Tender document
Department of BSBE
Indian Institute of Technology Kanpur
Kanpur (UP) 208016 India

Enquiry No: IITK/BSBE/AR/22-23/020622

Sub.: Inquiry for Biploar Constant Current Stimulator Digitimer

Inquiry date:02/06/2022

Last date:14/06/2022

Opening date:15/06/2022

Kindly quote your (Technical bid and price bid separately) are invited for the above-mentioned laboratory product as per the technical specifications given below:

It is to request you to send the details on the given email: arjunr@iitk.ac

Terms and Conditions:

1. Maximum discount on the product should be offered.
2. Quotations should be valid for minimum 90 days, or more.
3. Complete bank details should be submitted.
4. Delivery should be FOB,CIF & DAP
5. IIT Kanpur is fully exempted from payment of GST on imported goods against our DSIR certificate.
6. IIT Kanpur is partially exempted from payment of customs duty and exemption certificate will be provided.
7. Manufacturer authorization certificate from principal company is required if you are a distributor.
8. Include proprietary item certificate, if applicable.
9. The Institute reserves the right of accepting or rejecting any quotation without assigning any reason thereof.
10. All prices should be mentioned including delivery and installation to IIT Kanpur.
11. Payment terms should be 50% Advance & 50% after the delivery of the material.

Technical Specifications for Bipolar Constant Current Stimulator Digitimer

Stimulus Output

- **Current Output:** 2mA to 1000.0mA, incrementing in 0.1mA steps; accuracy ±(5% +2). For example, a set current of 100.0mA will be 100mA ± 5.2mA and a set current of 10mA will be 10mA ± 0.7mA
- **Pulse Duration:** 50-2000µs, incrementing by 10µs steps; accuracy ±2%.
- **Interphase Interval:** 1µs – 990µs in 10µs steps; accuracy ±2%.
- **Recovery Phase Ratio:** 10%-100% in 1% steps; accuracy ±2%.
- **Pulse Mode:** Monophasic or Biphasic
- **Pulse Polarity:** Positive/Negative/Alternating.
- **Compliance Limit:** 400V
- **Energy Limit:** 300mJ per pulse
- **Output Enable:** On/Off Momentary action toggle switch
- **Connections:** 4mm shrouded sockets (red and black) on 3/4" centres

Trigger

- Maximum hardware trigger rate is 1,000 pps (1 kHz); ±1%
- Maximum software (USB) trigger rate is 10pps (10Hz); ±1%
- Front panel: Push button
- Rear panel: 3.5mm mono jack socket for hand or foot switch (contact closure)
- TRIGGER INPUT Electrical via Rear Panel BNC socket: Triggers: Logic signal (+3V to +15V) +ve edge, TTL
- compatible. Minimum Pulse Duration is 5 microseconds.
- SYNC OUTPUT Rear panel BNC, positive TTL pulse, 100µs ± 20% duration.

External Amplitude Control

- **Working input range:** +20mV to +10V (equivalent to 2mA to 1000mA). Voltages below 20mV will give the minimum output of 2mA.
- **Lag:** 1ms (i.e. the DS8R will respond to amplitude changes at a maximum frequency of 1kHz)
- **Accuracy:** ±1mA

Front Panel Indicators

- TRIGGER LED - Amber, flashes for each trigger received
- FAULT/ERROR LED – Steady Amber, indicating internal hardware fault. Flashing Amber, indicating firmware update
- in progress.
- LCD Display Showing:-
- Set Current, Set Pulse Duration, Set Recovery Phase Ratio, Set Interphase Interval, Pulse Mode, Polarity Mode.

- Amplitude Control Mode.
- Pulse Measurements, including Current (mA), Energy (mJ), Impedance (Ohms), Voltage (V)
- Stimulus Output Status Indicators
- USB Communication Indicator
- Audible Out of Compliance Warning (optional mute)

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