

Technical Specifications for 4-Channel Signal Conditioner

SL.NO	Description	Parameters
1.	Channels	4
2.	Sensor Input Type(s)	ICP®, Voltage
3.	Voltage Gain ($\pm 1\%$) (at 500 Hz)	x1, x10, x100
4.	Output Range (Maximum)	± 10 V
5.	Low Frequency Response (-5%)	<0.05 Hz
6.	High Frequency Response (-3 dB) (x100)	>50000 Hz
7.	High Frequency Response (-5%) (x100)	>17 kHz
8.	High Frequency Response (-5%) (x1)	>100 kHz
9.	High Frequency Response (-5%) (x10)	>40 kHz
10.	High Frequency Response (-3 dB) (x1x10)	>100 kHz
11.	Phase Response (at 1 kHz)	$\pm 1^\circ$
12.	Cross Talk (maximum)	-72 dB
13.	Fault/Bias Monitor/Meter (LED)	Open/Short/Overload
14.	Temperature Range (Operating)	0 to +50 °C
15.	Power Required (for supplied AC power adaptor)	AC Power
16.	Power Required (direct input to unit)	DC Power
17.	AC Power (47 to 63 Hz)	100 to 240 VAC
18.	AC Power	≤ 0.7 Amps
19.	DC Power	<0.25 Amps
20.	DC Power	+32 to 38 VDC
21.	Excitation Voltage (± 1 VDC) (To Sensor)	+26 VDC
22.	DC Offset	<20 mV
23.	Constant Current Excitation (To Sensor)	0 to 20 mA
24.	Discharge Time Constant (0 to 50 %)	>7 sec
25.	Broadband Electrical Noise (1 to 10000 Hz) (Gain x1)	5.6 μ V rms
26.	Spectral Noise (1 Hz)	0.67 μ V/vHz
27.	Spectral Noise (10 Hz)	0.10 μ V/vHz
28.	Spectral Noise (100 Hz)	0.06 μ V/vHz
29.	Spectral Noise (1 kHz)	0.06 μ V/vHz
30.	Spectral Noise (10 kHz)	0.05 μ V/vHz
31.	Broadband Electrical Noise (1 to 10000 Hz) (Gain x10)	21 μ V/rms
32.	Spectral Noise (1 Hz)	5.10 μ V/vHz
33.	Spectral Noise (10 Hz)	0.60 μ V/vHz
34.	Spectral Noise (100 Hz)	0.22 μ V/vHz
35.	Spectral Noise (1 kHz)	0.22 μ V/vHz
36.	Spectral Noise (10 kHz)	0.19 μ V/vHz
37.	Broadband Electrical Noise (1 to 10000 Hz) (Gain x100)	165 μ V/rms
38.	Spectral Noise (1 Hz)	57 μ V/vHz
39.	Spectral Noise (10 Hz)	5.2 μ V/vHz
40.	Spectral Noise (100 Hz)	1.7 μ V/vHz
41.	Spectral Noise (1 kHz)	1.8 μ V/vHz
42.	Spectral Noise (10 kHz)	1.4 μ V/vHz
43.	Overload Threshold (± 1.0 Vpk)	$\pm 10/5$ Vpk
44.	Electrical Connector (ICP® Sensor Input)	BNC Jack
45.	Electrical Connector (Output)	BNC Jack

46.	Electrical Connector (DC Power Input)	5-socket DIN (female)
47.	Size - Height	8.1 cm
48.	Size - Width	20 cm
49.	Size - Depth	15 cm
50.	Weight	567 gm
51.	Quantity	10Nos.
52.	Warranty	12 Months
53.	Delivery	10-12 Weeks
54.	Payment	Advance Payment
55.	Installation	Not required
56.	Estimation	7 Lakhs

Sd/-



Indian Institute of Technology Madras
DEPARTMENT OF OCEAN ENGINEERING

Ref.No.

Date : 12/02/2021

OE	2020	003	DEPT	VSRR
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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.**