

ANNEXURE TO TENDER NO. DPS/MRPU/1/5/2253

1. Description of the ITEM: Signal conditioning modules

2. Detailed SPECIFICATIONS and Quantity:

a) Isolated analog voltage input module: 10 nos

Input range: 0 to +100mV
Bias current: ± 0.5 nA maximum
Input Resistance, Normal: 50 M Ω or more
Input Resistance, power off: 30 k Ω or more
Input Resistance, overload: 30 k Ω or more
Output Signal range: 0 to +10V
Power: 40mW maximum
CMV Input to output: 1500 Vrms minimum
CMRR: 160dB minimum
Accuracy: Better than $\pm 0.03\%$
Linearity: Better than $\pm 0.1\%$
Temperature stability: ± 35 ppm/ $^{\circ}$ C maximum
Noise at 5MHz Bandwidth: 500uV peak to peak
Noise at 10Hz to 100 kHz Bandwidth: 250uV rms
Bandwidth, -3dB: 3Hz
NMR @ 50Hz: 80 dB minimum
Step response, 90% span: 165ms maximum
Supply voltage: 14 to 35V dc
Current: 12mA maximum

b) Isolated analog voltage input module: 10 nos

Input range: 0 to +10V
Bias current: ± 0.05 nA maximum
Input Resistance, Normal: 500 k Ω or more
Input Resistance, power off: 500 k Ω or more
Input Resistance, overload: 500 k Ω or more
Output Signal range: 0 to +10V
Power: 40mW maximum
CMV Input to output: 1500 Vrms minimum
CMRR: 120dB minimum
Accuracy: Better than $\pm 0.03\%$
Linearity: Better than $\pm 0.1\%$
Temperature stability: ± 55 ppm/ $^{\circ}$ C maximum
Noise at 5MHz Bandwidth: 500uV peak to peak
Noise at 10Hz to 100 kHz Bandwidth: 250uV rms
Bandwidth, -3dB: 3Hz
NMR @ 50Hz: 80 dB minimum
Step response, 90% span: 150ms maximum
Supply voltage: 14 to 35V dc
Current: 12mA

c) Isolated current output modules: 10 nos

Input range: 0 to +10V
Bias current: ± 1 nA maximum

Input Resistance, Normal: 10M Ω or more
Input Resistance, power off: 30 k Ω or more
Input Resistance, overload: 30 k Ω or more
Input protection: \pm 35V peak
Output Signal range: 0 to 20mA
Power: 320mW maximum
Current limit: 32mA
CMV Input to output: 1500 Vrms minimum
CMRR: 160dB minimum
Accuracy: Better than \pm 0.03%
Linearity: Better than \pm 0.1%
Temperature stability: \pm 25ppm/ $^{\circ}$ C maximum
Noise at 5MHz Bandwidth: 46uA peak to peak
Noise at 10Hz to 100 kHz Bandwidth: 4uA RMS
Bandwidth, -3dB: 100Hz
NMR (-3dB at 100Hz): 80 dB per decade above 100Hz
Step response, 90% span: 5ms maximum
Supply voltage: 18 to 35V dc
Current: 56mA

Evaluation criteria

- All the items shall meet the tender specifications. Items which don't meet the tender specifications will not be considered.
- All the items shall be covered by a standard warranty for a minimum of 1 year
- The supplier/bidder shall arrange the necessary testing facilities for testing the items being procured during the pre-dispatch inspection, if carried out.
- Bids shall be for all the items, partial offer is not acceptable.
- Supplier/bidder shall have relevant past experience in supplying the items being procured as a manufacturer/authorized dealer/third party vendor. Proof for being a manufacturer or authorized dealer may be supplied along with the offer. Third party vendors may supply proof for successful execution.
- Supplier/bidder shall supply technical details of the goods being bid in the form of data sheets, catalogues as applicable along with the offer failing which the offer will be rejected.

Acceptance criteria

- Final acceptance of the good supplied will be given only after successful testing and performance demonstration at user site.