

## Technical Specification for miniature MRU.

1	Type	MEMS Based motion sensor.
2	Quantity	2 no's.
3	Heave Range	± 4m
4	Accuracy	5 cm
6	Roll & Pitch	Angle Range ± 30°
7	Connectivity	Split Box with RS 232 / 422 – 5 serial input & 3 series o/p
8	Power Supply	5 to 36 v DC
9	Software	Windows Based Application
10	Interface	<ul style="list-style-type: none"> <li>• RS 232 / RS 422 (NMEA, ASC II, Gyrocompass, TSS, Etc. /....)</li> <li>• Hypack / Teledyne PDS</li> </ul>
11	Software	<ul style="list-style-type: none"> <li>• Device Real time virtualization using GUI.</li> <li>• A USB key/ CD including software &amp; Tools</li> </ul>
12	Output Rate	≤ 200Hz userselectable.
13	Cable Length	≥ 5m
14	IHO Standard	Meet IHO Standards.
15	Temperature	0° C to 50° C
16	Warranty	Minimum 12 months including parts
17	Support	Free Technical & Hardware Support.
18	Vibration	8 g RMS (20 Hz to 200 k Hz per MIL-STD 810G
19	Application	Hydrography, Dynamic Positioning, etc...
20	Housing Material	IP 68 Marine grade – Titanium/SS / Anodized Aluminum.
21	Mounting Accessories.	Complete Motion sensor Mounting Accessories.
22	Manuals & Technical literature	<ul style="list-style-type: none"> <li>• Two Sets of Manual copy with complete technical details such as circuit description, detailed wiring diagrams to be provided to IITM.</li> <li>• All necessary details such as drawings, dimensions, weight and power consumption of the system to be provided.</li> </ul>
23	<b>Warranty</b>	<b>1 Year</b>
24	<b>Delivery</b>	<b>4-5 Weeks</b>
25	<b>Payment Terms</b>	<b>After Supply</b>
26	<b>Installation</b>	<b>After Delivery Demo required</b>



**Indian Institute of Technology Madras**  
**DEPARTMENT OF OCEAN ENGINEERING**

**Ref.No.**

**Date : 12/02/2021**

OE	2020	002	DEPT	SNAL
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**Dear Sirs,**

**DUE DATE : 22/02/2021**

Quotations are invited in duplicate for the various items shown below / overleaf / Enclosed list.

1. The **Quotations are to be in two parts as Technical Offer and as Commercial offer** : The two parts of the offer in separate envelopes must be enclosed in the one bigger envelope duly sealed and superscribed with the reference No. and due date, and must be addressed to the undersigned so as to reach him on or before the due date stipulated above.
2. ***Fax and Email quotation are not acceptable***
3. Quotations should be valid for 60 days from the due date and the period of delivery required , warranty terms etc., should also be clearly indicated. A minimum of one year warranty is required from the date of commissioning.
4. Imported supplies should be quoted for **CIF Chennai**.
5. Local firms to quote for free delivery to this Institute .If quoted for Ex-Godown delivery charges be indicated separately.
6. Relevant literature pertaining to the items quoted with full specifications(and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples/Machines/equipment if called for, should be submitted/demonstrated at free of charges, and collected back at the supplier's expenses. Compliancy certificate is to be provided indicating conformity to the technical specifications.
7. GST and such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted . If this is not indicated no such claim will be admitted at any stage.
8. Goods should be supplied carriage paid and insured.
9. Goods shall not be supplied without an official supply order.
10. If the item is under DGS&D Rate contract No. and price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the rate contract price( Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
11. The guarantee period of the item may be indicated clearly.
12. The payment will be made after completion of the supply and satisfactory installation of the Equipment/item.

13. **Acceptance and Rejection:-** IIT.Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

14. The quotes should be addressed to

**The Head,  
Department of Ocean Engineering ,  
IITMadras,Chennai-600036.**