



Tuesday 11th January 2011

STFC Rutherford Appleton Laboratory
Harwell Science and Innovation Campus
Didcot
OX11 0QX

For the attention of Ian Mullacrane

Dear Ian

Our Quotation Reference: Q1155Rev3/pw/cpp/110111

Further to our recent telephone conversation on behalf of Computer Power Protection, we thank you for your enquiry and have pleasure in submitting our proposal for the supply of a UPS and associated services as detailed.

Your requirement was as follows - 20kVA 3Phase UPS with 2 hours back-up at full load

During the site visit we discussed various requirements which we have detailed below and updated the quotation as applicable

- Due to space requirements the battery should be on a cladded rack with a maximum depth of 500mm
- The external manual maintenance bypass switch was no longer required
- The UPS was to have a volt free card
- The generator was to have a volt free card which will provide the following alarm notifications – generator running, generator fault and low fuel level.
- STFC will install all cabling requirements for the UPS with CPP to provide electrical services as detailed.

Computer Power Protection are an experienced, knowledgeable and professional supplier of power protection solutions who advise customers openly and honestly on any solution offered and whilst we are pleased to submit a quotation against your requirements we are concerned as to the UPS rating as this is being used with motors.

Electrical Installation & Battery Build – STFC advised that they would supply and install all suitably protected and terminated 63Amp 3 phase, 4 wire incoming AC supply into the UPS room with an outgoing UPS supported distribution board fitted on the wall opposite the door in the UPS room. CPP were to make final terminations of cabling into the generator, carry out build and installation of the battery rack along with all AC work from the customer supplied 63Amp AC mains supply to the outgoing UPS supported AC distribution board to include mounting of the generator change-over switch etc.

Floor Strengthening – The UPS and battery rack are being positioned on a raised floor and there is an existing open 'box section' plinth fitted. STFC are responsible for deeming the plinth suitable and for fitting any additional floor strengthening/ spreader plate etc as applicable.

Battery Sizing – We can confirm that the manufacturer has sized the battery to provide the 2 hours at full load which can be supported by the following run-time calculation.

Therefore, we have submitted our offer based on your stated requirement and it is the customer's responsibility to deem the UPS and generator suitable and correct for the application.

Computer Power Protection (Sales) Limited

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RIELLO BAT.CALC. 4.1						
Select Ups RIELLO Batt. Type Help						
ups type = Multi Plus						
UPS Nominal Power	20.00	kVA	Battery nom. Voltage	240	x2	V
Load Power [VA]	20.00	kVA	Start desch. Voltage	250	x2	V
Load Power [Watt]	18.00	kW	Aver. desch. Voltage	241	x2	V
Load Power Factor	0.90		End desch. Voltage	209	x2	V
Battery capacity	108	Ah	Average desch. Current	39.57		A
Battery type	2.00		End of desch. Current.	45.75		A
No. of 12V batteries	20	x2	Battery desch. rate	0.37		C10
Temperature	22.00	°C	Batt. descharg. power	19.15		kW
Recharging current	6.00	A	Batt. recharging time	15.74		h
Autonomy, minutes	120	min	Batt. 12V block power	478		W
Autonomy, hours	2.00	h	Batt. 2V cell power	79.79		W
Inverter loss 0%VA	1.30	%	Battery volume	617		Lt.
Inverter efficiency	94.00	%	Battery Weight	1542		kg
Nominal power factor	0.90		Cost factor	4320		

Motors and UPS – Motors, even with inverter control and soft start capability can take several times running current on start-up. This start-up/ inrush current is only for a very short duration in time and an MCCB or Switch Fuse unit has tripping characteristics designed to cope with this start up capability. A UPS is micro-processor controlled and if the UPS is not sized correctly to cope with this in-rush then the UPS may be overloaded and in the worst case scenario shut down in order to protect itself.

Verification of Inrush/ Start Up Current Statement – This inrush is common knowledge and can be verified by a simple google search, just type the following phrase into a common search engine

start up current in motors.

UPS Servicing - We always recommend the fitting of an external wall mounted maintenance bypass switch, as this allows for routine maintenance/ servicing of the UPS to be carried out in complete safety without having to close-down the supported load. This has been allowed for within our proposal and also includes external distribution which saves on the cost of an additional UPS supported distribution board.

UPS Management and control across the network - The NetMan 102 Plus network agent allows UPS management across a LAN using any of the main network communication protocols - TCP/IP, HTTP and network interface (SNMP). NetMan Plus enabled UPS integrate easily into medium and large sized networks and provide reliable communications between the UPS and management systems employed.

UPS Commissioning - Commissioning of the UPS system has been offered based upon normal working hours Monday to Friday and upon completion of electrical installation. User familiarisation will occur at the same time as the UPS commissioning. Additional training can be provided at any time but would be chargeable.

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UPS Battery Build – Batteries are shipped separately to the cabinet and require installation on site. Costs have been submitted for carrying out this activity.

UPS DC Cabling Between the UPS & Battery Cabinet – DC cabling on provided on the basis that the battery cabinet is adjacent to the UPS. If this is not the case additional DC cabling can be provided albeit at an additional charge.

UPS Delivery, Offload and Positioning – The customer will be responsible for receiving the delivery and advising where the goods will be positioned.

UPS Warranty – The UPS has a 2 years manufacturer's warranty from date of invoice/ commissioning which is full on-site and includes all parts and labour – 12 months warranty on consumables which is subject to the manufacturer's terms and conditions of warranty.

UPS Platinum (Enhanced) Maintenance Contract – An enhanced (Platinum) maintenance contract has been included as an option within our proposal which includes 24 x 7 telephone support, 4 clock hour response to site and 1 x planned maintenance visit during normal working hours Monday to Friday and includes all labour and parts (excludes consumables).

Customer Obligations - Planning permission and noise compliance regulations from the local authority along with landlords permission (if required) is the customers responsibility.

Computer Power Protection have been providing power protection solutions to both the private and public sector for twenty years and can provide a list of references within the private and public sector where we have undertaken installation and sales of UPS systems and generators etc. Case studies are available on our web site www.cppsales.com . References can be supplied upon request.

As independent power protection specialists we would be pleased to review the proposal with you and I will contact you in the near future to discuss this further.

All mechanical and electrical installation works is the responsibility of the customer unless detailed.

We trust this proposal meets with your approval, and look forward to receiving your instructions in due course. Should you have any queries in the meantime, please do not hesitate to call us at any time.

Yours sincerely

Phillip Wain

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20kVA UPS System – 10 Year Design Life Batteries

<p>20kVA Multi Plus UPS – 120 Minutes Back @ a load of 20kVA/ 18kW - Riello MLT Series UPS rated at 20kVA/ 18kW, Nominal 400V 3Phase 4 wire 50Hz Input and Output. Online double conversion UPS to provide a clean, regulated output under all operating conditions. Specification as detailed in attached data sheet.</p> <p>Volt free card fitted.</p> <p>UPS Dims (mm) 440W x 1320H x 850D. Weight: 120Kgs</p>	<p>£2,686.00</p>
<p>Cladded Battery Rack with 10 year design life battery - Battery Rack Cladded 4T1R with DC isolator all inter-cell and inter tier DC cabling and DC cabling between the UPS and battery rack. High quality Yuasa SWL series 10 year design life sealed lead acid batteries to maintain a nominal load of 20kVA/ 18kW for 2 hours at 20 to 25 degrees C.</p> <p>Cladded rack 1930W x 500D x1800H. Weight 1,572Kgs</p>	<p>£6,508.00</p>
<p>Delivery, off-load and positioning - Delivery off-load and position UPS system and associated battery cabinets and batteries packs to site via our specialist delivery company using air-ride vehicle during normal working hours Monday to Friday. The customer is responsible for ensuring goods are positioned in the correct location. Assumes ground floor location with clear, immediate and unobstructed access</p>	<p>£623.00</p>
<p>UPS Commissioning – Normal working hours Monday to Friday</p>	<p>£295.00</p>
<p>Netman 102 – network/ snmp management card - optional</p>	<p>£168.00</p>
<p>PowerShield Close-down software – standard version – FOC</p>	<p>£0.00</p>
<p>Upgrade to Platinum Maintenance Contract - Upgrade from the standard warranty for the 1st year to a Platinum maintenance contract which provides the following benefits.</p> <ul style="list-style-type: none"> • 1 x annual preventative maintenance visit during normal working hours • 24 x 7 Telephone support • 4 clock hour response • All parts included • All labour and travelling time is included <p>Consumables have a 12 month warranty from date of invoice.</p>	<p>£910.00 optional</p>

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UPS Electrical & Installation Works

<p>UPS & Generator Electrical Installation Works – Our trained and qualified engineers will carry out the following works in accordance with all current 17th edition wiring regulations.</p> <p>➤ UPS Installation</p> <ul style="list-style-type: none">▪ Supply and install UPS input cabling between supplied local isolator and UPS (3mtrs)▪ Supply and install UPS output cabling between the supplied output distribution board and the UPS (5mtrs)▪ Construct battery rack▪ Load battery rack – 40x blocks▪ Commission UPS▪ Supply and install cable containment as required▪ All works to be installed and tested to BS7671▪ All works to be performed during normal working hours	£894.00
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Terms

All prices exclude VAT, are ex works and are subject to our standard terms and conditions of sale. The manufacturer's terms and conditions of warranty apply.

Payment terms: 1st order is normally payment in advance or against an agreed payment schedule

Delivery: UPS is normally ex-stock.

Validity of quotation: 30 days.

Manufacturer's standard manuals will only be supplied.

The customer is ultimately responsible for deeming the final configuration fit for purpose and suitable.

No special on site testing has been allowed for within this offer.

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