

Protection modular jammer “STAR”



System characteristic:

- intended for protection against radio controlled improvised explosive devices (NVS, RCIED) activation
- prevents activation of RCIED, significantly reduces the distance for bomb activation to minimum
- used for jamming of radio communication systems during the “Special Forces” operation

The jamming is made by means of frequency sweeping in several frequency bands at the same time independently (Analog Multisweep, digital sweeping is an option). Directional antennas could increase additionally the power supremacy over the ignition devices of RCIED (6 to 40 times higher effective radiated power of jamming signal in direction of antenna pattern maximum - depending on the frequency band). The antennas are specified according the supposed jammer mission. The power can be divided in frequency band according the customer requirements. Basically this system is equipped with 4 wideband transmitting subsystems (the exciter, the amplifier, the antenna) According the customer requirements the jammer can be equipped just with one transmitting subsystem with maximum output power up to 300 W. With increasing number of used subsystems the higher jamming effectivity is achieved.

This jamming system is designed as the modular digitally controlled system and it is open with possibility of changing individual transmitting subsystems regarding to supposed mission. It is easy to implement the digital sweeping (DDS technology). Also it is designed as portable device which enables easy installation as to vehicle so to semistationar installation in place. The jammer antennas are intended for installation on the vehicle roof or the mast. The mast is not a part of this system and it is possible to order it as optional accessory.

The jammer is characterized by easy operation and self diagnostics. It is easy to control it by remote control (switching on/off of individual transmitting subsystems). It could be equipped by IP connection (optical) for embedding to special system. Power supply is realized independently of the vehicle onboard power feed or AC power supply, by means of the accumulators. Accumulator charging is ensured by the charger.

Specification of basic variant:

The basic variant (variant 4) works in following bands:

- 1) 26 – 50 MHz (CB – personal radiostations, RC – remotely controlled modules, HAMs, wireless analogue phones, baby monitors)
- 2) 420 – 470 MHz (civil UKV band, Remote Keyless Entry - RKE, wireless door-bells, PMR–personal mobile radio, analogue cellular telephone system NMT 450)
- 3) 800 – 1000 MHz (AMPS, DAMPS, GSM 900, NMT 900, IS 95, wireless digital phones CT1, CT2)
- 4) 1800 – 2200 MHz (DCS 1800, PCS 1900, DECT, UMTS)

The system consists of:

The set of jammer STAR in variant 4 (4 transmitting subsystems) consists of:

- Jammer STAR
- 4 pcs. of omnidirectional antennas (optionally directional) including RF cables
- 2 pcs. of lead accumulator 12V/100Ah including cabling
- charger of lead accumulators

The jammer is implemented into shockproof transport rack. There are placed the modules of the exciter and power amplifiers with maximum power approx. 300W in this rack. The power depends on amplifiers consumption. The rack provides sufficient climatic protection during the transport (IP 65 protection) and the shocks (19" frame fixed to rubber anti vibration mounting). The accumulators and the charger are placed outside the rack.

Basic technical parameters:

Technical parameters of protection jammer system STAR (variant 4):

Operating frequency bands

	26 - 50 MHz (band 1)
	420 - 470 MHz (band 2)
	800 - 1000 MHz (band 3)
	1800 - 2200 MHz (band 4)
Output impedance	50
Load matvhing	PSV .2 @ PN – 0,5dB
Protection of RF amplifiers outputs	output circulator, PSV =8
Output power	Band 1 - up to 100 W
	Band 2 - up to 40 W
	Band 3 - up to 60 W
	Band 4 - up to 60 W
Harmonics suppression	min – 15dBc (band 1) - without filter min. - 40 dBc (band 2 to 4)
Type of jamming signal	Analog Multisweep
Antenna	wideband, optionally omnidirectional or directional
Operating temperatures	0 to 45° C
Storage temperatures	-20° to +85° C
Relative humidity	up to 95 % (non condensing)
The level of jammer rack protection	IP 67
EMS shileding of rack	min. 60 dB according to MIL-STD 285
Power supply	24V DC (19 to 30 V DC)
Power consumption	1150 W @ 24VDC
Power supply voltage charger	230VAC/50 Hz
Charging characteristic	automatic three-stage
Jammer dimensions	575x540x380 mm (wxdxh)
Weight of Jammer including ACCU	50 kg

For more information, please contact:



OMNIPOL a. s.
Nekázanka 11, 112 21 Prague 1
Czech Republic



Phone: +420 224 011 120, Fax: +420 224 012 240
E-mail: omni25b@omnipol.cz, <http://www.omnipol.cz>