POLE STAR
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MARINE ASSET TRACKER

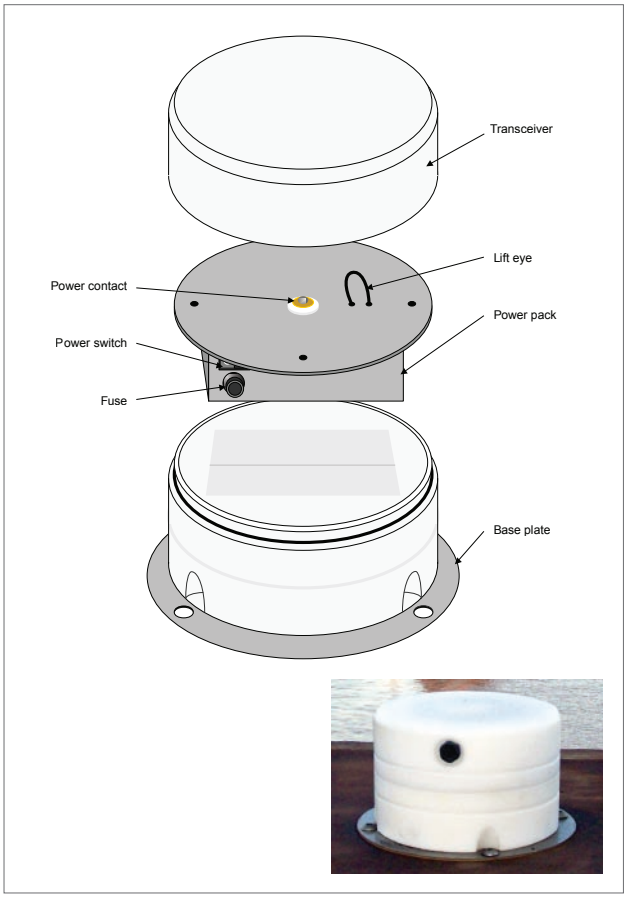
MAT3

For tug and barge operators who require a low-cost, low-maintenance tracking system for their fleet of powered and unpowered vessels, Pole Star has developed a further hardware option to support their tried and tested Marine Asset Tracker (MAT) service.

The MAT3 self-powered unit enables the operator to monitor a vessel's movements with guaranteed uninterrupted reporting for at least one year before the Power Pack will need replacing.

This extended reporting, coupled with the online MAT tools at their disposal, gives the user the information needed to deal with the major concerns facing the maritime industry today: vessels transiting high risk areas; protection of high value cargo; safety of crew; damage resulting from adverse weather and sea conditions – any of which can give rise to a major claim.

To keep you regularly updated, the MAT3 unit is programmed to deliver a position report every six hours for each vessel via email, web interface or SMS. In addition, you can set up notifications for key personnel to be alerted in the event that a vessel deviates from its planned course. Clients can be given selected access so that they too can remotely monitor its progress.



Key Benefits

- Easy to install. Select a suitable location, bolt down and flick the switch to activate
- No cabling to run. No power supply to install
- Low maintenance cost
- Guaranteed uninterrupted reporting for at least 12 months before Power Pack replacement required
- Small, discreet unit reduces the risk of theft
- Fixed 6 hourly reporting for consistent tracking

MAT3 TECHNICAL SPECIFICATION

PHYSICAL	
Overall dimensions	Diameter: 190 mm x Height: 110 mm
Weight	3.5kg
Hardware	Two part polyethylene enclosure (IP67); Inmarsat IsatM2M transceiver; integral power pack; marine grade stainless steel base plate; four marine grade stainless steel hex head securing bolts; four mounting collars; Allen key

ENVIRONMENTAL	
Operating temperature range	-25° to +70° C
Storage temperature range	-40° to +85° C
Humidity	95% Relative Humidity at 30° C
Vibration	5-20 Hz: 1.92 m^2/s^3 random noise 20-500Hz: -3dB octave random noise
Shock (survival)	Half sine 6ms, 300m/s^2
Transceiver environmental rating	IP56

ELECTRICAL	
Power consumption (typ. @ 12Vdc)	Receive: 0.9W; Idle: 0.25W; GPS active: +1.0W; Transmit: 10W; Sleep mode: 6mW

SATELLITE	
Coverage	Global, four overlapping regions
Frequency range	Rx: 1525.0 to 1559.0 MHz Tx: 1626.5 to 1660.5 MHz
Sensitivity	>-25dB/K
EIRP	0 dBW to 9 dBW (0dBW at < 5 degrees)
Elevation angle range	0 to 90 degrees
Modulation	Forward channel: 32-ary FSK, 20bps Reverse channel: binary FSK, 4-128bps
Forward error correction	Forward channel: Reed-Solomon (31,15) Reverse channel: Half-rate convolutional (k=7)

GPS	
Frequency	1575.42 MHz
Channels	16 parallel

CERTIFICATIONS	
	Inmarsat D+ Type Approval CEMark; IEC:EN60945

PSMAT3TS Valid as of 21.05.2009

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