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SPEED POST



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SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT
GUJARAT-395 007

No. DoME/RSY/ARDB Project/ 2425 / 2025-26 11022

Date: 17/10/2025

To,
Institute Website

17 OCT 2025

SUB: - Enquiry for DC Power Supply Systems

Dear Sir,

You are requested to quote your prices for supply of stores listed overleaf. The quotations may be sent to the undersigned in a sealed envelope and subscribed as: "Quotation with reference to Enquiry No. DoME/RSY/ARDB Project/ 2425 / 2025-26 dated: 10/2025. Your quotation should reach the undersigned on or before **05/11/2025 at 5:00 pm.**

The quotations should be furnished with the following information.

- 1) The brand or make of each item should be specifically stated and wherever necessary, Complete set of specifications and dimensions should be given.
- 2) If asked, samples accompany the quotations
- 3) Sales tax, General tax, Central Sales tax, Custom duty, Insurance charges, Packing and Forwarding charges, if not included in the prices quoted, should be clearly specified.
- 4) The period of validity of the quotation should be at least 45 Days. Offers subject to prior sale may please be avoided.
- 5) The delivery period is to be clearly mentioned in the quotation.
- 6) The mode of delivery of the stores may be mentioned. The delivery should be F.O.R. Surat or at the Institute.
- 7) All concessions available to an educational institution should be specified and also taken into account while quoting.
- 8) This Institute is located within the limits of S.M.C. & exempted from the paying of octroi duty on incoming goods from outside limits of S.M.C.
- 9) This Institute is registered with the Dept. of Scientific & Industrial Research (DSIR) for the purpose of availing custom duty exemption & central excise duty exemption, and hence the certificate to this effect will be issued wherever it is necessary on demand.
- 10) Payment is normally made by cheque drawn on the S.V.N.I.T. Branch Office of State Bank of India, Surat-395007 within a period of thirty days from the date of receipt of stores.
- 11) Your specifications & terms- conditions should be as per the format attached, must be on your company letterhead & signed by an authorized person.
- 12) Offered quotation may be rejected if any ambiguity is found in offered specifications, terms & conditions supplied by party in specified tabular format.
- 13) The Director reserves the right to accept stores, which are not strictly in confirming with the specifications but otherwise, found suitable.

Yours faithfully,

Head, Dept. of Mech. Engg.

RSY

17.10.25

Technical Specifications of the DC Power Supply Systems

(A) Electrolytic Power/Voltage Supply:		
S.No.	Parameters	Specification
a) Input Parameters		
1.	Input Voltage	220V – 240 V, I-Phase AC $\pm$ 10%
2.	Input Frequency	50 Hz / 60 Hz
b) Output Parameters		
3.	Voltage Output in Two Modes	• Variable Pulsed-DC Voltage Mode • Variable DC Voltage Mode
4.	Output DC Voltage Range	0 – 40 V or Higher [0-70 V DC]
5.	Output DC Current Range	0 – 40 A or Higher
6.	Voltage Regulation	$\pm$ 1% (Stable Output Voltage)
7.	Current Regulation	$\pm$ 1% (Prevents Overcurrent Damage)
8.	Ripple (DC Output)	$\leq$ 1% RMS
9.	Efficiency	$\geq$ 90% at Full load
10.	Power Factor	$\geq$ 0.9
c) Pulse Parameters		
11.	Pulse On-Time Range	1 millisecond or lower to 1 min or higher
12.	Pulse Off-Time Range	1 millisecond or lower to 1 min or higher
13.	Duty Cycle Range	0 to 90 % or higher
14.	Pulse dv/dt	300 V/microseconds
15.	Pulse rise time	< 500 nanoseconds
16.	Pulse fall time	< 500 nanoseconds
17.	Pulse drop	< 5% for 50% load
d) Reading Display and Control Parameters		
18.	Control Options	Manual, Digital, Remote (controllable using microcontroller)
19.	Digital display	• Input AC Voltage • Output DC Voltage • Output DC Current (from micro/milli ampere to ampere) • Pulse On-Time or Frequency of output DC Voltage • Pulse Off-Time or Duty Cycle of output DC Voltage
e) Protection Features		
20.	Operational overload trip	Over-voltage, Over-current, Short-circuit, Over-temperature, Input Surge
23.	Cooling Method	Natural air / Forced air
24.	Enclosure Protection	IP54 / IP65 (Industrial-grade; dust/water protection)
25.	Mounting Type	Bench-top
26.	Advanced Features	Logging: 0 to 5 V for current and voltage logging, no internal logging
27.	Front Controls and Indicators	• MCB (Operational overload trip) • Overload LED indicator • AC Power Input Port • Mains ON, • Start Push button, • Voltage Amplitude settable ten turn pot knob or with digital input with keypad, • Current Limit settable ten turn knob or with digital input with keypad, • Output Pulsed-DC Voltage Regulator knob • Output Pulsed-DC Current Regulator knob • Emergency Stop Stay put Mushroom Push button, • Pulse On-Time settable using knob or digital input with keypad, • Pulse Off-Time settable using knob or digital input with

		keypad, Or • Pulse Frequency settable using knob or digital input with keypad • Pulse Duty Cycle settable using knob or digital input with keypad • Cooling Fan • Other essential safety feature like input/output fuse.
(B)	Power Supply to Electromagnet/Coil:	
a)	Input Parameters	
1.	Input Voltage	220V – 240 V, I-Phase AC $\pm 10\%$
2.	Input Frequency	50 Hz / 60 Hz
b)	Output Parameters	
5.	Output Voltage Range	0 – 60 V or Higher DC Voltage
6.	Output Current Range	0 – 50 A or Higher DC Current
7.	Voltage Regulation	$\pm 1\%$ (Stable Output Voltage)
8.	Current Regulation	Fixed coil resistance load
9.	Ripple (DC Output)	$\leq 1\%$ RMS
10.	Efficiency	$\geq 90\%$ at Full load
11.	Power Factor	≥ 0.9
c)	Reading Display and Control Parameters	
12.	Control Options	Manual/Remote (controllable using microcontroller)
13.	Digital display	• Output DC Voltage • Output DC Current (from milli ampere to ampere)
d)	Protection Features	
14.	Operational overload trip	Over-voltage, Over-current, Short-circuit, Over-temperature, Input Surge
15.	Cooling Method	Natural air / Forced air
16.	Enclosure Protection	IP54 / IP65 (Industrial-grade; dust/water protection)
17.	Mounting Type	Bench-top
18.	Advanced Features	Logging: 0 to 5 V for current and voltage logging, no internal logging
19.	Front Controls and Indicators	• MCB (Operational overload trip) • Overload LED indicator • Mains ON, • Voltage Amplitude settable ten turn pot knob or with digital input with keypad, • Current Limit settable ten turn knob or with digital input with keypad, • Start Push button, • Emergency Stop Stay put Mushroom Push button • Other essential safety feature if any.
(C)	Power Supply to XYZ Axes Positioning System:	
a)	Input Parameters	
1.	Input Voltage	220V – 240 V, I-Phase AC $\pm 10\%$
2.	Input Frequency	50 Hz / 60 Hz
b)	Output Parameters	
3.	Output Voltage Range	0 – 40 V or Higher DC Voltage
4.	Output Current Range	0 – 5 A or Higher DC Current
5.	Voltage Regulation	$\pm 1\%$ (Stable Output Voltage)
6.	Current Regulation	$\pm 1\%$ (Prevents Overcurrent Damage)
7.	Ripple (DC Output)	$\leq 1\%$ RMS
8.	Efficiency	$\geq 90\%$ at Full load
9.	Power Factor	≥ 0.9

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c) Reading Display and Control Parameters		
10.	Control Options	Manual, Digital
11.	Digital display	• Output DC Voltage • Output DC Current
d) Protection Features		
12.	Optional overload trip	Over-voltage, Over-current, Short-circuit, Over-temperature, Input Surge
13.	Cooling Method	Natural air / Forced air
14.	Enclosure Protection	IP54 / IP65 (Industrial-grade; dust/water protection)
15.	Mounting Type	Bench-top
16.	Advanced Features	0 to 10 V for output current signal
17.	Front Controls and Indicators	• MCB (Operational overload trip) • Overload LED indicator • Mains ON, • AC Input Power Port • Voltage Amplitude settable ten turn pot knob or with digital input with keypad, • Current Limit settable ten turn knob or with digital input with keypad, • Start Push button, • Emergency Stop Stay put Mushroom Push button, • Cooling Fan, • Freewheeling diode and EMI/RFI filter. • Other essential safety feature if any.
(D) Power Supply to Vibration Solenoid:		
a) Input Parameters		
	Input Voltage	220V – 240 V, I-Phase AC $\pm 10\%$
	Input Frequency	50 Hz / 60 Hz
b) Output Parameters		
	Output Duty Cycle Range	Variable Duty Cycle Range within 0 - 80 %
	Output Frequency of Pulses	Variable Frequency of Pulsed-DC Voltage within 0 - 10 Hz
	Output Voltage Range	110 V DC or Higher DC Voltage
	Output Current Range	5-10 A DC Current
	Voltage Regulation	$\pm 1\%$ (Stable Output Voltage)
	Current Regulation	$\pm 1\%$ (Prevents Overcurrent Damage)
	Ripple (DC Output)	NA
	Efficiency	$\geq 90\%$ at Full load
	Power Factor	≥ 0.9
c) Pulse Parameters		
	Pulse Frequency	0 – 10 Hz
	Duty Cycle Range	0 - 80 %
	Pulse dv/dt	300 V /microseconds
	Pulse rise time	<500 nanoseconds
	Pulse fall time	< 500 nanoseconds
	Pulse drop	<5% for 50% load
d) Reading Display and Control Parameters		
	Control Options	Manual, Digital, Remote (controllable using microcontroller)
	Digital display	• Output DC Voltage • Output DC Current • Frequency of Pulsed-DC Voltage • Duty Cycle of output Pulsed-DC Voltage
e) Protection Features		
	Optional overload trip	Over-voltage, Over-current, Short-circuit, Over-temperature, Input Surge

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	Cooling Method	Natural air / Forced air
	Enclosure Protection	IP54 / IP65 (Industrial-grade; dust/water protection)
	Mounting Type	Bench-top
	Advanced Features	Pulse DC, Reverse polarity
	Front Controls and Indicators	• MCB (Optional overload trip) • Overload LED indicator • AC Power Input Port • Mains ON, • Start Push button, • Voltage Amplitude settable ten turn pot knob or with digital input with keypad, • Current Limit settable ten turn knob or with digital input with keypad, • Pulse Frequency settable using knob or digital input with keypad, • Pulse Duty Cycle settable using knob or digital input with keypad • Emergency Stop Stay put Mushroom Push button, • Cooling Fan • Other essential safety feature if any.
(E)	Others Requirements	
1.	User/ Operating manual	User manual (for operation and safety)
2.	Warranty	1 Year or more Standard Warranty for each

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