

PRECISE IDENTIFICATION

ACOUSTIC PLATFORM FOR VEHICLES (APV)

AA8000A001

APV is the vehicle mounted version of Rheinmetall's Acoustic Shooter Localization System family.

In combat environments, military personnel and vehicles are exposed to a constant threat through enemy fire. As soon as a vehicle is under attack, it is essential to know where the shots are fired from allowing the troops in contact to adapt position, accurately focus fire and to take other countermeasures. On vehicle platforms, it is hard to determine direction and distance of enemies because of vehicle and battle noise. Rheinmetall closes this gap with the Acoustic Platform for Vehicles (APV), which automatically calculates the enemy shooter's position in direction and distance and warns in real-time of fired shots.



HOW IT WORKS

The system detects all supersonic shot related sounds. The APV monitors the complete environment in 360° and detects direct-fire weapons within its effective combat range. Depending on the signal quality the sensor is either sending a unique direction and distance or two possible directions to the thread. Using sophisticated algorithm the APV system is able to eliminate almost all false warnings.

The sensor can be connected to the C2 infrastructure of the vehicle or can be used independently on a dedicated display. The signal processing is part of the sensor, so the system is independent from additional external devices.

Operation of APV is simple and intuitive. Minimal training is needed in order for the user to operate the system. APV is designed for multiple vehicle platforms, including tracked platforms. This feature is unique with regards to acoustic sniper location systems and underlines the technical advantage of the Rheinmetall product.

TECHNICAL DATA

Performance

Type of detection	Supersonic projectiles at fly-by ¹⁾
Weapon type	Long gun with a calibre between 5.56 mm up to 30 mm Detection of other calibres possible on request
Field of coverage	360° Azimuth ²⁾
Accuracy of bearing	±5° (1σ) ²⁾
Multisensor capability	up to 16 sensors

Interfaces

Voltage range	20V–33 V acc. to MIL-STD-1275 E (nominal 28VDC)
Power consumption	<25 W ³⁾
Communication	Ethernet

Physical characteristics

Color	RAL6031 Bronze green
Weight	<6 kg
Dimensions (L x W x H)	<250 mm x 250 mm x 170 mm

Qualification

Standards	AECTP 300, AECTP 400, MIL-STD-1275 and MIL-STD-461 (EMC)
Temperature (storage)	–46°C to +71°C ⁴⁾
Temperature (operating)	–32°C to +49°C ⁵⁾
Water protection	IPX6 ⁶⁾
Shock	15 g 11 ms ⁷⁾
Vibration	Tracked and wheeled vehicles ⁸⁾

¹⁾ Supersonic projectiles within a distance of 0.5 m up to at least 25 m to the APV

²⁾ Can be influenced by integration

³⁾ Normal operation

⁴⁾ Acc. to AECTP 300 (Ed 3) Method 303 Procedure II C 2 and Method 305 Procedure I A 1

⁵⁾ Acc. to AECTP 300 (Ed 3) Method 303 Procedure I C 1 and Method 302 Procedure I A 1

⁶⁾ Acc. to IEC 60529

⁷⁾ Acc. to AECTP 400 (Ed 3) Method 403 ANNEX A 403 A 1 Minimum Integrity

⁸⁾ Acc. to AECTP 400 (Ed 3) Method 401 Procedure III A 2 and Method 401 Procedure III B 2

