

NERO[®] **INDUSTRIES**

Advanced Reliability

LASER WARNING AND GRENADE LAUNCHER SYSTEM



UMAX

LASER WARNING AND GRENADE LAUNCHER SYSTEM

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UMAY - MCU

- The LWS system is designed for detection of laser irradiation from laser assisted weapons and can be used on all kinds of military vehicles.
- LWS detect, categorize and pinpoint laser sources such as rangefinders, designators, beam riders, infrared illuminators and trainers.
- The LWS system is an essential component of the vehicle's defensive capabilities and feature visual warnings, high detection probability, and a low false-alarm rate.
- The advanced, high-speed processing and communication capabilities, combined with electro-optical operation, provide accurate and reliability operation.
- The system is immune to false alarms triggered by reflections, lightning, gunfire as well as self-RF and electro-optical operations.
- Pulse, continuous wave and complex laser signals handling.
- The system provide the manual, semi-automatic or automatic launch of any type of grenades with which the vehicle may be equipped inside the safe zone, coincident to the tactical requirements.
- The LWS system is capable to detect laser radiation with wavelength from 0.5 μm to 1.7 μm and optionally 8-12 μm.



GENERAL FEATURES

High Sensitivity	Built-in Test Function (BIT)
Very Low False Alarm Rate	Communicates With Other Systems
Fast Response Time	Communication Interface: CAN-BUS /RS422 /Rs232 Fast Ethernet
Fully Customizable	Large Detection Footprint
High MTBF Figure	Laser Detection Resolution: ±15°. (optional ±1°)
False Alarm Rate: 1 in 72 h	Spectral Range: 0.5 to 1.7 μm. Optionally (8-12 μm) CO ₂ Wavelength
Wavelength Coverage: Bant I : 0.5 μm - 1.1 μm	Sensitivity of Perception: 10-20 W/m ²
Bant II : 1.1 μm - 1.65 μm	Operating Temperature: -40°C / +55°C
Bant III: 0.8 μm - 1.1 μm	Storage Temperature: -55°C / +85°C
Bant IV: 8-12 μm (Optional)	Power Supply: 24 VDC nominal (16-32 V)
Detects Multiple Simultaneous Threats	Power consumption: 120 mA ± 50 mA @24 VDC Nominal
Identifies Threat Type	400 mA ± 50 mA @24 VDC Full Swing
Detects, Categorizes and Pinpoints Laser Threats	Size: 180x155x116 mm
Threat Classification: Laser Range Finder (LRF)	Weight: Control Unit: 1.9±0.3 kg
Laser Target Designator (LTD)	Sensor Unit: LW180 : 2.1±0.5 kg
Laser Beam Rider (LBR)	LW360 : 3±0.5 kg
Probability of Detection: LRF (Bant I-II-IV) : %95	LW1000: 1.8±0.5 kg
LTD (Bant I-II-IV) : %95	IP67 Water and Dust Ingress Protection
LBR (Bant III-IV) : %99	Salt Spray Test: 800 hours
Identifies The Direction of Arrival of All Threats	IPC-A-610G Class 3 Produced PCB
Threat Detection Coverage: 360° Horizontal (Azimuth)	MIL-STD-810G, MIL-STD-461, MIL-STD-1275E STANAG-3733
95° Vertical (Elevation)	UL, CE GOST-R Certification

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LASER WARNING SENSORS



LW180



LW360



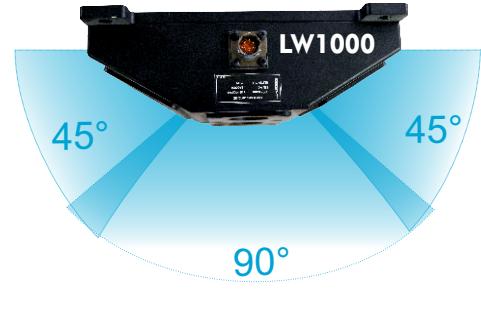
LW1000

UMAY RECEIVER TYPES

ANTI-TANK MISSILES DETECTABLE

- LW180 : 180° Detection
±15° Detection Resolution
- Resolution
±15° Detection Resolution
- LW1000 : 90°-180°-360° Detection
±1° Detection Resolution

- Kornet-EM Anti-Tank Missile / Laser Homing Attack Missile
- UMTAS
- AGM-114R HELLFIRE II Romeo
- Spike-MR/LR/ER
- Javelin Missile
- HJ-12 (Red Arrow 12)
- BGM-71 TOW
- PARS 3 LR
- Missile Moyenne Portée (MMP)
- MILAN ER
- NLAWS (Next Generation Light Anti-tank Weapon)



LASER WARNING AND GRENADE LAUNCHER SYSTEMS

UMAY - MCU



Connector J1	
Connector 24VDC	D38999/24WD19SA
24VDC	A-B
Battery Trig	C
GND	E-F
CANH	F-S
CANL	G-T
Output 1-2-3-4	H-J-K-L
Input 1-2-3-4	M-N-P-R

Connector J2	
Connector 24VDC	D38999/24WD19SN
Launcher 1-2	A-B-C-D
Launcher 3-4	F-G-H-J
Launcher 5-6	L-M-N-P
GND	E-K-R
CANH	S
CANL	T
ISO 24VDC	U
ISO GND	V

Connector J3	
Connector 24VDC	D38999/24WD19SB
Launcher 7-8	A-B-C-D
Launcher 9-10	F-G-H-J
Launcher 11-12	L-M-N-P
GND	E-K-R
CANH	S
CANL	T
ISO 24VDC	U
ISO GND	V

COLOR

	RAL3000		FS 33245		RAL6014		RAL 9005
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Connector J1

Connector 24VDC	MS3470W10-6P
24VDC	A
GND	B
CANH	C
CANL	D



CERTIFICATIONS

MIL-C-38999	Military Connector
MIL-DTL-27500	Specially Protected and Unshielded Cables
MIL-STD-461E	Military Electromagnetic Compatibility
MIL-STD-810G	Military Environmental Conditions
MIL-STD-1275E	28 VDC Countermeasures
STANAG 4135AC	AC Current Characteristics

STANDARDS

Military Connector	ISO 9001 2015
Specially Protected and Unshielded Cables	ISO 14001 2008
Military Electromagnetic Compatibility	ISO 27001 2013

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