

# L-3 AR Maritime Products

## PROTEC-M MARINE AIS



The L-3 PROTEC-M Marine Automatic Identification System (AIS-M) is a collision avoidance and vessel tracking tool designed to improve the situational awareness of the command and control team while facilitating secure AIS communication between military assets. With an integrated minimum keyboard display (MKD), L-3 offers a compact solution which is highly desirable in the space constrained world of bridge electronics.



### KEY FEATURES

- Position and identification information for AIS-equipped vessels
- Ability to display AIS targets on ECDIS/ECS/ARPA with detailed navigation information
- Supports text messaging between vessels and VTS
- Smallest AIS package offering in the industry
- Non-proprietary encryption method for secure position reporting
- IMO compliant to 61993-2
- Transmit power ranges 1-12.5W
- STEDS Protocol



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## PROTEC-M MARINE AIS

### PHYSICAL DIMENSIONS

|         |                        |
|---------|------------------------|
| Height: | 8.33 cm (3.28 inches)  |
| Width:  | 16.23 cm (6.39 inches) |
| Depth:  | 18.36cm (7.23 inches)  |
| Weight: | 2.54 kg (5.6 pounds)   |

### POWER REQUIREMENTS

|        |                      |
|--------|----------------------|
| Input: | 12 - 24VDC           |
| Watts: | 16W average/64W peak |

### DATA I/O

|             |                                                                    |
|-------------|--------------------------------------------------------------------|
| Pilot Port: | PI/38.4k BAUD                                                      |
| IEC Port:   | (2) RS422 (bi-directional)<br>(1) RS232<br>(1) RS422 (input only)* |

\*RS422 (input only) at 4800 BAUD, all others 38.4k BAUD

### TRANSMITTER PERFORMANCE

|                     |                      |
|---------------------|----------------------|
| TX Frequency Range: | 156.025 - 162.025MHz |
| Tuning Resolution:  | 12.5 kHz             |
| Modulation:         | GMSK/FSK             |
| TX Power Control:   | 1-12.5W              |
| TX Power Accuracy:  | ±0.7dB               |
| TX Frequency Drift: | ±500Hz               |
| Nominal Impedance:  | 50Ω                  |
| Antenna Connection: | Type PL259           |

### RECEIVER PERFORMANCE

|                         |                      |
|-------------------------|----------------------|
| # of Receivers:         | 3                    |
| RX Frequency Range:     | 156.025 - 162.025MHz |
| Tuning Resolution:      | 12.5kHz              |
| Dynamic Range:          | ≥100dB               |
| Co-Channel Rejection:   | ≥10dB                |
| Adj. Channel Rejection: | ≥72dB                |
| Intermod. Rejection:    | ≥74dB                |
| In-Band Blocking:       | ≥86dB                |
| Noise Figure:           | ≤5dB                 |

### RECEIVER PERFORMANCE cont'd

|                      |                     |
|----------------------|---------------------|
| Nominal Impedance:   | 50Ω                 |
| Max Input:           | +10dBm (no damage)  |
| Minimum Sensitivity: | ≤-107dBm            |
| GPS Receiver:        | 16 Channel          |
| DSC Receiver:        | Fixed on Channel 70 |

### ENVIRONMENTAL

|                       |                |
|-----------------------|----------------|
| Operating Temp Range: | -15° to +55° C |
| Relative Humidity:    | 0 to 95%       |

NOTE: All Specifications Tested @ 25°C

### TECHNICAL STANDARDS

|             |
|-------------|
| IEC 61993-2 |
| IEC 61162   |
| IEC 60945   |
| ITU 1371-3  |

### REGULATORY APPROVALS

|                                  |
|----------------------------------|
| BSH/4613/05902/0406/06           |
| USCG APR# 165.155/EC0735/4320357 |

L-3 Aviation Recorders Quality Management System is ISO 9001:2000 and AS9 100:2004 Rev. B Certified

### Aviation Recorders

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**communications**  
Aviation Recorders

L-3. Headquartered in New York City, L-3 Communications employs over 64,000 people worldwide and is a prime contractor in aircraft modernization and maintenance, C<sup>3</sup>ISR (Command, Control, Communications, Intelligence, Surveillance and Reconnaissance) systems and government services. L-3 is also a leading provider of high technology products, subsystems and systems. The company reported 2007 sales of \$14 billion.