

LWFC S

LIGHTWEIGHT FIRE CONTROL SYSTEM

CREW SERVED DAY / NIGHT FIRE CONTROL

DAY OR NIGHT OPERATION

- High-resolution daylight and uncooled thermal imaging for long-range target recognition and surveillance
- Daylight range finding and target engagement are aided by a high resolution 640 x 480 daylight sensor
- For night operations, LWFC S incorporates an uncooled 320 x 240 25-pixel pitch thermal sensor
- Sensor video displayed on a 640x480 helmet-mounted display is annotated with system data including a ballistically corrected aimpoint

LWFC S BENEFITS

- Increased firepower and lethality
- Greater gun crew situational awareness and survivability
- Rapid target engagements
- Increased capability day or night
- Greatly reduced ammunition costs



LASER PRECISION TARGETING

LWFC S provides precise pointing accuracy in battlefield conditions. For fast, accurate gunner operation, LWFC S provides:

- Eye-safe laser rangefinder to 5 km
- Ballistic aimpoint corrected for ammunition type, target range, air temperature, weapon cant, and atmospheric pressure

FIELD-PROVEN PERFORMANCE INCREASES

Field testing demonstrated that LWFC S prototype units increased the probability of hit $P(h)$ from 3% to 54% at 1,000 meters using military gunners and standard Mk19 GMG.

MODULAR DESIGN PROVIDES FLEXIBLE APPLICATION

LWFC S is designed to provide an adjusted aimpoint for the Mk19 40mm grenade machine gun. The system can be readily adapted for the M2 .50 caliber machine gun, as well as other weapons and ammunition, through the maintenance mode updates.



LIGHTWEIGHT FIRE CONTROL SYSTEM

SPECIFICATIONS

PHYSICAL

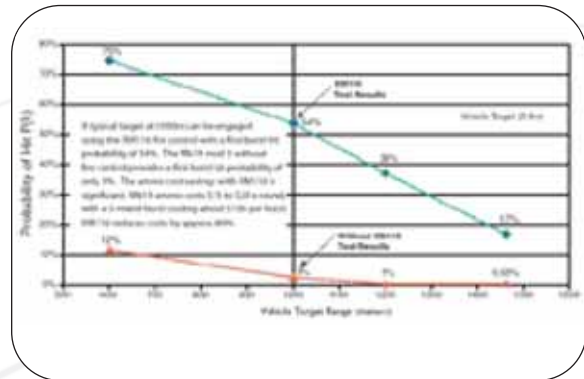
Storage temperature: -40 to +70° C
Operating temperature: -32 to +49° C
Environment: Mk19 shock, HMMWV vibration

MECHANICAL

Battery: Standard BB-2847/U (rechargeable) and BA-5847/U (non-rechargeable)
Battery life: >10 hours
Vehicle power: 14 to 32 volts

OPTICAL PERFORMANCE

Day/night FOV: 3° vertical x 4° horizontal x 5° diagonal
Daylight sensor: 640 x 480 visible sensor
Nightsight sensor: 320 x 240 uncooled thermal (8–12µm) 25µm pixel pitch
Display color: 640 x 480 head-mounted display
Aimpoint accuracy: ± 0.25 mrad
Boresight retention: ± 0.25 mrad
Range accuracy: ± 1 meter, 5 km range
Laser safety: Class 1 per ANSI Z136 (1993) (Eye Safe)



Mk19 First Burst Probability of Hit Results



Recon Optical RAVEN TM R-200

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