# TYPE APPROVAL CERTIFICATE

For a 406 Megahertz Distress Beacon for Use with the Cospas-Sarsat Satellite System

## Certificate Number: 398

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|---|---|
| **Manufacturer:** | McMurdo Limited, United Kingdom |
| **Beacon Type(s):** | EPIRB Float Free/Non-Float Free |
| **Beacon Model:** | McMurdo SmartFind G8 PLUS AIS EPRIB (Z712) |
| **Additional Names:** | Kannad Marine SAFEPRO PLUS AIS EPIRB (Z712), SAILOR 4065 EPIRB GNSS/AIS (Z712); Samyung ENC SEP-600AIS (Z712) |
| **Test Laboratory:** | TÜV SÜD Product Service, UK |
| **Dates of Test:** | March 2022 – July 2024 |

Details of the beacon features and battery type are provided overleaf.

The Cospas-Sarsat Council hereby certifies that the 406 MHz Distress Beacon Model identified above is compatible with the Cospas-Sarsat System as defined in documents:

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| C/S T.001 | Specification for Cospas-Sarsat 406 MHz Distress Beacon | Issue 4 – Rev. 10, November 2022 |
| C/S T.007 | Cospas-Sarsat 406 MHz Distress Beacon Type Approval Standard | Issue 5 – Rev. 9, November 2022 |

Original TAC 289 issued on: **20 July 2017**
First Extension TAC 347 issued on: **22 October 2021**
Changes approved and TAC 398 issued on: **20 September 2024**

Dr. Shefali Juneja
Head of Cospas-Sarsat Secretariat

**NOTE, HOWEVER:**

1. This certificate does not authorize the operation or sale of any 406 MHz distress beacon. Such authorization may require type acceptance by national administrations in countries where the beacon will be distributed and may also be subject to national licensing requirements.

2. This certificate is intended only as a formal notification to the above identified manufacturer that the Cospas-Sarsat Council has determined, on the basis of test data of a beacon submitted by the manufacturer, that 406 MHz distress beacons of the type identified herein meet the standards for use with the Cospas-Sarsat System.

3. Although the manufacturer has formally stated that all beacons identified with the above model name(s) will meet the Cospas-Sarsat specification referenced above, this certificate is not a warranty and Cospas-Sarsat hereby expressly disclaims any and all liability arising out of or in connection with the issuance, use or misuse of the certificate.

4. This certificate is subject to revocation by the Cospas-Sarsat Council should the beacon type for which it is issued cease to meet the Cospas-Sarsat specification. A new certificate may be issued after satisfactory corrective action has been taken and correct performance demonstrated in accordance with the Cospas-Sarsat Type Approval Standard.

5. Cospas-Sarsat type approval testing requirements only address the electrical performance of the beacon at 406 MHz. Conformance of the beacon to operational and environmental requirements is the responsibility of national administrations.

6. This certificate authorizes the use of the registered name mark "Cospas-Sarsat" and of registered trademarks for the Programme's logos, for labelling, instruction materials, and marketing of the 406-MHz beacon model identified, but not for other marketing or sales purposes (i.e., not for general uses beyond this specific beacon model).

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| **Beacon Model(s):** | McMurdo SmartFind G8 PLUS AIS EPRIB (Z712);<br>Kannad Marine SAFEPRO PLUS AIS EPIRB (Z712);<br>SAILOR 4065 GNSS/AIS (Z712);<br>Samyung ENC SEP-600AIS (Z712) |
| **Operating Temperature Range (Class):** | from -20°C to +55°C (Class 2) |
| **Battery Details:** | Battery pack P/N 23-106B, 3 x 2 AA-size serially connected Energizer L91 Lithium Iron Disulfide cells |
| **Operating Lifetime:** | 48 hours |
| **Transmit Frequency:** | 406.040 MHz |

**Beacon Model Features:**

- Internal navigation device (GPS, GLONASS, Galileo), model u-Blox NEO-M9N;
- 121.5 MHz auxiliary radio locating device (power: 79 mW, duty cycle: 66 %, homer-transmitter sweep duty cycle: 37%);
- AIS location transmitter (frequency: 161.975 MHz/162.025 MHz, power: 1W)
- Built-in strobe light (light intensity - 0.75 cd, flash rate - 23 per minute);
- Beacon activation: manual and automatic via salt-water sensor;
- Self-test mode, one burst of 520 ms; and
- GNSS self-test mode, one burst of 520 ms.

**Approved Beacon Message Protocols:**          Beacon is approved for use with the message protocols indicated with "Yes" and black text below:

| USER PROTOCOLS | | USER-LOCATION PROTOCOLS | | LOCATION PROTOCOLS | |
|---|---|---|---|---|---|
| No | Maritime with MMSI | Yes | **Maritime with MMSI** | Yes | **Standard Location: EPIRB with MMSI** |
| No | Maritime with Radio Call Sign | Yes | **Maritime with Radio Call Sign** | Yes | **Standard Location: EPIRB with Serial Number** |
| No | EPIRB Float Free with Serial Number | Yes | **EPIRB Float Free with Serial Number** | No | Standard Location: ELT with 24-bit Address |
| No | EPIRB Non Float Free with Serial Number | Yes | **EPIRB Non Float Free with Serial Number** | No | Standard Location: ELT with Aircraft Operator Designator |
| No | Radio Call Sign | Yes | **Radio Call Sign** | No | Standard Location: ELT with Serial Number |
| No | Aviation | No | Aviation | No | Standard Location: PLB with Serial Number |
| No | ELT with Serial Number | No | ELT with Serial Number | Yes | **National Location: EPIRB** |
| No | ELT with Aircraft Operator and Serial Number | No | ELT with Aircraft Operator and Serial Number | No | National Location: ELT |
| No | ELT with Aircraft 24-bit Address | No | ELT with Aircraft 24-bit Address | No | National Location: PLB |
| No | PLB with Serial Number | No | PLB with Serial Number | No | RLS Location: EPIRB |
| No | National (Short Format Message) | | | No | RLS Location: ELT |
| No | National (Long Format Message) | | | No | RLS Location: PLB |
| | | | | No | RLS Location: MMSI |
| | | | | No | ELT(DT) Location: ELT with Serial Number |
| | | | | No | ELT(DT) Location: ELT with Aircraft Operator and Serial Number |
| | | | | No | ELT(DT) Location: ELT with Aircraft 24-bit Address |