

# Fleet Management

## Technical Specification for FM1

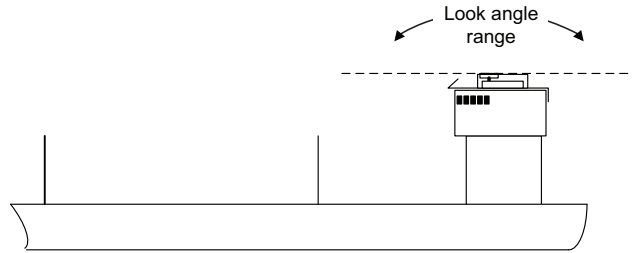
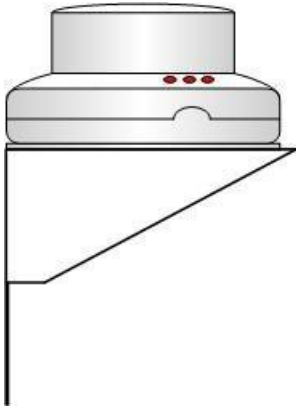
Pole Star's Fleet Management system is comprised of reliable satellite tracking hardware linked to a powerful web-based service. It provides an effective way of automatically tracking powered and unpowered vessels in real time.

The system enables the operator of any vessel to monitor the safe passage of their powered vessels and their unpowered assets through adverse weather and sea conditions or through high security risk areas which may be affecting trade routes

The FM1 satellite transceiver is specifically designed for powered vessels which have a 24v DC power supply on board.



**Note:** Diameter: 160mm x Height: 100mm



<b>PHYSICAL</b>	
Transceiver dimensions	Diameter: 160mm x Height: 100mm
Transceiver weight	640g
<b>ENVIRONMENTAL</b>	
Operating Temperature Range	-40° to +70° C
Storage Temperature Range	-40° to +85° C
Humidity	95% Relative Humidity at 30° C
Vibration	5-20 Hz: 1.92 m2/s3 random noise 20-500Hz: -3dB octave random noise
Shock (survival)	Half sine 6ms, 300m/s2
Transceiver environmental rating	IP56
<b>ELECTRICAL</b>	
Input Voltage Range	24 VDC
Power Consumption (typical. @ 12Vdc)	Receive: 0.9W
Idle:	0.25W
GPS Active:	+1.0W;
Heater Active:	+5.0W
Transmit:	10W;
Mating Connector	Conxall Mini-Con-X® 6282-8SG-3DC
<b>SATELLITE</b>	
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)
<b>GPS</b>	
Frequency:	1575.42 MHz
Channels:	16 parallel
<b>CERTIFICATIONS</b>	
	Inmarsat type approval DCC004, FCC, RSS-201, CE Mark, E Mark, NEMA 4/4X, IP56

