

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)					
Revision No. : 04			Issue No : 2		
Dt of Revision : 27.08.2020			Issue Dt. : 30.06.2003		
Page No. : 1 of 2			Issued by : P A		
Section : Formats			Documents : PPM		
Topic : Technical Specifications format			FORMAT NO.-CPRI/PUR/eTBD/GTP		
Section IV T -Technical Specification					
CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/ BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI					
Tender Enquiry No : CPRI/BLR21SCL06MB19					
Description of the Equipment/ Goods/ Services : 16 Channel Sequential Controller					
Note : 1) The technical bid submitted in other than this format is liable to be rejected.					
2) All blue fields are mandatorily to be filled in.					
Name and address of the bidder					
Quotation Number and Date					
SL.No.	Technical Specifications/Parameters	Qty	To be completed by the Bidder		
			Details of guaranteed technical parameters offered by the bidder	Guaranteed Technical Particulars (GTP)	Deviations from GTP
1	Application :The Sequential Controller (STP) is used for sequencing short circuit /endurance tests with AC / DC supply in the laboratory . The functioning of the sequencer should be highly reliable in view of high noise & electromagnetic induction fields. The sequencer shall be portable, rugged and standalone system. The sequencer is used for tests which are destructive & non-repetitive. Due to any malfunctioning of the sequencer the tests cannot be repeated and hence the sequencer should be highly reliable functioning unit.	1 no			
2	Scope: Includes supply & installation at SC lab, CPRI, Bengaluru				
3	Service Condition:The instrument shall be suitable for operation under following conditions				
a	Ambient Temperature: Minimum 5°C; Maximum 40° C;				
b	Atmospheric condition: Normal				
c	Relative Humidity(non-condensing): Max. 90%				
4	Technical Details				
a	ON/OFF timing range: 0 – 3600 seconds (with milli second resolution) ON & OFF time setting on each channel in suitable steps.				
b	Time interval range: 0-3600 seconds				
c	Point-On-Wave feature (Synchronization): The STP shall accept the synchronizing inputs (from the test source of voltage upto 1000V with dimmer arrangement and 230V ac 50/60Hz from auxiliary supply) The starting of the sequence shall be synchronized with the synchronizing input with a predefined delay angle (time) from 0-360 degree with a resolution of 1 degree. There shall be selector switch (through hardware or software) to select the type of synchronizing input.				
d	No. of output channels/relays: 16 (Isolated)				
e	Isolation: 3kV ac rms (between channel to channel, channel to ground & channel to control input) with suitable optical isolation technique				
f	Operating mode: Cyclic / Single shot				
g	Counter: 6 digit counter to count from 0- 999999 cycles				
h	Accuracy of timing: ±0.05%				
i	Push buttons: Start and Stop operations on STP to be provided.				
j	Output relays: Each relay unit shall be rated to 10A 415 V AC & DC- solid state relay based. The relays shall be able to switch solenoids, coils, trip mechanisms, relays which are highly inductive.				
k	Supply voltage: 180-250V ac, 50 Hz. Single Phase				
l	Construction: The enclosure shall be rugged and destop mounted. The entire system i.e. STP, synchronizing unit and relay modules shall be housed approximate size of enclosure 50 cm X 35 cm X 25 cm. The enclosure shall be made of powder coated sheet metal of more than 2.5 mm thick . Suitable cooling system shall be provided. Desktop computer(CPU, Monitor and Keyboard) shall be kept adjacent to the Sequential controller box. Suitable interfacing cable shall be provided for the length of 5 m approx.				
m	Mock run: Option for 'Mock' run without actuating the output relays shall be provided				

PROCUREMENT PROCEDURE OF CPRI (NON WORKS)				Issue No : 2 Issue Dt : 30.06.2003 Issued by : P A Documents : PPM	
Revision No. : 04 Dt of Revision : 27.08.2020 Page No. : 2 of 2 Section : Formats Topic : Technical Specifications format				FORMAT NO.:CPRI/PUR/eTBID/GTP	
Section IV T -Technical Specification					
CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL Web: www.cpri.in, www.tenderwizard.com/CPRI					
n	Overcurrent protection: Each output relay shall have overcurrent protection in case of faults in output circuit. Same shall be indicated by an individual LED.				
o	Software: Suitable window based software shall be supplied to program the STP from PC. After programming the sequence, the same shall be transmitted to the internal memory of the STP through reliable communication and STP shall run independent of the PC. The software shall have user friendly GUI with display of timing diagram. It shall be possible to have a software for the option of using set of each 5 channels independently and all 16 channels combinedly.				
p	Warranty: 2 years on-site from the date of commissioning				
q	PC: Branded Intel 8th/9th Generation Intel® Core™ i7 processor or latest with speed of 2.0 GHZ minimum base frequency with 1 TB HDD 8GB (minimum) RAM 21.5" Full HD display monitor with Windows 10 operating system and OFFICE 2003 or higher. Wi-Fi, HDMI Supported				
r	Component & spares: All the bought out items (including relays) shall be of reputed make and shall easily be sourced. Spares shall be identified as optional or mandatory and shall be quoted separately.				
s	HW Queries : Sufficient internal memory shall be required to store the program sequence of the sequencer in specified name. It shall be possible to retrieve back the program sequence again when required. It shall have counter, to count the number of operations. Completed number of operations shall be stored in memory. If we reset the STP, counter shall start from zero. internal battery shall be provided to complete the immediate next test cycle/ the sequence in case of failure of power in the middle of a sequence.				
t	Additional details: Require detail on Widows Application requirement for PC Require details on sequence to be generated when individual channels are accessed software shall also be designed to create templates of the sequences and store these in the hard disk for later use				
u	Protection: STP shall stop the sequence if current is flowing through the circuit for more than the set time. For sensing the current, CT output in the range of 0 to 0.5 V will be provided.				
v	Additional features: current shall be possible to stop at immediate next zero closing also. Also, Current shall be possible to control for half cycle (around 10 ms)				
5	Demonstration: Bidder shall give complete demonstration of the instrument at the time installation about the complete functionalities & usage of the instrument				
6	Manuals: operating instructions manual shall be furnished along with the instrument				
PN: 1) Mere statement of "Complied" do not suffice the requirement. The details of technical parameters in proof of CPRI requirements shall be furnished along with technical write-up, catalogues, brochures, literatures, phamplates, or any other documents shall be submitted in hard copy along with technical bid. 2) Calibration reports/certificates, factory test reports/certificates from an accredited agencies/facilities shall be submitted wherever applicable. 3) CPRI reserves the right to conduct "predispatch inspection" prior to dispatch at the works of the supplier and the expenditure towards PDI shall be borne by CPRI. However information regarding the rediness of the equipment/machinery for the PDI shall be communicated in writing at lease 70 days in advance.					