



SafePro EPIRB Range

MEOSAR Compatible for enhanced detection and location performance, the SafePro range includes an industry first; a four-frequency EPIRB, combining the global alerting of 406MHz with the localised locating and tracking power of AIS.



Kannad SafePro EPIRB Range

The world's most powerful EPIRBs, driving accelerated rescue times via:

- Faster alert detection on the 406MHz frequency through our MEOSAR compatibility
- The world's first 4TECH EPIRB, with four search and rescue frequencies, the SafePro AIS supports the Alert, Locate, Tracking and Recovery elements of search and rescue
- Greater location accuracy by receiving GNSS coordinates from a wider range of satellite constellations
- World's first convergence of 406 and AIS, combining the global alerting of 406 MHz with the localised locating and tracking power of AIS
- The only EPIRB manufacturer that also builds and supports the Cospas-Sarsat ecosystems infrastructure, making the benefits of MEOSAR a reality

Kannad SafePro EPIRBs include innovation as standard with ruggedized base, easy service battery, MEOSAR compatibility and compliance with the new United States Coast Guard emergency hands free transport mandate. The additional false activation protection and multiple self-tests also offer total user confidence. Coupled with an unparalleled marine heritage, commitment to quality and a history of innovation, customers know they can trust Kannad Marine, as part of the McMurdo Group of businesses, when their lives are at risk.

Kannad Safe/SafePro Auto-Housing

A fully protective, spring loaded enclosure, the auto-housing automatically deploys and activates the EPIRB when it is submerged between 1 - 4m. The SafePro/Safe auto-housing incorporates fixing points which ensure existing Kannad Marine auto-housing units can be retrofitted with minimum impact, when upgrading your vessels EPIRB.

Each of the 3 models (Safe, SafePro and SafePro AIS) detailed on the comparison table opposite are available as either a category 1 or category 2 EPIRBs:

Category 1 EPIRB models

Supplied inside an auto-housing and automatically deployed and activated when in contact with water (although they can also be manually activated).

Category 2 EPIRB models

Supplied with a unique SafeTransfer bracket to prevent accidental activation, once manually removed from the bracket the EPIRB is activated manually or via water contact.



McMurdo HRU

The auto-housing is controlled by a device called a McMurdo Hydrostatic Release Unit (HRU) fitted inside the protective enclosure.

The McMurdo HRU is specifically designed to work in conjunction with Kannad Marine SafePro EPIRBs and it is fully backward compatible with previous* Kannad Marine EPIRB units. Our HRU is 100% activation tested onsite to meet our stringent AS9100 quality standards and its innovative mechanical design offers extended shelf life, to enable greater flexibility in access to spares.

*SafeLink Sport Pro and SafeLink SportPro+



SafePro EPIRB Range Features Comparison

Feature	Description	Safe	SafePro	SafePro AIS
Optimised for MEOSAR	Enhanced detection capability for accelerated rescue	✓	✓	✓
VHF homer	121.5MHz swept tone	✓	✓	✓
406 frequency	International rescue frequency	✓	✓	✓
GNSS receiver	72 channels multi-constellation (see Note 3)		✓	✓
AIS capability	AIS for localized rescue			✓
SafeTransfer	Manual bracket allowing transport without activating water switch	✓	✓	✓
Auto-housing option	Automatic deployment when submerged 1 - 4m	✓	✓	✓
Activation method	Manual or water activation	✓	✓	✓
SafeCarry	Concealed hands-free easy carry strap		✓	✓
SafeBase	Impact protection	✓	✓	✓
SafeLight	3 lights, 360 degree coverage	✓	✓	✓
SafeSwitch	Reusable ON power button cover, to prevent accidental activation	✓	✓	✓
Battery storage life	10 years (Lithium Iron Disulphide) (see Note 4)	✓	✓	✓
SafeChange	Easy service battery	✓	✓	✓
Global service network	200+ service centres across 80+ countries	✓	✓	✓
Multiple self tests	120 short tests for system check and 20 Long tests which include testing of the GNSS receivers (see Note 1)	✓	✓	✓
Warranty	1 + 4 years with 1 year extension on safety check (see Note 2)	✓	✓	✓
Part of McMurdo Ecosystem	Developed with McMurdo's unique understanding of the technical requirements to fully utilise the Cospas-Sarsat infrastructure	✓	✓	✓

Note 1 Recommendation - 1 test a month over a period of 10 years. Long tests twice a year over a 10 year period. Long tests to be conducted in full view of sky. Obstacles will increase time taken for GPS lock, reducing the battery life. Long Tests can also only be performed if GNSS receiver workability seems suspect.

Note 2 Warranty is 1 year from date of purchase, an additional 4 years upon registration with McMurdo group. On 5 year health check, an additional year will be put in place.

Note 3 GPS and GLONASS has been approved. Galileo will be in place once active in early 2017.

Note 4 As a responsible manufacturer Kannad Marine, as part of the McMurdo Group of businesses, recommends a 5 year health check. Shore-based maintenance mandated vessels, battery health check or replacements should be carried out in accordance with flag Administration requirements and not exceeding 5 years.

Understanding the MEOSAR Ecosystem

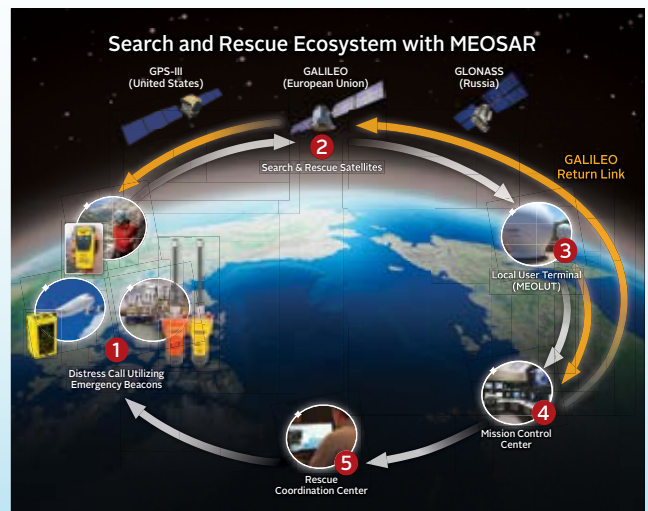
MEOSAR Improvements

Better Accuracy, Timeliness and Reliability

In the next few years Cospas Sarsat will be rolling out a new search and rescue infrastructure known as MEOSAR.

When fully deployed the aim is: **Determine beacon location within 5km, 95% of the time, within 10 minutes.**

- 72 MEOSAR satellites positioned at Medium Earth Orbit altitude
- Near instantaneous beacon signal detection using bent pipe technology – average 46 minutes faster compared to LEOSAR
- Reduced response times with multiple signal bursts to improve speed and accuracy of location calculation
- Close to 100% reliability due to multiple antenna systems and MEOLUT networking
- When fully operational next generation beacons will also have a return link signal through Galileo satellites
 - Acknowledge signal receipt
 - Control beacon – remotely activate, turn off or confirm false alarm
- Lives are already being saved with the early operational MEOSAR through faster alerts and greater accuracy, for example in Australia where McMurdo has just finished MEOSAR ground infrastructure installation.



SafePro EPIRB Range Specifications

406 MHz transmitter

Frequency	406.040 MHz + 1 kHz
Power output	5 W nominal
Modulation	Phase (16K0G1D)

121.5 MHz transmitter

Frequency	121.5 MHz +3.5 kHz
Power output	100 mW nominal
Modulation	Swept tone AM (3K20A3X)

AIS Transmitter (see Note 1)

Frequencies	161.975 MHz (AIS1); 162.025 MHz (AIS2)
Power output	2 W nominal
Modulation	Phase (16K0GXW)

GNSS receiver (See Note 2)

Constellations	GPS, GLONASS, Galileo
Frequencies	1575.42 MHz (GPS, Galileo); 1602.00 MHz (GLONASS)
Sensitivity	-167 dBm minimum
Satellites tracked	72 channel

Strobe light

Type	3 high intensity LEDs
Light output	0.2 cd minimum
Flash rate	23 flashes per minute

Battery

Type	Lithium iron disulphide
Operating life	48 hours minimum
Shelf life (in-service life)	10 years typical in service (see Note 3)

Environment

Operating temperature	-20 °C to +55 °C (-4° F to +131° F)
Storage temperature	-30 °C to +70 °C (-22° F to +158° F)
Automatic release depth	4 m maximum

Dimensions (EPIRB)

Weight	710 g
Height/Width/Depth	423 x 104 x 103 mm (incl. antenna)
Length of antenna	206 mm

Dimensions (Manual bracket)

Weight	110 g
Height/Width/Depth	270 x 125 x 121 mm

Dimensions (Float free enclosure)

Weight	1075 g
Height/Width/Depth	416 x 126 x 132 mm

Standards Applied (see Note 4)

COSPAS-SARSAT	C/S T.001 C/S T.007
Europe	MED (wheelmark)
USA	USCG & FCC; FCC ID: TBA; 4 7 CFR Parts 80, 2; Dependant on variant
International standards	IEC 61097-2; IEC 60945 incl. Corrigendum1; IEC 61108-1 (GNSS variant) RTCM 11000.4; Industry Canada RSS-287; AS/NZS 4280.1; IMO MSC/Circ. 862
IMO regulations	A.662(16); A.694(17); A.810(19); A.814(19)

Part Numbers

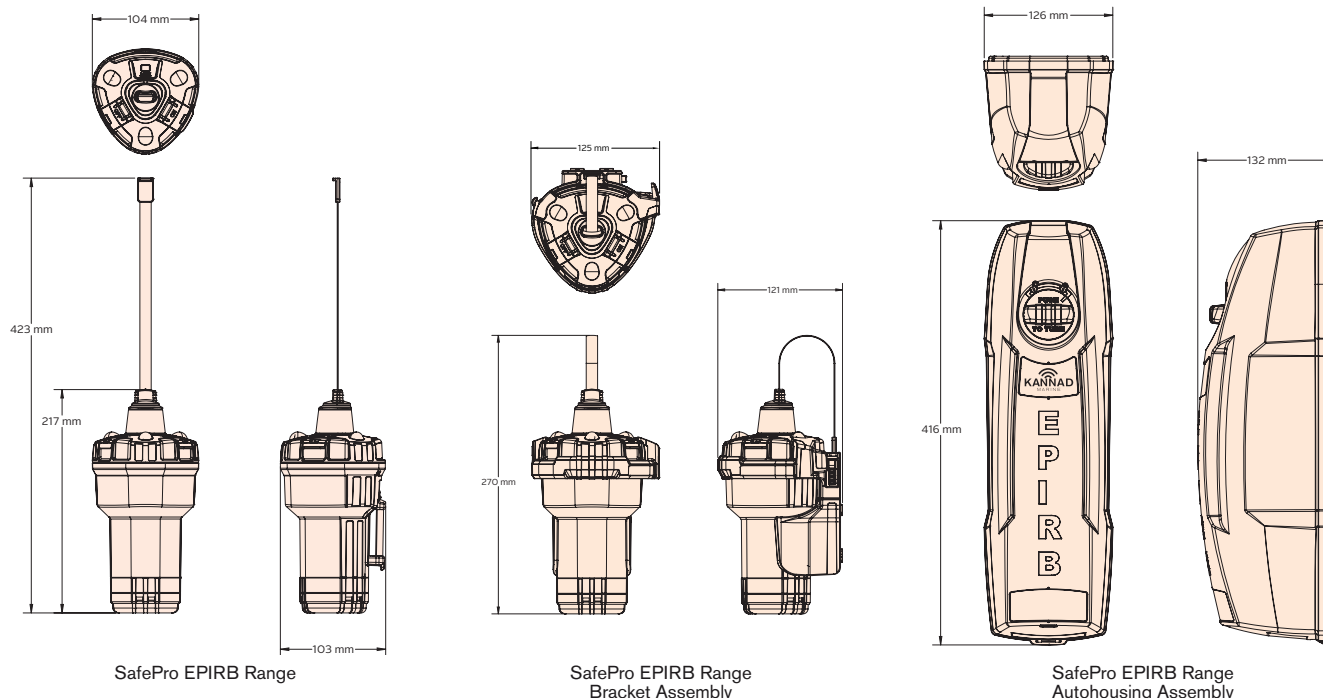
Kannad Safe Manual EPIRB	23-001-104A
Kannad Safe Auto EPIRB	23-001-154A
Kannad SafePro Manual EPIRB	23-001-102A
Kannad SafePro Auto EPIRB	23-001-152A
Kannad SafePro AIS Manual EPIRB	23-001-101A
Kannad SafePro AIS Auto EPIRB	23-001-151A

Note 1: AIS is available on the SafePro-AIS model only

Note 2: GNSS is available on the SafePro and SafePro-AIS models only

Note 3: As a responsible manufacturer Kannad Marine, as part of the McMurdo Group of businesses, recommends a 5-year health check at the nearest McMurdo approved service agent. Shore-based maintenance mandated vessels, battery health check or replacements should be carried out in accordance with flag Administration requirements and not exceeding 5 years.

Note 4: Approvals for the various standards is pending



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