LASER WARNING AND GRENADE LAUNCHER SYSTEM

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
- Very Low False Alarm Rate
- Fast Response Time
- Fully Customizable
- High MTBF Figure
- False Alarm Rate: 1 in 72 h
- Detects Multiple Simultaneous Threats
- Identifies Threat Type
- Detects, Categorizes and Pinpoints Laser Threats
- Threat Classification: Laser Range Finder (LRF)
  - Laser Target Designator (LTD)
  - Laser Beam Rider (LBR)
- Identifies The Direction of Arrival of All Threats
- Threat Detection Coverage: 360 Horizontal (Azimuth) 95 Vertical (Elevation)
- Built-in Test Function
- Communicates With Other Systems
- Communication Interface: CAN-BUS / RS422 / RS232
- Large Detection Footprint
- Laser Detection Resolution: min 0.8 optimum 1
- Spectral range: 0.5 to 1.7 µm
  - Optionally (8-12 µm) CO2 Wavelength
- Wavelength Coherence: Band I, Band II, Band III, Band IV

- Sensitivity of Perception: 10-20 W/m2
- Operating Temperature: -40 C / +55 C
- Storage Temperature: -55 C / +85 C
- Power supply: 24 VDC nominal (16-32)
- Power consumption: 400 mA ± 50 mA @24 VDC nominal
- Size: 180x155x116 mm
- Weight: Control Unit: 1.9±0.3 kg
  - Sensor Unit: 3±0.5 kg
- IP67 Water and Dust Ingress Protection
- Salt Spray Test: 800 hours
- IPC-A-610G Class 3 Produced PCB
- UL, CE GOST-R Certification

For current information please contact us info@neroindustry.com - Nero Industry has the right to change the information
LASER WARNING AND GRENADE LAUNCHER SYSTEMS

UMAY - MCU

CONNECTOR J1
- Connector 24VDC
- MS3470W1G-6P
- 24VDC
- GND
- CANH
- CANL
- Output 1-2-3-4
- Input 1-2-3-4

CONNECTOR J2
- Connector 24VDC
- D38999/24WD195N
- Launcher 1-2
- Launcher 3-4
- Launcher 5-6
- GND
- CANH
- CANL
- ISO 24VDC
- ISO GND

CONNECTOR J3
- Connector 24VDC
- D38999/24WD195S
- Launcher 7-8
- Launcher 9-10
- Launcher 11-12
- GND
- CANH
- CANL
- ISO 24VDC
- ISO GND

COLOR
- RAL3000
- FS 33245
- RAL6014
- RAL 9005

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

For current information please contact us info@neroindustry.com - Nero Industry has the right to change the information
GRENADE LAUNCHER SYSTEMS

UMAY - GL76

- Nero GL76 Grenade Launchers are use as a self-defence/obscurant device designed to be externally mounted to the vehicle, controlled and fired from within the vehicle cockpit.
- GL76 grenade launcher system can be mounted externally to the main vehicle.
- The 76mm variant fires smoke grenades or fragmentation grenades, depending on the type loaded.
- The Smoke grenade launcher provides an effective smoke screen camouflage action on a battlefield with a range of up to 45 ± 5 meters, depending on environmental conditions.
- Durable to corrosion with the options of material.
- Can-Bus communication infrastructure compatible.

FEATURES

- Smoke Grenades or Fragmentation Grenades, depending on type used.
- High speed response and varies according to ammunition.
- 10 years shelf life.
- Weight: 2.8 kg ± 0.5 kg.
- Inside Diameter: 77 ± 1 mm.
- Outside Diameter: 104 ± 2 mm.
- Length: 235 ± 5 mm.
- Depth: 160 ± 10 mm.
- Coating: Zinc-Nickel.
- Power supply: 28 VDC nominal (16-32).
- Power consumption: 120 mA ± 20 mA @28 VDC nominal.
- Power consumption: 6 A ± 2 A @28 VDC firing mode.
- Electrical resistance: 1-3.5 ohm.
- Electrical Connector: MS3474W10-6P.
- CANBUS (J1939) option.
- MTBF Minimum 250,000 hours.
- Durable to corrosion.
- Humidity: %95.
- Vibration and Shock resistance.
- Salt spray test resistance 800 hours.
- IPC-A-610G Class 3 Produced PCB.
- UL, CE GOST-R Certification.

Output Pin Diagram

- Connector 24WDC: MS3474W10-6P
- Power: A
- GND: B
- Detector COMM: C

COLOR CODE

- RAL3000: FS 33245
- RAL6014: RAL 9005

CERTIFICATIONS

- MIL-C-38999: Military Connector.
- MIL-DTL-27500: Specially Protected and Unshielded Cables.
- STANAG 4135AC: AC Current Characteristics.

STANDARDS

- ISO 9001 2015: Military Connector.
- ISO 14001 2008: Specially Protected and Unshielded Cables.
GRENADe LAUNCHer SYSTEMS

UMAY - GL76

Grenade launcher can be positioned on the vehicle with different options depending on the number of launchers and customer demand. Standard positioning options and effect angles are simulated in the following figures. The payload has to generate a smoke screen in a field of 50 – 230 degrees opening at a distance of 45 ± 5 m from the vehicle to a depth of 10-30 m and a height of 6-20 m. These values are determined particularly by the placement of the launch tubes. Usually launchers are mounted on either side of the turret or multiple launchers are mounted on the remote weapon system. For vehicles which are void of a gun turret, launchers are positioned on all sides of the vehicle’s roof, based on the free space, and allow a 360 degrees coverage. This configuration is most suitable for small caliber launchers (4 tubes) and usually consists of 4 up to 16 launchers.

OPTION 1
Effect Angle: 50°

OPTION 2
Effect Angle: 50°

OPTION 3
Effect Angle: 20°

OPTION 4
Effect Angle: 80°

Effect Angle: 50°

Effect Angle: 20°

Effect Angle: 80°

Effect Angle: 50°

Effect Angle: 45°

45 ± 5 m

5m 15m 15m