

Ref No. : PE/PG/RTC/E-6373/2019/CORRIGENDA/04

Date: 11.03.2020

CORRIGENDA / ADDENDUM-04

SUBJECT: TENDER ENQUIRY FOR RATE CONTRACT OF DISTRIBUTION BOARDS AS PER TECHNICAL SPECIFICATION NO. PE-RC-999-558-E005(REV-0)

OUR REF: TENDER ENQUIRY NO: PE/PG/RTC/E-6373/2019, DTD-01/02/2020

DUE DATE
21.03.2020
BY 14:00PM

1. The last date of submission of offer against tender for Rate Contract of DISTRIBUTION BOARDS invited vide Enquiry No PE/PG/RTC/E-6373/2019, DTD-01/02/2020 has been extended till **21.03.2020, 14.00PM**. Part I Bid opening will be done on **21.03.2020, 15.00PM**. All bidders are requested to visit the website www.bhel.com (Tender Notifications Section) OR www.bhelpem.com. All future corrigenda/ amendment and due date extension, if any, for this tender shall be hosted only on above websites.
2. Please find enclosed Amendment to Technical Specification which is to be considered by all the bidders while quoting their offer. Also find Reply to Technical Queries raised by the bidders during pre-bid meeting.
3. Please note that there is minor change in Price Schedule/BOQ which is available on the e-procurement portal. Vendors are requested to quote as per revised BOQ. Vendors who have already submitted their offer need to furnish fresh offer as per revised BOQ and Amendment to Technical Specification.

Thanking You,

With Regards,

For & on behalf of BHEL

SUMEET SAHAY

DY.ENGINEER/CMM

Please reply to:

Sh SUMEET SAHAY

DY.ENGINEER/CMM

Power Project Engineering Institute Building
HRD & ESI Complex Plot No. 25, Sector -16 A,
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Tel No.0120-4213532, 09999498202



**AMENDMENT TO TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS
FOR RATE CONTRACT**

SPECIFICATION NO.: PE-RC-999-558-E005
AMENDMENT NO # 1
REV. NO. 00 DATE: 07/03/2020
Page 1 of 2

MODIFIED CLAUSES AS BELOW.

Sl no.	Vol. No.	Section/ Description	Clause no	Page no	Existing clause/details	Modified Clause
1	I	DATASHEET-A	5.13 & 5.14	18 OF 20	By vendor for all incoming and outgoing cables [Cable sizes shall be informed during detail engineering]	Tentative cable sizes are given below: i) LDB incomer: 3CX240 sq.mm ii) LP incomer: 3.5CX95 sq.mm iii) DC LP incomer: 2CX95sq.mm iv) DC LDB incomer : 2CX95 sq.mm
2	I	DATASHEET-A	3.0	10 OF 20	Lighting / Welding Distribution boards	Lighting / Welding Distribution boards : Form IVb construction as per IEC 61439.
3	I	3.0 : Specific technical requirements	2(e)	5 of 20	Contactors of AC lighting panel shall be 3 no 32A, -----125A shall be provided in incomer of contactors in the LP.	This clause has been deleted. Please refer revised datasheet-A enclosed with the corrigenda. Also LP scheme Attached.
4	I	4.0 : Inspection & testing				Following clause is added: " List of type tests: Type tests shall be as per relevant IS."
5	I	4.0 : Inspection & testing				Addition: Offered item shall be a Type tested design with same size and rating. Else type test shall be conducted without any price implication to BHEL.
6	I	Attachment-I	Note -3	8 of 20		Addition : First submission of drawing shall be with in three weeks of placement of PO and resubmission shall be within 10 days of comments received from BHEL.
7	I	DATASHEET-A	4.11(c)	13 of 20	ELCB in incomer required : Not applicable for north Karanpura FGD project	NO ELCB in incomer shall be provided in all projects. Refer revised datasheet-A.
8	I	DATASHEET-A	3.11(j)	11 of 20	Transformer type : Encapsulated : Applicable for Mouda FGD project only - 4 no 50kVA & 4 no 100 kVA	All transformers shall be Non- encapsulated. Refer revised datasheet-A

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AMENDMENT TO TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS
FOR RATE CONTRACT

SPECIFICATION NO.: PE-RC-999-558-E005
AMENDMENT NO # 1
REV. NO. 00 DATE: 07/03/2020
Page 2 of 2

9	I	DATASHEET-A	4.11 (b)	13 of 20	Type of income for LP : TPN SFU ; TPN MCB; TP MCB : refer note-1	Type of income: LP income for all projects shall be TPN MCB. Refer revised datasheet-A
10	I	DATASHEET-A	3.11(C)	11 OF 20	Voltage ratio of lighting transformer : 415/433 or 415/415V	All Transformers shall have voltage ratio as 415/415V . refer revised Datasheet-A.
11	I	DATASHEET-A				Following clauses have been revised: Clause no 3.0; 3.11 (c) ; 3.11(f); 3.11(j); 4.11(b); 4.11(c) c); 4.11(d); 4.11 (e) ; 4.12 (b) ; 4.12 (c) ; 5.13; 5.14 and Note no 1.
12		BOQ unpriced cum schedule				Addition : Mandatory spares.

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	TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS	SPECIFICATION NO. PE-RC-999- 558-E005	
		VOLUME II	
		SECTION - I	
	2 X 500 MW NTPC MOUDA ST-I FGD 3 X 660 MW NORTH KARANPURA FGD 3 X 660 MW NTPC BARH ST-I FGD 3 X 660 MW NPGCPL NABINAGAR STPP FGD 2 X 660 MW NTPC BARH ST-II FGD 2X250MW NSPCL BHILAI TPP FGD 3X200+3X500 MW NTPC RAMAGUNDAM TPP FGD 3X200+3X500+1X500 MW NTPC KORBA TPP FGD 4X250 MW BRBCL NABINAGAR STPP FGD	REV. 01	DATE: 07.03.2020

SHEET 1 OF 11

DATA SHEET -A

S. No.	Description	Unit	Value
1.0	SYSTEM DESIGN DATA		
1.1	Design ambient	°C	50
1.2	AC Supply		
a)	Rated voltage	V	415
b)	Rated frequency	Hz	50
c)	Voltage variation (permissible)	%	+10% to -10%
d)	Frequency variation (permissible)	%	+5% to -5%
e)	Combined voltage & frequency variation (sum of absolutes permissible)	%	10%
f)	System fault level & duration	kA, sec.	50kA for 1 sec.
1.3	DC Supply		
a)	Rated voltage	V	220
b)	Voltage variation (permissible)	%	+10% to -15%
c)	System fault level and duration	kA, Sec	20kA for 1 sec.
2.0	APPLICABLE STANDARDS		
	IS 60947	Low voltage switchgear and controlgear	
	IS 11171	Dry type transformers	
	IS 13703	Low voltage fuses for voltages not exceeding 1000V AC or 1500 V	
	IS 10118	Code of practice for selection, installation and maintenance of switchgear and controlgear	
	IS 60898	Electrical Accessories - circuit breakers for over protection for household and similar installations	
	IS 1901	Visual indicator lamps	

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		VOLUME II	
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	IS 60079	Explosive atmospheres						
	IS 5572	Classification of hazardous areas (other than mines) having flammable gases and vapours for electrical installation						
	IS:2551	Danger notice plates						
3.0	LIGHTING/ WELDING DISTRIBUTION BOARDS			Form IV b construction as per IEC 61439				
3.1	Operational Front			Single Front				
3.2	Type of execution of modules (functional unit)			☒ Fixed ☐ Draw out				
3.3	Type of sheet steel			CRCA				
3.4	Sheet metal thickness (minimum)							
a)	Non-load bearing covers	mm		2.0 mm				
b)	Non-load bearing partitions	mm		2.0 mm				
c)	Load bearing members	mm		2.0 mm				
d)	Frames	mm		2.0 mm				
e)	Door	mm		2.0 mm				
f)	Withdrawable unit (if applicable)	mm		2.0 mm				
3.5	Cable alley width (minimum)	mm		400				
3.6	Bus bar material			☒ Aluminium grade E 91E				
3.7	Earth bus bar material			☒ GI Strip ☐ Aluminium ☐ Copper				
3.8	Degree of Protection							
a)	Main Panel			IP-54				
b)	Transformer cubicle			IP-42 , IP-52 for transformer terminal box.				
3.9	Gland plate thickness	mm	3.0					
3.10	AC LDB/ WDB							

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		SHEET 3 OF 11	

a)	No. of Incomers		☐ One ☒ Two
b)	Bus coupler required		☒ Yes ☐ No
c)	Incomer and Bus coupler rating	A	As per transformer rating
d)	Type of Incomer and Bus coupler		☒ TPN SFU ☐ MCCB
e)	Type of Outgoing Feeders		☒ TPN SFU ☐ MCCB
f)	Outgoing feeders rating	A	63
g)	Cable entry		☒ Bottom ☐ Top
3.11	Lighting Transformer		
a)	Rating	kVA	100 / 50
b)	Type of cooling		Air natural
c)	Voltage ratio	V	415/415
d)	Rated frequency	Hz	50
e)	No. of phases		3
f)	Vector group		Dyn1
g)	Off circuit taps		
	Tap range, steps	%	+5% to -5% in steps of 2.5%
	Voltage of each tap	V	As per manufacturer's data
h)	Impedance at rated current, frequency at 75 °C	%	As per IS
i)	Rated current		
	Primary	A	As per manufacturer's data
	Secondary	A	As per manufacturer's data
j)	Transformer type		☐ Cast resin + ☐ Encapsulated ☒ Non-Encapsulated

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		VOLUME II	
		SECTION - I	
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k)	Transformer winding insulation		Class-B or better	
l)	Transformer winding insulation temperature rise limit		90 degree C above 50 degree C. ambient	
n)	Type of ventilation arrangement provided for transformer enclosure		As per manufacturer's data	
o)	Winding conductor material		Copper	
p)	Iron loss at 50 Hz and 100% rated voltage	kW	As per manufacturer's data	
q)	Copper loss at rated load at 75 °C	kW	As per manufacturer's data	
r)	Regulation at full load at 75 °C and 0.8 p.f. lagging		As per manufacturer's data	
s)	Weight	kg	As per manufacturer's data	
3.12	DC LDB			
a)	No of incomers		☒ One ☐ Two	
b)	DC incomer type		DP Switch fuse unit with contactor	
c)	DC incomer rating		125	
d)	AC incomer type		NA	
e)	AC incomer rating		NA	
f)	Buscoupler required		☐ Yes ☒ No	
g)	Incomer and bus coupler rating	A	125	
h)	Type of bus coupler		☐ SFU ☐ DP MCCB	
i)	Type of outgoing feeders		☒ DP SFU ☐ MCCB ☐ DP MCB	
j)	Outgoing feeders rating	A	32	
k)	Changeover required in DC LDB		☐ Yes (Converter for Conversion of AC to DC) ☒ No	
l)	Provision of manual override		☐ Yes ☐ No	

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	TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS	SPECIFICATION NO. PE-RC-999- 558-E005	
		VOLUME II	
		SECTION - I	
		REV. 01	DATE: 07.03.2020
2 X 500 MW NTPC MOUDA ST-I FGD 3 X 660 MW NORTH KARANPURA FGD 3 X 660 MW NTPC BARH ST-I FGD 3 X 660 MW NPGCPL NABINAGAR STPP FGD 2 X 660 MW NTPC BARH ST-II FGD 2X250MW NSPCL BHILAI TPP FGD 3X200+3X500 MW NTPC RAMAGUNDAM TPP FGD 3X200+3X500+1X500 MW NTPC KORBA TPP FGD 4X250 MW BRBCL NABINAGAR STPP FGD		SHEET 5 OF 11	

m)	Cable entry		☒ Bottom	☐ Top
4.0	LIGHTING PANELS			
4.1	Application		☐ Indoor	☐ Outdoor ☒ Both
4.2	Type of sheet steel		CRCA	
4.3	Sheet metal thickness (minimum)		2.0	
3.4	Degree of Protection			
a)	Indoor panel		IP-55	
b)	Outdoor panel		IP-55, Weatherproof	
c)	Canopy in outdoor panel		☒ Yes	☐ No
4.5	Bus bar material		☒ Aluminium	☐ Copper
4.6	Earth bus bar required		☒ Yes	☐ No
4.7	Earth bus bar material (if applicable)		☒ GI Strip	☐ Aluminium ☐ Copper
4.8	Gland Plate	mm	3.0	
4.9	Earthing studs required		☒ Yes	☐ No
4.10	Hinged door with locking facility		☒ Yes	☐ No
4.11	AC Lighting Panel			
a)	Incomer rating	A	63A for LP and SLP	
b)	Type of Incomer		☒ TPN SFU	☒ TPN MCB ☐ TP MCB
c)	Earth Leakage Circuit Breaker (ELCB) in incomer required		☐ Yes	☒ No
d)	Type of Outgoing Feeders (non-flameproof panel)		☐ SPN MCB	☐ TPN MCB ☒ SP MCB
e)	Timer required for indoor panel		☐ Yes	☒ No

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TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS

SPECIFICATION NO. PE-RC-999-
558-E005

VOLUME II

SECTION - I

REV.
01

DATE: 07.03.2020

SHEET 6 OF 11

2 X 500 MW NTPC MOUDA ST-I FGD
3 X 660 MW NORTH KARANPURA FGD
3 X 660 MW NTPC BARH ST-I FGD
3 X 660 MW NPGCPL NABINAGAR STPP FGD
2 X 660 MW NTPC BARH ST-II FGD
2X250MW NSPCL BHILAI TPP FGD
3X200+3X500 MW NTPC RAMAGUNDAM TPP FGD
3X200+3X500+1X500 MW NTPC KORBA TPP FGD
4X250 MW BRBCL NABINAGAR STPP FGD

f)	Timer required for outdoor panel		☒ Yes	☐ No
g)	Timer required Street Light panel/ High mast feeder pillar		☒ Yes	☐ No
h)	Photocell required for Street Light panel/ High mast feeder pillar		☒ Yes	☐ No
i)	Outgoing feeders rating	A	20	
4.12	DC Lighting panel			
a)	Incomer rating	A	32	
b)	Type of incomer		☐ DP SFU ☐ DP MCCB ☒ DP ISOLATOR	
c)	Type of outgoing feeders (non- flameproof panel)		☒ DP SFU	
d)	Type of outgoing feeders (flameproof panel)			
e)	Outgoing feeders rating	A	20	
5.0	COMPONENTS OF LIGHTING SYSTEM EQUIPMENT			
5.1	Moulded Case Circuit Breaker (MCCB)			
a)	Rated voltage	V	415	
b)	Number of poles		TPN	
c)	Rated short circuit duty	kA	50	
d)	Rated breaking capacity (rms)	kA	50	
e)	Rated making current (peak)	kA	105	
f)	Release with short circuit		☒ Yes	☐ No
g)	Release with overload		☒ Yes	☐ No
h)	Release with under voltage		☐ Yes	☒ No
i)	Auxiliary contacts			

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TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS

SPECIFICATION NO. PE-RC-999-
558-E005

VOLUME II

SECTION - I

REV.
01

DATE: 07.03.2020

SHEET 8 OF 11

2 X 500 MW NTPC MOUDA ST-I FGD
3 X 660 MW NORTH KARANPURA FGD
3 X 660 MW NTPC BARH ST-I FGD
3 X 660 MW NPGCPL NABINAGAR STPP FGD
2 X 660 MW NTPC BARH ST-II FGD
2X250MW NSPCL BHILAI TPP FGD
3X200+3X500 MW NTPC RAMAGUNDAM TPP FGD
3X200+3X500+1X500 MW NTPC KORBA TPP FGD
4X250 MW BRBCL NABINAGAR STPP FGD

d)	Accuracy class		1.0				
e)	Winding configuration		Star/ Star				
f)	System grounding		[√] Effective [] Non-effective				
5.6	Indicating Meters						
5.6.1	Ammeter						
a)	Type		Analog				
b)	Shape		Square				
c)	Size		96mm x 96mm				
d)	Accuracy		2.0				
e)	Current coil rating	A	1				
f)	Angle of deflection	deg	90				
5.6.2	Voltmeter						
a)	Type		Analog				
b)	Shape		Square				
c)	Size		96mm x 96mm				
d)	Accuracy		2.0				
e)	AC voltage coil rating	V	0-500				
f)	DC voltage coil rating	V	0-250				
g)	Angle of deflection	deg	90				
5.6.3	Energy meter (if applicable)						
a)	Type		[√] Analog [] Digital				
b)	Accuracy		1.0				
c)	Current coil rating	A	1				
d)	Voltage coil rating	V	0-500				

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TECHNICAL SPECIFICATION FOR
DISTRIBUTION BOARDS

SPECIFICATION NO. PE-RC-999-
558-E005

VOLUME II

SECTION - I

REV.
01

DATE: 07.03.2020

SHEET 9 OF 11

2 X 500 MW NTPC MOUDA ST-I FGD
3 X 660 MW NORTH KARANPURA FGD
3 X 660 MW NTPC BARH ST-I FGD
3 X 660 MW NPGCPL NABINAGAR STPP FGD
2 X 660 MW NTPC BARH ST-II FGD
2X250MW NSPCL BHILAI TPP FGD
3X200+3X500 MW NTPC RAMAGUNDAM TPP FGD
3X200+3X500+1X500 MW NTPC KORBA TPP FGD
4X250 MW BRBCL NABINAGAR STPP FGD

5.7	Power Contactors						
a)	Coil voltage (nominal)						
	AC contactors	V			240		
	DC contactors	V			220		
b)	Current rating of contacts						
	Power	A			As per manufacturer data		
	Control	A			As per manufacturer data		
5.8	Under voltage relay						
a)	Type				☒ Electromagnetic ☐ Static		
b)	Coil voltage rating	V			110		
c)	Means for in-built testing provided				As per manufacturer data		
5.9	Timer						
5.9.1	Time switch						
a)	Type				Digital synchronous		
b)	Range	hr			0-24		
c)	Coil voltage rating	V			240		
5.10	Selector switch						
a)	Type of selector switch				☒ Stay put ☐ Wing knob		
b)	Lockable				☐ Yes ☒ No		
5.11	Push Button						
a)	Voltage grade	V			500		
b)	Potential free contacts				2NO+2NC		

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	TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS	SPECIFICATION NO. PE-RC-999- 558-E005	
		VOLUME II	
		SECTION - I	
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		SHEET 10 OF 11	

5.12	Indicating Lamps						
a)	Lens Colour						
	ON condition					Red	
	OFF condition					Green	
b)	Circuit voltage	V				240V	
5.13	Cable Glands			By vendor for all incoming and outgoing cables [Tentative cable sizes are given in Note 1]			
a)	Type			☒ Double compression ☐ Single compression			
b)	Material			Brass			
c)	Nickel Plating provided			☒ Yes ☐ No			
d)	Flameproof glands with flameproof equipment			☒ Yes ☐ No			
5.14	Cable Lugs			By vendor for all incoming and outgoing cables [Tentative cable sizes are given in Note 1]			
a)	Type			Crimping type/ ring type			
b)	Material			Tinned copper			
6.0	PAINTING						
6.1	Paint shade						
a)	LDBs			Two coats of Red oxide primer followed by two coats of Powder coated, colour shade 9002			
b)	LPs			Two coats of Red oxide primer followed by two coats of Powder coated, colour shade 9002			
6.2	Paint Finish						
a)	Interior			☐ Matt ☒ Semi-glossy			
b)	Exterior			☒ Semi-glossy ☐ Full-glossy			
6.3	Paint Thickness	Microns	80				

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	TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS	SPECIFICATION NO. PE-RC-999- 558-E005	
		VOLUME II	
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		SHEET 11 OF 11	

Note :

1. Tentative cable sizes are given below:

- LDB incomer: 3CX240 sq.mm
- LP incomer: 3.5CX95 sq.mm
- DC LP incomer: 2CX95sq.mm
- DC LDB incomer : 2CX95 sq.mm

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BOQ CUM UNPRICE SCHEDULE
(Mouda, Barh-I , Barh-II, North Karanpura, BRDCL Nabinagar, NPGCPL Nabinagar, Korba, Bhilai, Ramagundam)

COST ESTIMATION FOR MAIN SUPPLY ITEMS								
Sl.No.	ITEM CODE	DESCRIPTION	UNIT	QTY.	HSN CODE	UNIT PRICE	TOTAL PRICE	REMARKS
		MAIN SUPPLY ITEMS						
1.0		Lighting Distribution Board (LDB)						
1.1		AC LDB Type LDB-F (8)						
1.1a	558-13031-A	AC LDB Type LDB-F (8) without transformer (including cubicle suitable for 2 no. 50 kVA transformer)	Nos.	23				
1.1b	558-13018-A	50kVA transformer (non- encapsulated) for housing in 1.2a	Nos.	46				
1.1c		AC LDB Type LDB-H(12)						
1.2a	558-13029-A	AC LDB Type LDB-H(12) without transformer (including cubicle suitable for 2 no. 100 kVA transformer)	Nos.	18				
1.2b	558-13017-A	100kVA transformer (non- encapsulated) for housing in 1.3a	Nos.	36				
1.3		DC LDB Type LDB- D(12)						
1.3a	558-13004-A	DC LDB Type LDB- D(12)	Nos.	4				
1.4		DC LDB Type LDB- D(6)						
1.4a	558-13005-A	DC LDB Type LDB- D(6)	Nos.	9				
1.5		AC LDB Type WDB-H (12) with 100 kVA transformer						
1.5a	558-13030-A	AC LDB Type WDB-H (12) without transformer (including cubicle suitable for 2 no. 100 kVA transformer)	Nos.	13				
1.5b	558-13017-A	100kVA transformer (non-encapsulated) for housing in 1.5a	Nos.	26				
2.0		Lighting Panels (LP)						
2.1	558-13032-A	AC Normal /Emergency indoor Type LP – A (12)	Nos.	57				
2.2	558-13006-A	AC Normal (Decorative) Type LP – A (12)	Nos.	29				
2.3	558-13033-A	AC Normal /Emergency indoor Type LP – A (18)	Nos.	48				
2.4	558-13014-A	AC Normal /Emergency outdoor Type LP – A (18) (With timer)	Nos.	22				
2.5	558-13019-A	DC indoor Type LP – D (6)	Nos.	18				
2.6	558-13013-A	DC outdoor Type LP – D (6)	Nos.	4				
2.7	558-13016-A	Street Lighting Type LP – S (6) (with timer)	Nos.	17				
3	558-13000B	MANDATORY SPARES						
3.1		TIMER FOR LIGHTING PANEL (24 HOURS)	Nos.	10				

NOTES :

- The quantities, which are indicated above shall be released for manufacture & supply along with LOI.
- Manufacturing of above quantities shall be done after the approval of technical & quality documentation, and supply of the same shall be completed as per NIT.
- The total quantity variation shall be limited to $\pm 30\%$ of the total contract value derived on the basis of the ordered quantities. Subsequent lot shall be cleared for manufacture based on project requirement. Delivery completion of supply of each lot from the date of clearance of the quantities shall be as per NIT.
- The unit price quoted by bidder shall be binding for quantity variation (as per sl. No.3 above) which is at discretion of purchaser.
- Design engineering charges are considered to be included in main equipment supply price. No separate charges shall be applicable.
- Prices shall remain firm during contract execution.

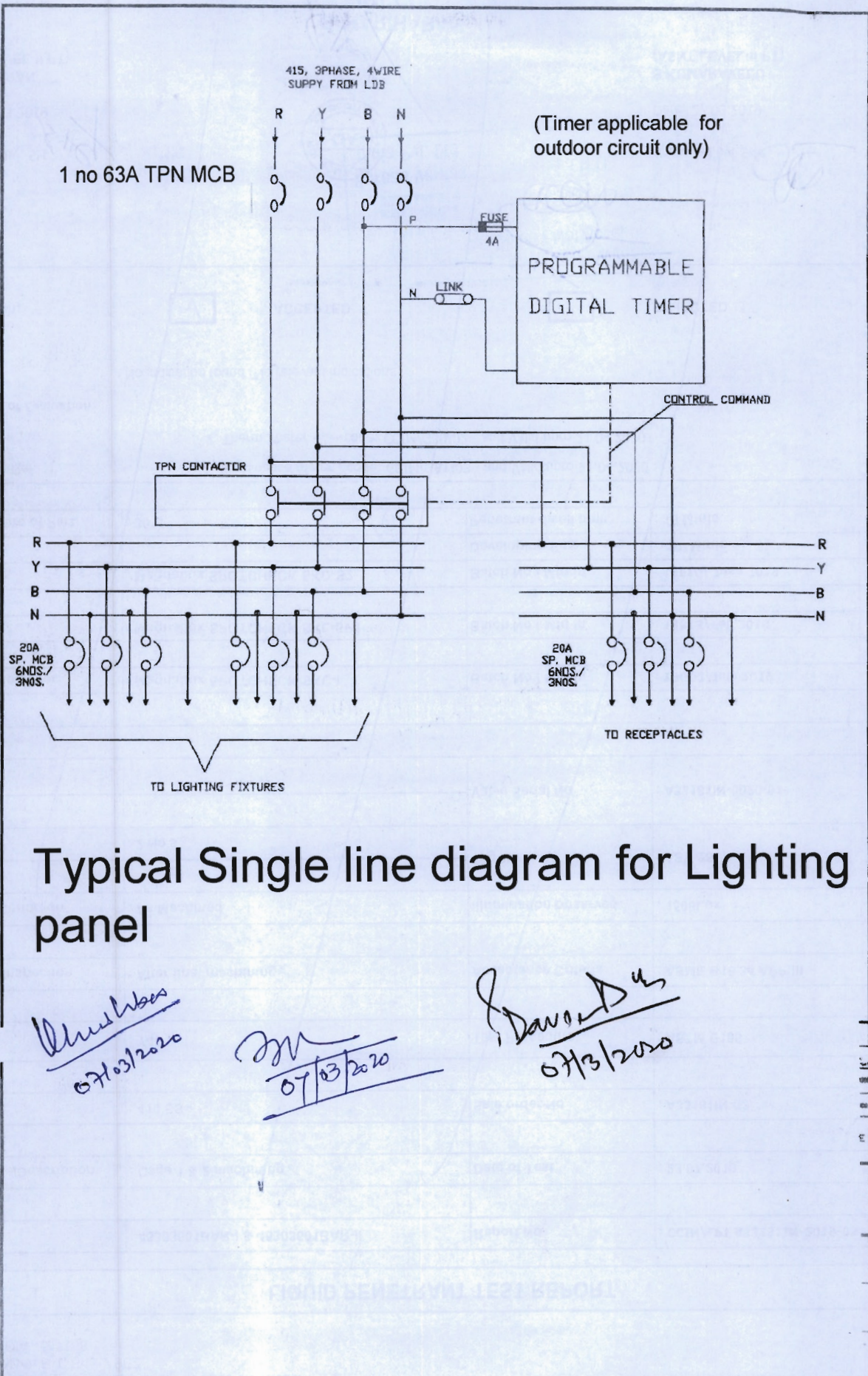
Umesh
07/03/2020

2m
07/03/2020

g. Datta
07/03/2020

Amendment to Technical Specification for Distribution
Boards for Rate Contract (LDB/LP etc of FGDs)

Spec. No.: PE-RC-999-SSB-E05



Typical Single line diagram for Lighting panel

Whishwas
07/03/2020

SM
07/03/2020

S. D. D. S.
07/03/2020



**TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS
FOR RATE CONTRACT**

SPECIFICATION NO.: PE-RC-999-558-E005
AMENDMENT NO # 1
REV. NO. 00 DATE: 07/03/2020
Page 1 of 1

REPLIES TO M/s AWAIDS TECHNOVATORS QUERIES

BHEL REPLY	
Sr. No.	Clause No.
Bidder query	
1	Sr. No. 2.7 of BOQ Annexure-V to NIT: Street lighting panel with energy saving system
Energy saving unit as mentioned at S. no 2.7 of BOQ cum unpriced schedule is deleted. Refer revised BOQ cum unpriced schedule enclosed with corrigenda..	

Sumit
07/3/2020

Unsub
07/03/2020



**AMENDMENT-38 TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS
FOR RATE CONTRACT**

SPECIFICATION NO.: PE-RC-999-558-E005
AMENDMENT NO # 1
REV. NO. 00 DATE: 07/03/2020
Page 1 of 2

REPLIES TO M/s ULTIMA SWITCHGEARS LTD. QUERIES

1	BOQ, Sr. No. 1.3a: As per DATA Sheet-A Under Voltage relay is not mentioned whereas in Technical specification it is asked, please clarify if it is required or not.	Bidder to refer clause no 1.3 of Section-I, Page – 3 of 20 : "The stipulations of Section-I, followed by those of Data Sheet-A shall prevail and govern in case of conflict between the corresponding requirements of Section-I and Section-II." Bidder to provide undervoltage relay as per spec..
2	BOQ, Sr. No. 2.1 LPs: As per data sheet –A, Point 4.11, Timer & Photocell both are marked for consideration, while in specific technical requirement, Clause no. 3.2.1 Points (G) only a programmable time switch (Astro type) is to be considered. Please clarify on Time switch /Photo cell requirement.	Datasheet-A clause no 4.11 indicates the requirement of timer and photocell both. Specific technical requirement clause no 3.2.1 (g) contains details of the timer. Bidder to follow spec. Diagram of timer circuit is enclosed with corrigenda (applicable for outdoor circuit only).
3	Specific technical requirement, Clause no. 3.2.1, point no.(e) 3 Set of contactors with 125A fuse with base to considered at incomer but As per Data Sheet-A All LPs are to be considered with 63A Switch fuse units at incoming side (1SFU+1 ELCB.), Kindly clarify on using of 3 Contactors assembly.	Clause no 3.2.1 S. no (e) of section-I (page no 5 of 20) deleted. Refer revised datasheet-A enclosed with corrigenda in this regard.
4	As per data sheet ALL LPs are to be considered with AL Bus-bars , While specifications says Copper bus-bars , Please clarify.	Bidder to refer clause no 1.3 of Section-I, Page – 3 of 20: "The stipulations of Section-I, followed by those of Data Sheet-A shall prevail and govern in case of conflict between the corresponding requirements of Section-I and Section-II." As per datasheet-A AL busbar are required.
5	Street Lighting Panel: As per specification A timer and, OR Photocell is to be provided at incoming side of panel, please clarify if both are to be considered. Also, brief on Energy saving unit.	As per datasheet-A timer and photocell both are required as per specification. Energy saving unit as mentioned at S. no 2.7 of BOQ cum unpriced schedule is deleted. Refer revised BOQ cum unpriced schedule enclosed with corrigenda.
6	DC-LP-D: Whether this panel require any contactor +Timer assembly for changeover of supply when AC is not available.	BHEL understands bidder is referring to DC LP here, following may be noted in this regard: DC LP is fed from DC LDB and DC LDB is fed from 220V DCDB. Whereas, AC LDB is

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13/03/2020
13/03/2020
13/03/2020



**AMENDMENT NO. 10 TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS
FOR RATE CONTRACT**

Replies to M/s Ultima SWGR. Ltd. Queries

SPECIFICATION NO.: PE-RC-999-558-E005
AMENDMENT NO # 1
REV. NO. 00 DATE: 07/03/2020
Page 2 of 2

		fed from AC PMCC (unit / station). There is no separate changeover contactor / timer circuit is envisaged in DC LDB, however, based on feedback of AC supply failure for AC LDB, DC LDB / DC LP is to be switched on.
7	Cl.3.0 (Specific Requirements/Change) Sub clause no .3.2.1 point .(f) Rotary type 2 pole switches to be provided in all DCDBs incoming & outgoing feeders . Whereas as per DATA SHEET –A, Incomer & outgoing feeders for DCDBs mentioned as DP Switch fuse units . Kindly clarify whether only 220V DP Rotary switch without fuse to be taken OR Rotary switch + separate 2 no. Fuse with Base , Third possibility a complete Switch disconnector fuse units to be provided in DCDBs for incomer & outgoing feeder.	For incoming and outgoing feeder of DC LDB & DC LP, refer revised datasheet-A. Further please note that DP rotary switch shall preferably be provided with separate fuse base.
8	Cl.3.0 (Specific Requirement/change) Sub clause no .3.2.1 point .(e) Contactor lighting ckt. Drawings need to be submitted.	Clause no 3.2.1 S. no (e) of section-I (page no 5 of 20)deleted.
9	Cables sizes are also need to furnish by BHEL as Lugs & Glands are part of supply.	Refer S. no 1 of corrigenda.

Umesh Kumar
07/03/2020

Manoj Kumar
07/03/2020

Praveen Kumar
07/03/2020



TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS
FOR RATE CONTRACT

SPECIFICATION NO.: PE-RC-999-558-E005
AMENDMENT NO # 1
REV. NO. 00 DATE: 07/03/2020
Page 1 of 2

REPLIES TO M/s CORE METAL KRAFTS LIMITED QUERIES

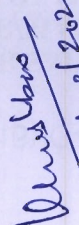
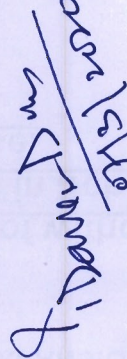
Reference Clause in Data sheet-A	DATASHEET-A	TECHNICAL Specifications	CMKL QUERY	BHEL REPLY
1	Lighting/ Welding DB	Cu. Busbar specified at P 4 of 22	what to consider	Al busbar is required. Bidder to refer datasheet-A in line with clause no 1.3 of Section-I of technical specification.
3.11 c	Lighting Transformer	P-5 of 22 (g) -neutral busbar of same size		
	Voltage ratio		Note-1 ??	Refer revised datasheet-A enclosed with corrigenda
3.11 j	Transformer type	Encapsulated (Applicable for Mounda Project only: 4 nos. 50KVA & 4 NOS. 100kva)	No separate qty given for Mounda project and in price schedule also, total qty 46 is mentioned as item no.-2	Refer revised datasheet-A enclosed with corrigenda
4	Lighting panel	Non-Encapsulated 4.0- busbar AL	what to consider	Al busbar is required. Bidder to refer datasheet-A in line with clause no 1.3 of Section-I of technical specification.
4.11	AC Lighting panel			
	P-13 of 20	Incomer - 63A TPN SFU/ TPN MCB/ TP MCB	what to consider	Refer revised datasheet-A enclosed with corrigenda
	ELCB in Incomer	yes but not applicable in case of North Karampura Project only.	No separate qty given for North Karampura project and in price schedule also	Refer revised datasheet-A enclosed with corrigenda

Signature Date 07/03/2020

Signature Date 07/03/2020

	TECHNICAL SPECIFICATION FOR DISTRIBUTION BOARDS FOR RATE CONTRACT		SPECIFICATION NO.: PE-RC-999-558-E005	
	Replies to M/s Corc Metal Kraft Ltd. Queries		AMENDMENT NO # 1	
			REV. NO. 00	
			DATE: 07/03/2020	
Page 2 of 2				

Type of outgoing	SPN MCB/SP MCB (refer note-1)	Note-1 ??	Refer revised datasheet-A enclosed with corrigenda
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 07/03/2020
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