

Type Approval Particulars

Inmarsat-C MES



Inmarsat Global Limited
 99 City Road
 London EC1Y 1AX
 United Kingdom
www.inmarsat.com

T +44 (0)20 7728 1000
 F +44 (0)20 7728 1044

MES Model: TT-3020C
Manufacturer: Thrane & Thrane
T.A.P. Number: TA-04-060-21
Certificate Number: IT-04-060-01
Issue Date: 16th February 2009

DCE Software Version Number: 3.36
DTE Software Version Number: 3.44

CATEGORY	ELEMENTS	STATUS
----------	----------	--------

1 MES TYPE		
1a	Pre CN114 GMDSS Maritime MES Category 1	
1b	SOLAS SES with Distress calling ☒	
1c	SOLAS SES without Distress calling	
1d	NON-SOLAS SES with Distress calling ☒	
1e	NON-SOLAS SES without Distress calling	
1f	Land Mobile Earth Station (for installation on vehicle)	
1g	Land Portable Earth Station	
1h	Aero-C	
1i	Others	

2 MES CLASS		
2a	Class 0 (stand-alone EGC or add-on to Inmarsat-A, -B, -M, etc.)	
2b	Class 1 (no EGC capability)	
2c	Class 2 (Inmarsat-C and EGC)	☒
2d	Class 3 (simultaneous Inmarsat-C and EGC)	

This MES includes an integrated GPS receiver. The Inmarsat Type Approval certifies that the MES meets all Inmarsat-C technical requirements whilst the GPS receiver is in operation. The operation and performance of the GPS receiver is not included in Inmarsat's Type Approval tests and these Type Approval Particulars do not imply any approval of the GPS receiver.

3 ANTENNA TYPE		
3a	Omnidirectional	Note 1
3b	Optimised (usable elevation angles) G/T	
3c	Directional G/T	
3d	Others	

4 UNIT CONFIGURATION		
4a	Separate antenna, combined DCE and DTE	
4b	Separate antenna, DCE, DTE	☒
4c	Combined antenna and DCE, separate DTE	
4d	Combined antenna, DCE and DTE	
4e	Integrated GPS	☒
4f	Maximum cable length between antenna and DCE	Note 2 / Note 3
4g	Remote distress button	Note 4
4h	Remote audible alarm	Note 4
4i	Character display CRT / LCD	☒
4j	Others	

5 MESSAGE PROTOCOL		
5a	Store-and-forward	☒
5b	Prefixed store-and-forward	☒
5c	Multi-addressing	☒
5d	Network access: Telex	☒
5e	PSDN	☒
5f	PSTN	☒
5g	MHS (X.400)	
5h	Closed network	☒
5i	Special access code, 2 digits	☒
5j	Special access code, more than 2 digits	☒
5k	Presentation codes: IA5	☒
5l	ITA2	☒
5m	Data	☒
5n	Maximum transmit message length	32K- TT 3001B Opt1 32K-TT3005M 10k- TT3005A
5o	Message storage capability	106k

6 DISTRESS ALERTING PROTOCOL		
6a	Maritime	Note 11
6b	Land Mobile	

7 DATA REPORTING PROTOCOL		
7a	DCE configuration I [sub-address = physical port](no. of ports)	
7b	DCE configuration II [sub-address = logical port]	☒
7c	DCE configuration I and II (no. of ports)	Note 5
7d	Unreserved	☒
7e	Program reserved	☒
7f	Program unreserved	☒
7g	Macro Encoded Messages	☒
7h	Data	☒
7i	Download/delete DNID	☒
7j	Position reporting	☒
7k	Sub-addressing	☒

8 POLLING PROTOCOL		
8a	Individual poll	<input checked="" type="checkbox"/>
8b	Group poll	<input checked="" type="checkbox"/>
8c	Area poll	<input checked="" type="checkbox"/>
8d	Unreserved	<input checked="" type="checkbox"/>
8e	Program reserved	<input checked="" type="checkbox"/>
8f	Program unreserved	<input checked="" type="checkbox"/>
8g	Macro Encoded Messages	<input checked="" type="checkbox"/>
8h	Data	<input checked="" type="checkbox"/>
8i	Download/delete DNID	<input checked="" type="checkbox"/>
8j	Maximum no. of DNIDs stored/no. of characters	25/23

9 EGC PROTOCOL		
9a	System EGC	<input checked="" type="checkbox"/>
9b	SafetyNET	<input checked="" type="checkbox"/>
9c	FleetNET	<input checked="" type="checkbox"/>
9d	Presentation code IA5	<input checked="" type="checkbox"/>
9e	ITA2	<input checked="" type="checkbox"/>
9f	Data	<input checked="" type="checkbox"/>
9g	Message storage capacity on EGC reception	106k
9h	Maximum number of ENIDs stored/no. of characters	25/23
9i	FleetNET reception in restoration mode	<input checked="" type="checkbox"/>
9j	Automatic identification of NAVAREA code from position	<input checked="" type="checkbox"/>
9k	Automatic identification of WMO/IHO chart area from position	
9l	Simultaneous entry of NAVAREA codes	<input checked="" type="checkbox"/>
9m	Simultaneous entry of NAVTEX codes	<input checked="" type="checkbox"/>
9n	Simultaneous reception of EGC messages	<input checked="" type="checkbox"/>

10 INTERFACES		
10a	DCE-DTE interface: RS232-C	<input checked="" type="checkbox"/>
10b	RS-449	
10c	Others	RS485 Arc Net & Alarm 1/0
10d	Inmarsat recommended DCE-DTE interface control codes	
10e	Navigational interface: IEC 61162-1 (NMEA)	<input checked="" type="checkbox"/>
10f	Others	<input checked="" type="checkbox"/>
10g	Printer interface (RS232/Centronix/others)	<input checked="" type="checkbox"/>

11 POSITION UPDATING		
11a	Automatic	<input checked="" type="checkbox"/>
11b	Manual	<input checked="" type="checkbox"/>

12 SCANNING		
12a	NCS scanning on BBER: Automatic (Pre-CN114 Maritime only)	
12b	Manual	<input checked="" type="checkbox"/>
12c	Others	

13 AS REQUIRED FOR SOLAS (GMDSS) COMPLIANCE Not applicable for Land Mobile Earth Stations*		
13a	DCE	<input checked="" type="checkbox"/>
13b	DTE	Note 6
13c	Printer	Note 7
13d	Others	

13 PRE-CHANGE NOTE 114 GMDSS COMPLIANCE Not applicable for Land Mobile Earth Stations		
13i	DCE	
13ii	DTE	
13iii	Printer	
13iv	Others	

14 POWER SUPPLY		
14a	AC	Note 9
14b	DC	Note 8 / Note 9
14c	Built-in battery	

15 ENVIRONMENTAL CONDITIONS*		
15a	As required for SOLAS (GMDSS)	<input checked="" type="checkbox"/>
15b	PRE-CN114 SOLAS (GMDSS)	
15c	for Inmarsat-C LMES	
15d	for Inmarsat-C LPES	
15e	for Aeronautical MES	
15f	Ice	Note 10
15g	Rain	<input checked="" type="checkbox"/>
15h	Wind	<input checked="" type="checkbox"/>
15i	Solar radiation	<input checked="" type="checkbox"/>
15j	Mechanical shock	<input checked="" type="checkbox"/>

16 EMC COMPLIANCE*		
16a	<u>Details attached</u> Compliant with IEC 945 & EMC Directive 89/336/EEC Article 10.2, EMC Assessment Certificate no:94 & no: 128 & 166	

17 DTE		
17a	<u>Models name and number</u> TT-3602D SVGA Monitor, SEA 6602 Monitor Message Terminals: Thrane & Thrane TT-3606A, SAILOR H2098B, SEA 6616 SAILOR H1640 Mono/Colour display SKANTI PCU 9000 Mono/Colour display Thrane & Thrane TT-3606E with colour display SAILOR TT-3606E, SAILOR DT464E Keyboards: Thrane & Thrane TT-3601A/B/E SAILOR H2099A SKANTI KBU 9000 SAILOR KB4641E	

18 OEM		
18a	<u>Models name and number</u> The following model is electrically and mechanically identical to the:- TT-3020C SAILOR SAT-C H2095C, SKANTI Scansat CT, SEA 6003 DEBEG 3220C, Husun 2095C, LMS-H2095C	

19 COMMENTS		
19a	Note 1:	TT-3001B OPT001, SAILOR TT- 3001B OPT 001 Coverage down to -15° TT-3005A, SAILOR TT- 3005A, SKANTI SCANSAT CT ANTENNA & TT-3005B Coverage down to -15°, TT-3005M Coverage down to -15°.
	Note 2:	Up to 100 meter cable allowed for use of TT-3001B OPT 001, SAILOR & SKANTI Up to 70 meter cable allowed for use of TT-3005A, TT-3005M (up to 100 meter cable allowed for use).
	Note 3:	19 dB attenuation for use of TT-3001B OPT 001, 10 dB attenuation for use of TT-3005A, SAILOR & SKANTI, 17dB attenuation for use of TT-3005M.
	Note 4:	Remote alarm distress box: Thrane & Thrane TT-3042C Thrane & Thrane TT-3042D (includes an additional printer) SKANTI AP 9010CT SKANTI AP9003 CT S P Radio AP4365 SKANTI AP1003 SAILOR C2149 Compact GMDSS Alarm Unit SAILOR 1604C, SEA 6042 SAILOR AP4365 Norcontrol AP4365 DEBEG 9565 HUSUN 4365 LMS Sperry AP4365 SAILOR AP5065 SAILOR AP5042
		TRANSAS C2149 Norcontrol C2149 DEBEG 3109 HUSUN 2149 Sperry C2149
	Note 5:	Additional port on TT-3606E only
	Note 6:	TT-3606A, TT-3602D, TT-3601A/B/E & TT-3606E
	Note 7:	Thrane & Thrane TT-3608A SAILOR H1252B SKANTI PRN 9000 Thrane & Thrane TT-3042D (includes an additional alarm distress box). Up to 7 TT-3042D (alarm panel printers) may be used.
	Note 8:	TT-3680M DC/DC converter to monitor (TT-3602D)
	Note 9:	TT-3680B AC/DC 200W PSU SAILOR H2096B SKANTI P2408 SKANTI PCH2424 SAILOR PCH4652 SAILOR PCH4652 DEBEG PCH4652 LMS PCH4652 HUSUN PCH4652 NORDCONTROL PCH4652 P2420 PS4665
	Note 10:	Up to 25mm (EME)
	Note 11:	Single Button Distress The AP5065 and AP5042 alarm panels must be connected to the DCE using the TT-3687 Alarm Panel Adapter.
	⌘ Not allowed for SCADA applications	

* Note any national / international regulatory type authority documentation used for compliance

Agreed on behalf of Inmarsat:



Ian Cooper
Product Manager
E&E Systems

Date: 15th August 2007