



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

| | |
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| ENQUIRY | Phone: +91 431 257 76 53 Fax : +91 431 252 00 31 Email : skaruna@bheltry.co.in Web : www.bhel.com |
| NOTICE INVITING TENDER | |

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|--|---|---|---|
| TWO PART BID Tender to be submitted in two Parts | Enquiry Number: 2621300034 | Enquiry Date: 25.10.2013 | Due date for submission of quotation: 26.11.2013 |
| <p>You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.</p> <p>Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.</p> | | | |

| Item | Description | Quantity | Delivery Required |
|------|---|----------|--------------------------|
| 10 | Medium Voltage Industrial Type Switch Board for MP | 04 Nos. | 2 Months from PO date |
| 20 | Medium Voltage Industrial Type Switch Board for ML | 01 No. | |
| 30 | TPN Distribution Board 250 A | 12 Nos. | |
| 40 | TPN Distribution Board 125 A | 12 Nos. | |
| 50 | 8 Way MCB Distribution Board with 16A Single Pole MCB | 6 Nos. | |

as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or <http://tenders.gov.in>)

Important points to be taken care during submission of offer

1. The rate of EMD for this Tender will be (INR) 40,000/-
2. The Compliance Form for Commercial Terms & Conditions to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
3. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions (refer **MM/CE/GENL/001-EMD) including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under above Enquiry reference.**

Tenders should reach us before 14:00 hours on the due date. Tenders will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

Engineer / Capital Equipment / MM

Item No. 10

| Specification for Medium Voltage Industrial Type Switchboard For MP | | | |
|--|--|-----------------------------------|--------------------------|
| Sl.No | Description for BHEL Requirement | To be Specified/ Confirmed | Bidder's Comments |
| | Design, manufacture and supply of Medium Voltage, floor mounting, free standing, indoor, Industrial type switchboard comprising of fuse switches, busbar chamber and conforming to the specification and features given below. | | |
| 1.0 | Incomer Fuse Switch unit with fuses: | | |
| 1.1 | Current rating at 415V, 50Hz | 800A | |
| 1.2 | Configuration | Three poles and neutral | |
| 1.3 | Type of enclosure | Sheet steel | |
| 1.4 | Fuses for 3 phases | 630A | |
| 1.5 | Quantity of Incomer fuse switch | 1 no. | |
| 2.0 | Outgoing Fuse switch Units with fuses: | | |
| 2.1 | Configuration | Three poles and neutral | |
| 2.2 | Current rating at 415V, 50Hz | 400A | |
| 2.2.1 | Type of enclosure | Sheet steel | |
| 2.2.2 | Fuses for 3 phases | 400A | |
| 2.2.3 | Quantity of 400A fuse switch | 1 no. | |
| 2.3 | Current rating at 415V, 50Hz | 200A | |
| 2.3.1 | Type of enclosure | Cast iron | |
| 2.3.2 | Fuses for 3 phases | 200A | |
| 2.3.3 | Make of the Fuse switch | GE, CH2003N(U) | |
| 2.3.4 | Quantity of 200A fuse switch | 7 nos. | |
| 2.4 | Current rating at 415V, 50Hz | 100A | |
| 2.4.1 | Type of enclosure | Cast iron | |
| 2.4.2 | Fuses for 3 phases | 100A | |
| 2.4.3 | Make of the Fuse switch | GE, CH1003N(U) | |
| 2.4.4 | Quantity of 100A fuse switch | 3 nos. | |
| 3.0 | Busbars: | | |
| 3.1 | Current rating at 415V, 50Hz | 800A | |
| 3.2 | Configuration | Three poles and neutral | |
| 3.3 | Material | Aluminium | |

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| 3.4 | Busbar chamber | CRCA sheet steel of min. 2 mm thickness. | |
| 4.0 | Accessories: | | |
| 4.1 | Voltmeter with selector switch | Analog type, a.c., 0-500V, 96mm square, accuracy class 1.0 | |
| 4.2 | Voltmeter and switch make | Vendor to specify | |
| 4.3 | Indication lamp | 3 lamps for the phases | |
| 5.0 | Approx. overall dimensions of the Panel (WxHxD) | Vendor to specify | |
| 6.0 | Make of the Fuse switches- L&T/ Siemens/ GE make only | Vendor to specify | |
| 6.1 | Technical leaflet of the fuse switch offered to be enclosed with the offer. | Vendor to confirm | |
| 7.0 | General Features of the Fuse switches: | | |
| 7.1 | The switches shall be totally enclosed and fully shrouded | Vendor to confirm | |
| 7.2 | Provided with On/Off indication and two earthing terminals | Vendor to confirm | |
| 7.3 | Quick make, quick break mechanism, independent of the speed of the operator. | Vendor to confirm | |
| 7.4 | Double break isolation arrangement ensuring complete isolation of fuse units when unit is in off position | Vendor to confirm | |
| 7.5 | All current carrying parts shall be hard silver plated | Vendor to confirm | |
| 7.6 | Units to be provided with bolted type neutral links with facility to disconnect neutral easily. | Vendor to confirm | |
| 7.7 | Interlock to ensure the lid cannot be opened until the switch is in off position and the possibility to defeat the interlock by a competent examiner. | Vendor to confirm | |
| 7.8 | Phase-phase, phase-earth barrier should be provided. | Vendor to confirm | |

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| 8.0 | General Features of Switchboard: | | |
| 8.1 | The panel shall be of Industrial type construction with enclosed busbar chamber in the middle and the fuse switch units mounted on the top and bottom of the busbar chamber. | Vendor to confirm | |
| 8.2 | Busbars shall be made of high conductivity aluminium alloy with 75mmx10mm or equivalent cross section. | Vendor to confirm | |
| 8.3 | The neutral busbars shall have a continuous current rating of 50% of the phase busbars. All busbars shall be insulated, colour coded for easy identification of individual phases and neutral. | Vendor to confirm | |
| 8.4 | The earth busbar of size 6 x 50mm G.I.Flat shall run through out the length of the switchboard and be terminated at the two ends. | Vendor to confirm | |
| 8.5 | High tensile bolts and spring washers shall be provided on all busbars and connection joints. | Vendor to confirm | |
| 8.6 | All sheet steel used in the panel shall undergo a rigorous metal treatment process involving alkaline degreasing, descaling in dilute sulphuric acid, phosphating and painting. | Vendor to confirm | |
| 8.7 | The switches shall be provided with cable adopter boxes in sheet steel for termination of armoured aluminium cable suitable for the current rating of the switches. | Vendor to confirm | |
| 8.8 | Adequate number of busbar supports shall be provided to withstand short circuit current. | Vendor to confirm | |
| 8.9 | The busbar chamber covers shall be fitted with dust proof neoprene gaskets. | Vendor to confirm | |
| 8.10 | The switchboard shall be provided with 50x50x6mm size angle for main frame and 40x40x6mm angle for aux. frames for floor mounting. | Vendor to confirm | |

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| 8.11 | The connections from the busbars to the switches shall be through insulated copper busbars of adequate cross section. | Vendor to confirm | |
| 8.12 | The switchboard shall be painted with one coat of red oxide primer and two coats of enamel paint to match the colour of the switches. | Vendor to confirm | |
| 8.13 | The construction of the panel shall generally conform to the Indian Electricity Rules and switches shall conform to the relevant IS. | Vendor to confirm | |
| 9.0 | Qualifying Conditions: | Vendor to confirm | |
| 9.1 | Only those vendors who have supplied and commissioned same or higher capacity switchboard that is working satisfactorily for at least one year after commissioning should quote. | Vendor to confirm | |
| 9.2 | Information about the companies where similar equipments have been supplied with copy of few purchase orders and performance certificates are to be submitted. | Vendor to confirm | |
| 10.0 | Scope of Supply | Quantity | |
| 10.1 | Industrial type switchboard of the configuration and specification as furnished above | 4 nos. | |


 KEVIN-ARK KUMAR
 Engineer
 Maintenance & Services
 BREL, Trichy - 620 014

Item No. 20

| Specification for Medium Voltage Industrial Type Switchboard For ML | | | |
|---|--|----------------------------|-------------------|
| Sl.No | Description for BHEL Requirement | To be Specified/ Confirmed | Bidder's Comments |
| | Design, manufacture and supply of Medium Voltage, floor mounting, free standing, indoor, Industrial type switchboard comprising of fuse switches, busbar chamber and conforming to the specification and features given below. | | |
| 1.0 | Incomer Fuse Switch unit with fuses: | | |
| 1.1 | Current rating at 415V, 50Hz | 800A | |
| 1.2 | Configuration | Three poles and neutral | |
| 1.3 | Type of enclosure | Sheet steel | |
| 1.4 | Fuses for 3 phases | 630A | |
| 1.5 | Quantity of Incomer fuse switch | 1 no. | |
| 2.0 | Outgoing Fuse switch Units with fuses: | | |
| 2.1 | Configuration | Three poles and neutral | |
| 2.2 | Current rating at 415V, 50Hz | 400A | |
| 2.2.1 | Type of enclosure | Sheet steel | |
| 2.2.2 | Fuses for 3 phases | 400A | |
| 2.2.3 | Quantity of 400A fuse switch | 1 no. | |
| 2.3 | Current rating at 415V, 50Hz | 200A | |
| 2.3.1 | Type of enclosure | Cast iron | |
| 2.3.2 | Fuses for 3 phases | 200A | |
| 2.3.3 | Make of the Fuse switch | GE, CH2003N(U) | |
| 2.3.4 | Quantity of 200A fuse switch | 1 nos. | |
| 2.4 | Current rating at 415V, 50Hz | 100A | |
| 2.4.1 | Type of enclosure | Cast iron | |
| 2.4.2 | Fuses for 3 phases | 100A | |
| 2.4.3 | Make of the Fuse switch | GE, CH1003N(U) | |
| 2.4.4 | Quantity of 100A fuse switch | 8 nos. | |
| 3.0 | Busbars: | | |
| 3.1 | Current rating at 415V, 50Hz | 800A | |
| 3.2 | Configuration | Three poles and neutral | |
| 3.3 | Material | Aluminium | |

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|-----|---|---|--|
| 3.4 | Busbar chamber | CRCA sheet steel of min. 2 mm thickness. | |
| 4.0 | Accessories: | | |
| 4.1 | Voltmeter with selector switch | Analog type, a.c., 0-500V, 96mm square, accuracy class 1.0 | |
| 4.2 | Voltmeter and switch make | Vendor to specify | |
| 4.3 | Indication lamp | 3 lamps for the phases | |
| 5.0 | Approx. overall dimensions of the Panel (WxHxD) | Vendor to specify | |
| 6.0 | Make of the Fuse switches- L&T/ Siemens/ GE make only | Vendor to specify | |
| 6.1 | Technical leaflet of the fuse switch offered to be enclosed with the offer. | Vendor to confirm | |
| 7.0 | General Features of the Fuse switches: | | |
| 7.1 | The switches shall be totally enclosed and fully shrouded | Vendor to confirm | |
| 7.2 | Provided with On/Off indication and two earthing terminals | Vendor to confirm | |
| 7.3 | Quick make, quick break mechanism, independent of the speed of the operator. | Vendor to confirm | |
| 7.4 | Double break isolation arrangement ensuring complete isolation of fuse units when unit is in off position | Vendor to confirm | |
| 7.5 | All current carrying parts shall be hard silver plated | Vendor to confirm | |
| 7.6 | Units to be provided with bolted type neutral links with facility to disconnect neutral easily. | Vendor to confirm | |
| 7.7 | Interlock to ensure the lid cannot be opened until the switch is in off position and the possibility to defeat the interlock by a competent examiner. | Vendor to confirm | |
| 7.8 | Phase-phase, phase-earth barrier should be provided. | Vendor to confirm | |

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|------|--|-------------------|--|
| 8.0 | General Features of Switchboard: | | |
| 8.1 | The panel shall be of Industrial type construction with enclosed busbar chamber in the middle and the fuse switch units mounted on the top and bottom of the busbar chamber. | Vendor to confirm | |
| 8.2 | Busbars shall be made of high conductivity aluminium alloy with 75mmx10mm or equivalent cross section. | Vendor to confirm | |
| 8.3 | The neutral busbars shall have a continuous current rating of 50% of the phase busbars. All busbars shall be insulated, colour coded for easy identification of individual phases and neutral. | Vendor to confirm | |
| 8.4 | The earth busbar of size 6 x 50mm G.I.Flat shall run through out the length of the switchboard and be terminated at the two ends. | Vendor to confirm | |
| 8.5 | High tensile bolts and spring washers shall be provided on all busbars and connection joints. | Vendor to confirm | |
| 8.6 | All sheet steel used in the panel shall undergo a rigorous metal treatment process involving alkaline degreasing, descaling in dilute sulphuric acid, phosphating and painting. | Vendor to confirm | |
| 8.7 | The switches shall be provided with cable adopter boxes in sheet steel for termination of armoured aluminium cable suitable for the current rating of the switches. | Vendor to confirm | |
| 8.8 | Adequate number of busbar supports shall be provided to withstand short circuit current. | Vendor to confirm | |
| 8.9 | The busbar chamber covers shall be fitted with dust proof neoprene gaskets. | Vendor to confirm | |
| 8.10 | The switchboard shall be provided with 50x50x6mm size angle for main frame and 40x40x6mm angle for aux. frames for floor mounting. | Vendor to confirm | |

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| 8.11 | The connections from the busbars to the switches shall be through insulated copper busbars of adequate cross section. | Vendor to confirm | |
| 8.12 | The switchboard shall be painted with one coat of red oxide primer and two coats of enamel paint to match the colour of the switches. | Vendor to confirm | |
| 8.13 | The construction of the panel shall generally conform to the Indian Electricity Rules and switches shall conform to the relevant IS. | Vendor to confirm | |
| 9.0 | Qualifying Conditions: | Vendor to confirm | |
| 9.1 | Only those vendors who have supplied and commissioned same or higher capacity switchboard that is working satisfactorily for at least one year after commissioning should quote. | Vendor to confirm | |
| 9.2 | Information about the companies where similar equipments have been supplied with copy of few purchase orders and performance certificates are to be submitted. | Vendor to confirm | |
| 10.0 | Scope of Supply | Quantity | |
| 10.1 | Industrial type switchboard of the configuration and specification as furnished above | | 1 no. |


KEVIN ARK KUMAR
 Engineer
 Maintenance & Services
 BHEL, Trichy - 620 014

Item 20

Specification for TPN Distribution Board 125A

| Sl.No. | Description for BHEL Requirement | Specified/ To be confirmed by | Bidder's Comments |
|---|--|--|--------------------------|
| <p>Manufacture and supply of Medium Voltage, 8 Way TPN distribution boards with 32A, triple pole MCB as outgoing, 125A, 4 pole MCCB incomer, Metallic door. The DB should be Phase Segregated and Separated between incomer and outgoings, suitable for surface mounting. The distribution boards conforming to the specification and features given below.</p> | | | |
| 1.0 | MCB Distribution Board | | |
| 1.1 | Type of enclosure conforming to IP42 or higher. | Fabricated Sheet steel. Vendor to confirm. | |
| 1.2 | Configuration | Three poles and neutral DB with per phase isolation | |
| 1.3 | Number of ways | 8 ways. Vendor to confirm | |
| 1.4 | Copper Busbar Rating | 125 A. vendor to Confirm. | |
| 1.5 | Make of the MCB distribution Board (Schneider, Legrand, Standard Kopp, Havells, Siemens, ABB, C&S and reputed make acceptable to BHEL) | Vendor to specify the make offered. | |
| 1.6 | Overall dimensions of the DB | Vendor to specify | |
| 2.0 | Miniature Circuit Breaker/MCCB | | |
| 2.1 | Breaking Capacity as per IS 8828 of 1996, IEC 608898 of 1995 for MCB and IEC 60947-2 for MCCB. | 10 KA for MCB. 16 KA for MCCB. Vendor to confirm. | |
| 2.2 | Type of release | Fixed thermo magnetic for MCB. Adjustable thermo magnetic for MCCB. Vendor to confirm. | |
| 2.3 | Current rating at 415V, 50Hz | 125A, 4 pole MCCB as incomer. 32A, triple pole MCB as outgoing. | |
| 2.4 | Number of MCB, MCCB | 32A, 8 nos. Triple pole MCB. 125A, 1 no. 4 pole, MCCB. | |
| 2.5 | Mounting accessories for MCCB :- Spreader links | Suitable current rating and size. Vendor to confirm | |
| 2.6 | Terminal capacity of MCB | Proper termination and firm connection to accommodate 35sq.mm cable. | |
| 2.7 | Make, Type of the MCB offered. (Schneider, Legrand, Standard Kopp, Havells, Siemens, ABB, C&S and reputed make acceptable to BHEL) | Vendor to specify the make offered | |
| 3.0 | General Features of the Lighting Distribution board: | | |

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| 3.1 | The DBs shall be 125A Copper Busbar with neutral bars, earth bars and Cable Ties for cable management, interconnecting wires/links. Neutral bars and busbars should be fully insulated with door earthing with IP 42 or higher protection. | Vendor to confirm. | |
| 3.2 | Sufficient clearance as per IS should be provided for Neutral bars | Vendor to confirm. | |
| 3.3 | DB shall be provided with gland plates at the top and bottom with knockouts. | Vendor to confirm. | |
| 3.4 | Earth bar for facilitating individual earth for each outgoing circuit. Sufficient clearance as per IS should be provided. | Vendor to confirm. | |
| 3.5 | Label to be permanently and securely fixed inside the case to mark the name, current rating of the circuit. | Vendor to confirm. | |
| 3.6 | Gaskets shall be provided to ensure vermin proof condition. | Vendor to confirm. | |
| 3.7 | The DB shall be provided with metal double door. | Vendor to confirm. | |
| 3.8 | The DB shall be epoxy powder coated to give a superior finish with great aesthetics look. | Vendor to confirm. | |
| 3.9 | The DB should conform to IS:13032-1991 and Indian Electricity Rules. | Vendor to confirm. | |
| 3.10 | The MCB shall conform to IS:8828-1996 and IEC 608898 of 1995 and IEC 60947-2 for MCCB. | Vendor to confirm. | |
| 4.0 | Reference List/ Qualifying Conditions: | | |
| 4.1 | Only those vendors who have supplied similar or higher capacity/size equipment that is working satisfactorily for at least one year after commissioning should quote. | Vendor to confirm. | |
| 4.2 | Information about the customers to whom similar equipments have been supplied is to be submitted for qualification of the offer. | Vendor to confirm. | |
| 5.0 | Scope of Supply | Quantity | |
| 5.1 | 8 way, MCB distribution board with 32A, triple pole MCB as outgoing, 125A, 4pole MCCB as incomer. The DB should be Phase Segregated and Separated between incomer and outgoings, suitable for surface mounting. The distribution boards conforming to the specification and features as furnished above. | 12 nos. | |


 . KEVIN ARK KUMAR
 Engineer
 Maintenance & Services
 RREI Trichy - 620 014

Item 10

| Specification for TPN Distribution Board 250A | | | |
|--|---|--|-----------------------------|
| Sl.No. | Description for BHEL Requirement | Specified/ To be confirmed by | M/S CABLEMAN, TRICHY |
| <p>Manufacture and supply of Medium Voltage, 8 Way TPN distribution boards with 63A three pole TP MCB per way as outgoing, 250A, 4 pole MCCB as incomer, Metallic door. The DB should be Phase Segregated and Separated between incomer and outgoing, suitable for flush / surface mounting. The distribution boards conforming to the specification and features given below.</p> | | | |
| 1.0 | TPN Distribution Board | | |
| 1.1 | Type of enclosure (surface mounting) | Fabricated Sheet steel. confirming to IP42 or higher. Vendor to confirm. | |
| 1.2 | Configuration | Three poles and neutral DB with per phase isolation | |
| 1.3 | Number of ways | 8 ways vendor to Confirm | |
| 1.4 | Copper Busbar Rating | 250 A vendor to Confirm | |
| 1.5 | Make of the TPN distribution Board (Schneider, Legrand, Standard Kopp, Havells, Siemens, ABB, C&S or reputed make acceptable to BHEL) | Vendor to specify the make offered. | |
| 1.6 | Overall dimensions of the DB. Attach drawings | Vendor to specify | |
| 2.0 | Miniature Circuit Breaker/MCCB | | |
| 2.1 | Breaking Capacity as per IS 8828 of 1996, IEC 608898 of 1995 for MCB and IEC 60947-2 for MCCB. | 10 KA for MCB. 36 KA for MCCB. Vendor to confirm. | |
| 2.2 | Type of release | Fixed thermo magnetic for MCB. Adjustable thermo magnetic for MCCB. Vendor to confirm. | |
| 2.3 | Current rating at 415V, 50Hz | 63 A/250 A (as specified for outgoing/incomer) | |
| 2.4 | Number of MCB, MCCB | 63A, 8 nos., Triple pole MCB as outgoing, 250A, 1 no. 4 pole MCCB as incomer. | |

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| 2.5 | Mounting accessories for MCCB :- Spreader links | Suitable current rating and size . Vendor to confirm. | |
| 2.6 | Terminal capacity of MCB | Proper termination and firm connection to accommodate 35sq.mm cable. | |
| 2.7 | Make, Type of the MCB offered . (Schneider,Legrand,Standard Kopp,Havells, Siemens, ABB , C&S or reputed make acceptable to BHEL) | Vendor to specify the make offered | |
| 3.0 | General Features of the Lighting Distribution board: | | |
| 3.1 | The TPN DBs shall have 250A Copper Busbar with neutral bars, earth bars and Cable Ties for cable management, interconnecting wires/links. Neutral bars and busbars should be fully insulated with door earthing with IP 42 or higher protection. | Vendor to confirm. | |
| 3.2 | Sufficient clearance as per IS should be provided for Neutral bars | Vendor to confirm. | |
| 3.3 | DB shall be provided with gland plates at the top and bottom with knockouts. | Vendor to confirm. | |
| 3.4 | Earth bar for facilitating individual earth for each outgoing circuit. Sufficient clearance as per IS should be provided. | Vendor to confirm. | |
| 3.5 | Label to be permanently and securely fixed inside the case to mark the name, current rating of the circuit. | Vendor to confirm. | |
| 3.6 | Gaskets shall be provided to ensure vermin proof condition. | Vendor to confirm. | |
| 3.7 | The DB shall be provided with metal door. | Vendor to confirm. | |
| 3.8 | The DB shall be epoxy powder coated to give a superior finish with great aesthetics look. | Vendor to confirm. | |
| 3.9 | The DB should conform to IS standards and Indian Electricity Rules. | Vendor to confirm. | |
| 3.10 | The MCB shall conform to IS:8828-1996 & IEC 608898 of 1995 and IEC 60947-2 for MCCB. | Vendor to confirm. | |
| 4.0 | Reference List/ Qualifying Conditions: | | |
| 4.1 | Only those vendors who have supplied similar or higher capacity/ size equipment that is working satisfactorily for at least one year after commissioning should quote. | Vendor to confirm. | |

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| 4.2 | Information about the customers to whom similar equipments have been supplied is to be submitted for qualification of the offer. | Vendor to confirm. | |
| 5.0 | Scope of Supply | Quantity | |
| 5.1 | 8 way TPN distribution boards with 63 A, Triple pole MCB as outgoing, 250A, 4 pole MCCB as incomer. The TPN distribution board should be Phase Segregated and Separated between incomer and outgoings , suitable for surface mounting. The distribution boards conforming to the specification and features as furnished above. | 12 nos. | |


KEVIN ARK KUMAR
 Engineer
 Maintenance & Services.
 BHEL, Trichy - 620 014.

Item 30

8 Way MCB distribution board with 16A single pole MCB

Manufacture and supply of Medium Voltage 8 Way MCB distribution board with 16A single pole MCB per way as outgoing; 63A, DP MCB as phase incomer; 100A, 4 pole MCB as incomer; 7 segment, Double door. The DB should be Phase Segregated and Separated between incomer and outgoing, suitable for flush / surface mounting. The distribution boards conforming to the specification and features given below.

| 1 | Description for BHEL Requirement | Specified/ To be confirmed by | Bidder's Comments |
|-----|---|--|-------------------|
| 1.0 | MCB Distribution Board | | |
| 1.1 | Type of enclosure confirming to IP42. | Fabricated Sheet steel. Vendor to confirm. | |
| 1.2 | Configuration | Three poles and neutral DB with per phase isolation | |
| 1.3 | Number of ways per phase | 8 ways. Vendor to confirm | |
| 1.4 | Copper Busbar Rating | 100 A. Vendor to confirm | |
| 1.5 | Make of the MCB distribution Board (Schneider, Legrand, Standard Kopp, Havells, Hager, Siemens, ABB, C&S and reputed makes acceptable to BHEL) | Vendor to specify the make offered. | |
| 1.6 | Overall dimensions of the DB. Attach Drawing | Vendor to attach drawings | |
| 2 | Miniature Circuit Breaker | | |
| 2.1 | Breaking Capacity as per IS 8828 of 1996, IEC 608898 of 1995 or latest edition. | 10 KA for MCB. Vendor to confirm. | |
| 2.2 | Type of release | Thermo magnetic. Vendor to confirm. | |
| 2.3 | Current rating at 415V, 50Hz. | 100A, 4 pole MCB as incomer. 63 A, Double Pole MCB as phase incomer, 16A, Single pole MCB as outgoing. | |

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| 2.4 | Number of MCB | 1)16A, Single pole MCB,24 nos. 2) 63A, Double pole MCB,3 nos. 3) 100A, 4 pole MCB,1 no. | |
| 2.5 | Terminal capacity of MCB | Proper termination and firm connection to accommodate 35sq.mm cable. | |
| 2.6 | Make, Type of the MCB offered . (Schneider,Legrand,Standard Kopp,Havells, Hager, Siemens, ABB ,C&S and reputed make acceptable to BHEL) | Vendor to specify the make offered | |
| 3 | General Features of the Lighting Distribution board: | | |
| 3.1 | The DBs shall be 100A Copper Busbar with neutral bars, earth bars and Cable Ties for cable management, interconnecting wires/links. Neutral bars and busbars should be fully insulated with door earthing with IP 42 protection. | Vendor to confirm. | |
| 3.2 | DB shall be provided with gland plates at the top and bottom with knockouts. | Vendor to confirm. | |
| 3.3 | Earth bar for facilitating individual earth for each outgoing circuit. | Vendor to confirm. | |
| 3.4 | Label to be permanently and securely fixed inside the case to mark the name, current rating of the circuit. | Vendor to confirm. | |
| 3.5 | Gaskets shall be provided to ensure vermin proof condition. | Vendor to confirm. | |
| 3.6 | The DB should conform to IS:13032-1991 and Indian Electricity Rules. | Vendor to confirm. | |
| 3.7 | The MCB shall conform to IS:8828-1996 & IEC 608898 of 1995 . | Vendor to confirm. | |
| 3.8 | The DB shall be provided with metal double door. | Vendor to confirm. | |
| 3.9 | The DB shall be epoxy powder coated to give a superior finish with great aesthetics look. | Vendor to confirm. | |

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|----------|--|--------------------|--|
| 4 | Reference List/ Qualifying Conditions: | | |
| 4.1 | Only those vendors who have supplied similar or higher capacity/ size equipment that is working satisfactorily for at least one year after commissioning should quote. | Vendor to confirm. | |
| 4.2 | Information about the customers to whom similar equipments have been supplied is to be submitted for qualification of the offer. | Vendor to confirm. | |
| 5 | Scope of Supply | Quantity | |
| 5.1 | 8 way MCB distribution boards with 16 A per way as outgoing, 63A, DP MCB as phase incomer, 100A, 4 pole MCB as incomer, 7 segment, MCB distribution board. The DB should be Phase Segregated and Separated between incomer and outgoing, suitable for flush / surface mounting. The distribution boards conforming to the specification and features as furnished above. | 6 nos. | |



KEVIN-ARK KUMAR
 Engineer
 Maintenance & Services
 BHEL, Trichy - 620 014