coupled with Firing Control System
- Standard interfaces
- RF and digital process in same chassis
- Qualified with all types of ammunitions
- NATO - STANAG qualified

Main Benefits

- Fully automatic and autonomous
- High accuracy
- High sensitivity
- Versatility, reliability
- High ruggedness (battle field qualified)
- Low weight
- Easy to install onto existing weapon system
- Easy maintenance and handling features

ZODIAC DATA SYSTEMS

AEROSAFETY & TECHNOLOGY
Telemetry & Telecommunications

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Technical specifications

General specifications

Caliber range	20 to 203mm (no limitation for other calibers)
Velocity range	50 to 2000m/s
Accuracy	0.05% @ V0 ≥ 200m/s
Firing rate	up to 1200 shots /mn
Initial velocity calculation	1st or 2nd order regression with least square method
Programmable ballistic profiles	up to 10
Data acquisition	6 to 40 pts over 4096 pts FFT (Fast Fourier Transform)
Parallax corrections	
Gun recoil motion compensation	
Automatic salvo detection	
Statistical calculations on shots and salvos fired	
Built-in auto test	

Radio frequency specifications

Transceiver	
RF signal	X band (5 selectable frequencies) Doppler signal analysis
RF power	0.125 W
Patch antenna	
Polarization	Linear
Gain	23dB
Beamwidth	E : 9°; A : 14°

Interfaces

Electrical	RS 232, RS 422, RS 485
Mechanical	4 bolts (for mounting on tripod or gun)

Primary Power

Direct voltage	16 VDC to 36 VDC
Power consumption	35 W max

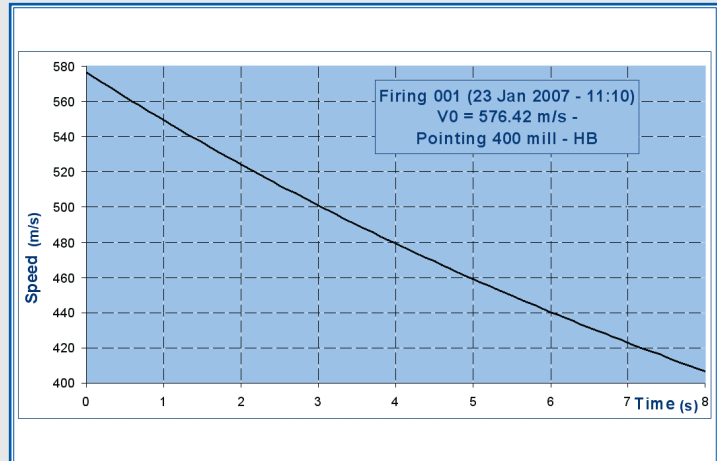
RDB4 MK3 - MVR

MODEL REFERENCE

Muzzle Velocity Radar - MVR	SM512 719
Man Machine Interface - DKU	SM514 279
MMT	SM520 975

Processing specifications

Data storage 999 initial and average velocities



Mechanical characteristics

Dimensions	
MVR without handle	11.2x8.27x5.45" (285x210x138,4 mm)
MVR with handle	11.2x10.43x5.45" (285x265x138,4 mm)
DKU	6.7x 3.93x1.57" (170x100x40 mm)
Weight	
MVR with handle	13.2 lb (6 kg)
DKU	2.2 lb (1 kg)
Rugged aluminium	

Environmental conditions

Operating conditions	
Temperature range	-40°C to +55 °C
Relative humidity	0 to 95% non condensing
Applicable standards	MIL STD 810 E MIL STD 1275 A MIL STD 461 C

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