



Ref: TPCODL/P&S/68/2020-21/Corrigendum/003

Dated: 29th Aug 2020

Sub: Corrigendum-3 to open tender number TPCODL/P&S/68/2020-21 for Rate Contract for Supply of 11 kV Ring Main Unit.

I. Extension of due date and time of bid submission/opening of Technical bids and EMD

Tender No.	Work Description	Existing Entry	May be read as
TPCODL/P&S/68/2020-21	Rate Contract for Supply of 11 Ring Main Unit	a: Due date and time of bid submission /Date & Time of opening technical bids and EMD 28.08.2020 15:00 Hours	a: Due date and time of bid submission /Date & Time of opening technical bids and EMD 07.09.2020 15:00 Hours

II. Addition to existing Technical Specification (Annexure-II) of the Tender document

Following clause is being added to existing clause of Technical specification of 11kV Motorized Ring Main Unit (RMU): -

- a. Addition to Clause No 5.1.13 Paint- OEM Should provide PU Coating (polyurethane) to the RMU Enclosure surface and RMU Body to protect the base material from corrosion, weathering, abrasion and other processes that would degrade the material over time
- b. Addition to Clause No-7.0 Type Test of RMU - OEM should provide Salt Spray Test of RMU for 1000hrs.

III. TPCODL is sharing replies to Pre-Bid queries raised by all the bidders seeking clarification before the deadline date as mentioned in Event Calendar of Tender Document No. TPCODL/P&S/68/2020-21 and Corrigendum-2 – Annexure-1

Note:

All other terms and conditions of the above tender will remain same

By Order

Chief-Procurement & Store, TPCODL

ANNEXURE-1- REPLIES TO PRE-BID QUERIES FOR SUPPLY OF 11 KV RING MAIN UNIT

Sr. No.	Detailed Reference to Tata Power Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPCODL RESPONSE
1	Clause-5.1.1, General Construction for RMU Page- 5 of 19	The switchgear and bus bar shall be contained in a stainless steel tank filled with SF6 gas and the outer body shall be made of minimum CRCA of 3mm or GI high tensile steel 2mm thick.	For outdoor RMU outer enclosure shall be made of 1.6mm GI sheet duly powder coated as per our type tested design.	Not Accepted
2	Clause-5.1.2, General Construction of RMU, Page- 5 of 19	The RMU shall be complete with all connection and tinned copper busbar.	Bus Bar is placed in Stainless Steel tank filled with SF6 gas. The busbar outside the tank shall be tinned copper.	The RMU shall be complete with all connection and copper busbar with continuous current capacity of 630A
3	Clause-5.1.5, Incomer Load Break Switch, Page- 6 of 19	The LBS shall be fitted with an electrical operating mechanism and can remotely open-disconnected, closed and earthed from reserved location.	LBS shall be fitted with an electrical mechanism and it is possible to remotely open-disconnected, closed. Earth switch is manually operated & Therefore; it is not operable from remote as a safety measure.	Accepted. LBS & VCB shall be fitted with an electrical mechanism and it is possible to remotely open-disconnected, closed. Earth switch is manually operated & Therefore; it is not operable from remote as a safety measure.
4	Clause-5.1.11, Fault Passage Indicator, Page-7 of 19	FPI Shall have at least 16 setting for Earth Fault + 4 settings for Phase-Phase (O/C settings 200-1000A and Earth Fault settings 10-150A)	Offered FPIs have 6 setting for E/F + 7 setting for phase - phase faults.(O/C setting 200-1200 & E/F setting 10-100A) in line with past supplies	Accepted
5	Clause-7.0, Acceptance Test, Page 10 of 19	Heat Run Test shall be carried on one random	Heat run test is part of Type test & type test report is submitted. This test may excluded from acceptance test.	Accepted

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		sample/configuration/tender quantity as acceptance test.		
6	Clause-5.1.4, General Construction for RMU, Page 5 of 19	Gas shall be released to the rear of the RMU away from the operator. Bidder shall provide type test report to prove compliance to the 'Internal fault IAC- A & B as per IEC 62271-200.	Our RMU has been tested with IAC AFLR with 21kA for 1 sec as per IEC 62271-200.	Accepted
7	Clause-5.1.6, CB for Transformer, Page 6 of 19	An operating mechanism can be used to manually close the circuit breaker and charge the mechanism in a single movement	The mechanism being used is, "Stored energy, spring operated type" takes 8-9 strokes for charging. Request you to confirm.	Accepted
8	Clause-5.1.6, CB for Transformer, Page 7 of 19	The cable cover door shall be pad lockable and shall be tamper & arc proof.	Padlocking facility for cable door is not available in our RMU. However, these cable doors are tamper and arc proof.	Accepted
9	Clause-5.1.12, Remote control of the RMU, Page 8 of 19	Signal requirement for field RTU (which shall be mounted near RMU) is attached (refer Annexure-1). Bidder shall quote the cost of field RTU (FRTU) separately with all technical details for acquisition of the signal as described in Annexure-1.	Do we quote RMU with FRTU or not please clarify.	FRTU is not part of this Tender
10	Clause-5.1.13, Paint, Page 8 of 19	The overall paint thickness shall not be less than 150 microns	High Paint thickness has tendency to peel off, hence we will provide overall Paint thickness between 80 micron to 120 micron for better adhesion. We request you to accept the same.	Accepted

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11	Clause-11.0, Gaurantee, Page-11 of 19	In the event any defect is found by the Purchaser up to a period of at least 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract whichever is later,	Guarantee shall be amended as- period of at least 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract whichever is earlier.	Not Accepted
12	Clause-17.0, Spares Page-12 of 19	Auto changeover in-built requirement utilization VPI(Voltage Passage indicator) or through separate core of PT proposed on each breaker along with associated circuitry	Requirement is not clear to us. Pls clarify the scope.	Not applicable for the Tender
13	Clause-19.0, GTP (S.No.33), Page 15 of 19	Earthing of main CCT Cables shall be earthed with earth switch with S/C making capacity as per IEC 129. Moving contacts of earthing switch shall be visible in closed position thru transparent covers AND closing shall be possible only when Isolator is open	In our design, mechanical contact position indicator is directly mounted on the main shaft of switch. Hence It reflect the true position of contact.	Accepted
14	Clause-19.0, GTP (S.No.65), Page 17 of 19	LBS & Earth Switch operation counter- Should provide	Operation counter shall be provide on LBS only. Earth switch will not have any operation counter	Accepted
15	9 of 115-Clause-3.9	The type tests specified in TPCODL specifications should have been carried out within five years prior to the date of opening of technical bids	As per the latest Guidelines of the Central Electricity Authority, the validity of type tests for Medium Voltage Switchgear is 10 years. Please accept a validity of 10 years.	1) Accepted subjected to there is no change in plant, RMU design & mechanism. Vendor

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		and test reports are to be submitted along with the bids. If type tests carried out are not within the five years prior to the date of bidding, the bidder will arrange to carry out type tests specified, at his cost. The decision to accept/ reject such bids rests with TPCODL		has to give undertaking for same in his company letter pad.
16	40 of 115 (2 of 19)- Clause-2.0	IEC 60694 : Common specifications for high voltage switchgear and control gear standards	IEC 60694 is withdrawn and is replaced by IEC 62271-1: High-voltage switchgear and control gear - Part 1: Common specifications. Our equipment would comply only with the latest applicable IS/IEC Standards.	Accepted.
17	40 of 115 (2 of 19)- Clause-2.0	IEC 60265-1 : High voltage switches – Part 1: Switches for rated voltages above 1 kV and less than 52 kV	IEC 60265-1 is withdrawn and is replaced by IEC 62271-103: High-voltage switchgear and controlgear - Part 103: Switches for rated voltages above 1 kV up to and including 52 kV. Our equipment would comply only with the latest applicable IS/IEC Standards.	Accepted.
18	40 of 115 (2 of 19)- Clause-2.0	IS 13947 : Low voltage switchgear and control gear	IS 13947 is withdrawn and is replaced by IS/IEC 60947: Low-voltage switchgear and controlgear. Our equipment would comply only with the latest applicable IS/IEC Standards.	Accepted.
19	40 of 115 (2 of 19)- Clause-2.0	IEC 60439-1 : Low-voltage switchgear and control gear assemblies- Type tested and partially type tested assemblies	IEC 60439-1 is withdrawn and is replaced by IEC 61439-1: Low-voltage switchgear and controlgear assemblies - Part 1: General rules. Our equipment would comply only with the latest applicable IS/IEC Standards.	Accepted.
20	40 of 115 (2 of 19)- Clause-2.0	IEC 60255-3 : Electrical relays - Part 3: Single input energizing quantity	IEC 60255-3 is withdrawn and is replaced by IEC 60255-151: Measuring relays and protection equipment - Part 151: Functional requirements for over/under current protection.	Accepted.

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		measuring relays with dependent or independent time.	Our equipment would comply only with the latest applicable IS/IEC Standards.	
21	40 of 115 (2 of 19)- Clause-2.0	IEC 60044-1 / IS 2705 : Current Transformers	IEC 60044-1 is withdrawn and is replaced by IEC 61869-1: Instrument transformers - Part 2: Additional requirements for current transformers. IS 2705 is withdrawn and is replaced by IS 16227-2: Instrument Transformers Part 2 Additional Requirements for Current Transformers. Our equipment would comply only with the latest applicable IS/IEC Standards.	Accepted.
22	40 of 115 (2 of 19)- Clause-2.0	IEC 60044-2 / IS 3156 : Voltage Transformers	IEC 60044-2 is withdrawn and is replaced by IEC 61869-3: Instrument transformers - Part 3: Additional requirements for inductive voltage transformers. IS 3156 is withdrawn and is replaced by IS 16227-3: Instrument Transformers Part 3 Additional Requirements for Inductive Voltage Transformers. Our equipment would comply only with the latest applicable IS/IEC Standards. Our equipment would comply only with the latest applicable IS/IEC Standards.	Accepted.
23	40 of 115 (2 of 19)- Clause-2.0	IEC 61958 : High-voltage prefabricated switchgear and control gear assemblies - Voltage presence indicating systems.	IEC 61958 is withdrawn and is replaced by IEC 62271-206:High-voltage switchgear and controlgear - Part 206: Voltage presence indicating systems for rated voltages above 1 kV and up to and including 52 kV. Our equipment would comply only with the latest applicable IS/IEC Standards.	Accepted.
24	41 of 115 (3 of 19) - Clause-4.0	Interrupting medium - Vacuum	This is applicable only for the Circuit Breaker. For the Load Break Switches, the interrupting medium shall be SF6 gas.	Accepted
25	41 of 115 (3 of 19) - Clause-4.0	Maximum permissible temperature for bus bar shall not be 90 deg C at	IEC 60694 is withdrawn and is replaced by IEC 62271-1: High-voltage switchgear and controlgear - Part 1: Common	Accepted

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		an ambient temperature not exceeding 40 deg C, as per IEC 60694 And IEC 62271.	specifications. Our equipment would comply only with the latest applicable IS/IEC Standards.	
26	42 of 115 (4 of 19)- Clause-4.0	Coupled type DC operated motors shall be suitable for the installation on the indoor type RMU's on the isolator function and to be flitted in/from the LV compartment side. There	Whereas the item description in Cl. 1.1 (Page 3 of 115) mentions "11 KV RMU Outdoor type". This is contradicting. Please clarify.	RMU are outdoor type however remote/manual open & close operation of LBS & Circuit breaker 24V DC Motor should be fitted along with RMU Mechanism
27	42 of 115 (4 of 19)- Clause-4.0	There shall be provision of 230 V AC (maximum 5 Amp current) & 24 V DC	No control transformer is specified anywhere in the Specifications. Please confirm that TPCODL will be providing this 230V AC & 24V DC Power Supplies.	Yes, TPCODL will provide the necessary control supply 230V AC & 24V DC
28	42 of 115 (4 of 19)- Clause-4.0	i) 1 Way Extension Type (For Outdoor application):	Whereas the item description in Cl. 1.1 (Page 3 of 115) mentions "11 KV RMU Outdoor type 3 Way & 4 Way". This is contradicting. Please clarify.	RMU requirement under this tender is 3W type & 4W with extension type. However the specification for 4 different type of combination of RMU
29	42 of 115 (4 of 19)- Clause-4.0	ii) 2 Way Extension Type (For Indoor and Outdoor application):	Whereas the item description in Cl. 1.1 (Page 3 of 115) mentions "11 KV RMU Outdoor type 3 Way & 4 Way". This is contradicting. Please clarify.	RMU requirement under this tender is 3W type & 4W with extension type. However the specification for 4 different type of combination of RMU
30	42 of 115 (4 of 19)- Clause-4.0	iii) 3 Way Extension Type (For Indoor and Outdoor application):	Whereas the item description in Cl. 1.1 (Page 3 of 115) mentions "11 KV RMU Outdoor type 3 Way & 4 Way". This is contradicting. Please clarify.	RMU requirement under this tender is 3W type & 4W with extension type. However the specification for 4 different type of combination of RMU

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31	42 of 115 (4 of 19)- Clause-4.0	iv) 4 Way Extension Type (For Indoor and Outdoor application):	Whereas the item description in Cl. 1.1 (Page 3 of 115) mentions "11 KV RMU Outdoor type 3 Way & 4 Way". This is contradicting. Please clarify.	RMU requirement under this tender is 3W type & 4W with extension type. However the specification for 4 different type of combination of RMU
32	42 of 115 (4 of 19)- Clause-4.0 (iii) & (iv)	1 No. Electronic Fault Passage Indicator per RMU	Do you mean only one FPI per RMU, even when 2 Load Break Switches are there in the RMU? If so, in which LBS, should the FPI be provided? Loop-in Ring Feeder or Loop-out Ring Feeder?	Yes, one FPI for RMU. The FPI will be placed on first LBS of RMU from left to right
33	42 of 115 (4 of 19)- Clause-4.0 (iii) & (iv)	Extension provision on both sides of RMU for adding 630A circuit Breaker.	Whereas Cl. 4.0 (Page 42 of 115) mentions that "There shall be provision of 230 V AC (maximum 5 Amp current) & 24 V DC". Which means a Control Transformer has to be provided in the RMU. With the provision of the Control Transformer, it is not possible to extend the RMU on both sides. Only one side extension is possible. Please note.	Our requirement is extension of Circuit breaker on both side of RMU
34	42 of 115 (4 of 19)- Clause-4.0	VPI to be provided with all type of RMU of the above combination mentioned.	What is the quantity of the VPI to be provided? One per RMU or one each in each LBS & VCB Feeder?	VPI to be provided on each LBS & VCB
35	43 of 115 (5 of 19)- Clause-5.1.1	SF6 gas used for the filling of the RMU shall be in accordance with IEC 376.	IEC 376 is not a valid Standard. Please clarify.	IEC 376 .SF6 gas shall be tested for purity, dew point, breakdown voltage, water contents as per IEC-376,
36	43 of 115 (5 of 19)- Clause-5.1.5	The position indicator shall provide positive contact indication in accordance with IEC 60265-1.	IEC 60265-1 is withdrawn and is replaced by IEC 62271-103: High-voltage switchgear and controlgear - Part 103: Switches for rated voltages above 1 kV up to and including 52 kV. Our	Accepted

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			equipment would comply only with the latest applicable IS/IEC Standards.	
37	43 of 115 (5 of 19)- Clause-5.1.5	The switches shall be of the "increased operating frequency" in accordance with IEC 60265-1.	IEC 60265-1 is withdrawn and is replaced by IEC 62271-103: High-voltage switchgear and controlgear - Part 103: Switches for rated voltages above 1 kV up to and including 52 kV. Our equipment would comply only with the latest applicable IS/IEC Standards.	Accepted
38	44 of 115 (6 of 19)-Clause-5.1.5	Each switch shall be fitted with an electrical operating mechanism in an especially reserved location, such that the mechanism is compatible for remote/SCADA operation	Only the Load Break Switch will have an electrical operating mechanism. The Earth Switches will only be manually operated.	Manual operation Accepted for earth switch, electrical fitting operation should be available for LBS & VCB however earthswitch open & closing status limit switch should be available SCADA wiring to remote monitoring
39	44 of 115 (6 of 19)-Clause-5.1.5	The LBS shall be fitted with an electrical operating mechanism and can remotely open-disconnected, closed and earthed from a reserved location.	Only the Load Break Switch will have an electrical operating mechanism. The Earth Switches will only be manually operated.	Manual operation Accepted for earth switch, electrical fitting operation should be available for LBS & VCB however earthswitch open & closing status limit switch should be available SCADA wiring to remote monitoring
40	44 of 115 (6 of 19)-Clause-5.1.6	Breaker contact resistance should be <=50 micro-ohms	This shall be as per Type Test Plus the Tolerances mentioned in the Standards	Breaker contact resistance should be less than 50Micro ohm

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41	44 of 115 (6 of 19)-Clause-5.1.6	CT Burden is 5 VA for Feeder and 2.5 VA for Transformer	The CT burden shall be adequate for the actual connected load of the CT Secondary.	CT Burden is 5 VA for Feeder protection and 2.5 VA for Transformer protection
42	44 of 115 (6 of 19)-Clause-5.1.6	The circuit breaker shall be provided with Phase protection of Definite time/ IDMT element for overcurrent PSM-0.2 TMS-0.01 having standard characteristics of Standard Inverse, Very inverse, Extremely Inverse as per IEC 60255-3 standard.	IEC 60255-3 is withdrawn and is replaced by IEC 60255-151: Measuring relays and protection equipment - Part 151: Functional requirements for over/under current protection. Our equipment would comply only with the latest applicable IS/IEC Standards.	The circuit breaker shall be provided with Phase protection of Definite time/ IDMT element for overcurrent PSM-0.2 TMS-0.01 having standard characteristics of Standard Inverse, Very inverse, Extremely Inverse as per IEC 60255-3 standard.
43	44 of 115 (6 of 19)-Clause-5.1.6	The Earth Fault Protection shall be provided of Definite time/ IDMT element PSM-0.05 TMS-0.01 having standard characteristics of Standard Inverse, Very inverse, Extremely Inverse as per IEC 60255-3 standard.	IEC 60255-3 is withdrawn and is replaced by IEC 60255-151: Measuring relays and protection equipment - Part 151: Functional requirements for over/under current protection. Our equipment would comply only with the latest applicable IS/IEC Standards.	The Earth Fault Protection shall be provided of Definite time/ IDMT element PSM-0.05 TMS-0.01 having standard characteristics of Standard Inverse, Very inverse, Extremely Inverse as per IEC 60255-3 standard.
44	44 of 115 (6 of 19)-Clause-5.1.6	The breaker shall have the provision of flag Relay for indication to Trip on Fault	We will provide an LED indication on relay front facis for the purpose.	Accepted
45	44 of 115 (6 of 19)-Clause-5.1.6	High set (DT) for overcurrent and earth fault-min current setting-0.5 In, minimum Time Delay-20 millisecond. The	The time delay will be 30 m.sec. for Phase & 40 m. sec. for Earth	Accepted

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46	45 of 115 (7 of 19)- Clause-5.1.7	The cable termination shall be done with Heat shrinkable /Push ON termination method	This is not in our scope	Accepted. However necessary supporting arrangement should be provided to do the cable termination
47	45 of 115 (7 of 19)- Clause-5.1.7	The Sizes of cable should be 11kV 3 Core 400 sq.mm and 11kV 1CX630 sq.mm (optional) for termination.	Whereas, Cl. 67.0 (g) (Page 55 of 115) mentions that "Cable cross section of cable: 150-300 sq.mm". This is contradicting. Please clarify.	The cable compartment should support for 11KV 3C X400Sqmm or 1CX630Sqmm cable termination
48	45 of 115 (7 of 19)- Clause-5.1.8	The RMU outdoor metal clad, switchgear, load Break Isolators, Distribution Transformer, R.S. Joists, M.S Channels/M.S. angles etc, shall be equipped with an earth bus securely fixed along the base of the RMU.	Our scope is limited to provision of Earth Bus in RMU. All other items are not in our scope.	Accepted
49	45 of 115 (7 of 19)- Clause-5.1.8	Provision shall be made on end of RMU for connecting the earth bus to the earth grid by erecting suitable 2 earth pipes of 50mm dia. M.S. rod of 3 meter in Pits. Both the earth pipes are also to be connected in a grid formation. Necessary terminal clamps and connectors shall be included in the scope of supply.	This is not in our scope	Accepted. There should be two copper earthbus of RMU for connecting to earthpit
50	45 of 115 (7 of 19)- Clause-5.1.9	These devices shall be in compliance with IEC 61958 standard.	IEC 61958 is withdrawn and is replaced by IEC 62271-206:High-voltage switchgear and controlgear - Part 206: Voltage presence indicating systems for rated voltages above	Accepted

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			1 kV and up to and including 52 kV. Our equipment would comply only with the latest applicable IS/IEC Standards.	
51	46 of 115 (8 of 19)- Clause-5.1.11	IEC 60068-2-6, IEC 60068-2-9 : Environmental testing – For Vibration, solar radiations	IEC 60068-2-9 is withdrawn and is replaced by IEC 60068-2-5: Environmental testing - Part 2-5: Tests - Test Sa: Simulated solar radiation at ground level and guidance for solar radiation testing	Accepted
52	46 of 115 (8 of 19)- Clause-5.1.11	IEC 1000-2 : Electromagnetic compatibility for low-frequency conducted disturbances and signaling in public low power supply systems	There is no such Standard as IEC 1000-2. Please clarify.	IEC 61000-2
53	46 of 115 (8 of 19)- Clause-5.1.11	IEC 1000-4 : EMC - Testing & Measurement	There is no such Standard as IEC 1000-4. Please clarify.	IEC 61000-4
54	46 of 115 (8 of 19)- Clause-5.1.11	IEC 1000-6 : EMC- Immunity for Residential, Commercial and light industrial environments	There is no such Standard as IEC 1000-6. Please clarify.	IEC 61000-6
55	47 of 115 (9 of 19)-Clause-6.0 (f)	Rated Short time withstand current for 1 sec	Whereas, vide Cl. 4.0 (Page 41 of 115) it is mentioned that the "Rated Short time current withstand (3 sec) - 21 kA". This is contradicting. Please clarify.	21KA for 3Sec
56	47 of 115 (9 of 19)-Clause-7.0	7. Operational & Interlock Performance Test	This is a only a Routine Test as per IS/IEC Standards.	Accepted
57	47 of 115 (9 of 19)-Clause-7.0	11. Leakage test on SF-6 Gas chamber	This is a only a Routine Test as per IS/IEC Standards.	Accepted
58	47 of 115 (9 of 19)-Clause-7.0	12. Dimensional and Visual Checks.	This is a only a Routine Test as per IS/IEC Standards.	Accepted
59	47 of 115 (9 of 19)-Clause-7.0	5. Sf-6 chamber pressure withstands/leakage test.	Pressure Withstand Test is only a Type Test as per IS/IEC Standards.	Accepted

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60	48 of 115 (10 of 19)- Clause-7.0	Pre-commissioning test to be conducted on each RMU before installation and commissioning	This is not in our scope	Accepted
61	48 of 115 (10 of 19)- Clause-8.0	Type tests shall have been conducted in certified Test laboratories during the period not exceeding 5 years from the date of opening the bid.	As per the latest Guidelines of the Central Electricity Authority, the validity of type tests for Medium Voltage Switchgear is 10 years. Please accept a validity of 10 years.	1) Accepted subjected to there is no change in design & mechanism, no plant change. Vendor has to give undertaking for same in his company letter pad.
62	50 of 115 (12 of 19)- Clause-17.0	Auto changeover in-built requirement utilization VPI(Voltage Passage indicator) or through separate core of PT proposed on each breaker along with associated circuitry.	No PT is specified for the RMU in the Specifications. Unable to comprehend this clause. Please elaborate.	No PT requirement
63	53 of 115 (15 of 19)- Clause-33.0	IEC 129.	There is no such Standard as IEC 129. Please clarify.	IEC60129
64	53 of 115 (15 of 19)- Clause-35.0	Circuit Breakers: Preferably SF6 type	Whereas, vide Cl. 4.0 (Page 41 of 115) it is mentioned that the "Interrupting Medium - Vacuum". This is contradicting. Please clarify.	The circuit breaker interrupting medium should be VCB Surrounded with SF6 gas
65	53 of 115 (15 of 19)- Clause-36.0	Hi-set setting for O/C + E/F min setting 0.5 In and delay 20 ms.	The time delay will be 30 m.sec. for Phase & 40 m. sec. for Earth	Accepted
66	53 of 115 (15 of 19)- Clause-38.0	Flag indication on CB for Trip on fault	We will provide an LED indication on relay front facis for the purpose.	Accepted
67	54 of 115 (16 of 19)- Clause-42.0	Voltage indicator box shall be fixed type-This device shall be in compliance with IEC 61958 standard	IEC 61958 is withdrawn and is replaced by IEC 62271-206: High-voltage switchgear and controlgear - Part 206: Voltage presence indicating systems for rated voltages above 1 kV	Accepted

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			and up to and including 52 kV. Our equipment would comply only with the latest applicable IS/IEC Standards.	
68	54 of 115 (16 of 19)- Clause-46.0	Cable termination	This is not in our scope	Accepted
69	54 of 115 (16 of 19)- Clause-47.0	Type: Heat/ Cold shrinkable	This is not in our scope	Accepted
70	54 of 115 (16 of 19)- Clause-48.0	Size: Suitable for cable sizes 11kV 3CX400 sq.mm and 11kV 1CX630 sq.mm cable (optional)	Whereas, Cl. 67.0 (g) (Page 55 of 115) mentions that "Cable cross section of cable: 150-300 sq.mm". This is contradicting. Please clarify.	RMU cable compartment Suitable for cable sizes 11kV 3CX400 sq.mm and 11kV 1CX630 sq.mm cable (optional)
71	54 of 115 (16 of 19)- Clause-48.0	Size: Suitable for cable sizes 11kV 3CX400 sq.mm and 11kV 1CX630 sq.mm cable (optional)	This is not in our scope	RMU cable compartment Suitable for cable sizes 11kV 3CX400 sq.mm and 11kV 1CX630 sq.mm cable (optional)
72	54 of 115 (16 of 19)- Clause-55.0	CT Burden is 5 VA for Feeder and 2.5 VA for Transformer	The CT burden shall be adequate for the actual connected load of the CT Secondary.	CT Burden is 5 VA for Feeder and 2.5 VA for Transformer
73	55 of 115 (17 of 19)- Clause-67.0 (e)	Bushing Diameter - Conical bushing as per EN50181, Type C	We don't follow EN. Our equipment would comply only with the latest applicable IS/IEC Standards.	as per OEM design
74	56 of 115 (18 of 19)- Clause-68 (e)	There shall be provision of 230 V AC (maximum 5 Amp current) & 24 V DC	No control transformer is specified anywhere in the Specifications. Please confirm that TPCODL will be providing this 230V AC & 24V DC Power Supplies.	provision to be made for connecting 230 V AC (maximum 5 Amp current) & 24 V DC in RMU.TPCODL will provide the control supply
75	57 of 115 (19 of 19)- Clause-	SIGNAL LIST FOR AUTOMATION - Breakers - Phase Voltage	Whereas no PT is specified anywhere in the Specifications. Without a PT, how is it possible to extend Phase Voltage Signal? Please clarify.	Not applicable. Accepted

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76	57 of 115 (19 of 19)- Clause-	FRTU SIGNAL LIST - Breakers - Phase Voltage	Whereas no PT is specified anywhere in the Specifications. Without a PT, how is it possible to extend Phase Voltage Signal? Please clarify.	Not applicable. Accepted
77	57 of 115 (19 of 19)- Clause-	SIGNAL LIST FOR AUTOMATION - Amp Loading R, Y & B	These will be through soft communication from the Relay. No further analogue signal will be provided.	Accepted
78	57 of 115 (19 of 19)- Clause-	FRTU SIGNAL LIST - Amp Loading R, Y & B	These will be through soft communication from the Relay. No further analogue signal will be provided.	Accepted
79	57 of 115 (19 of 19)- Clause-	FRTU SIGNAL LIST - Breakers - Power Factor	Whereas no PT is specified anywhere in the Specifications. Without a PT, how is it possible to extend Power Factor Signal? Please clarify.	Not applicable. Accepted
80	(11 of 19)-Clause-11.0	Bidder shall further be responsible for "free replacement " for another period of three years from the end of guarantee period for any " Latent Defects" if noticed and reported by the purchaser.	Any guarantee beyond guarantee period is not acceptable.	Not Accepted. Bidder shall further be responsible for "free replacement " for another period of three years from the end of guarantee period for any " Latent Defects" if noticed and reported by the purchaser.
81	(9 of 19)-Clause-5.1.12	Bidder shall quote the cost of filled RTU(FRTU) separately with all technical details for acquisition of the signal as described in Annexure - 1	FRTU is bidder scope of work or not.	Accepted. FRTU is out of tender scope
82		Terms of payments	This is contradicting. Please clarify.	As per Tender Refer Section - 6- Order of Preference/Contradiction
83		Guarantee Period	This is contradicting. Please clarify.	Ref guarantee clause 11 of Technical Specification

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84	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-1.0	Scope	Our Scope is limited to supply of 11 kV SF6 gas Insulated RMU as per given specification, clarification / deviation listed below and enclosed scope of supply (BOQ / BOM). All works related unloading of material at site, storage of material at site, RMU erection, testing and commissioning is excluded from our scope. However, we can depute our engineer at site for supervision activities on per diem rate if required. External Cables, lugs and cable glands are not considered in our scope.	Accepted
85	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-3.0	Ambient Temperature	Design ambient temperature considered is 40Deg C. At 50 deg C there shall be suitable derations.	Accepted
86	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-4.0	Rated cable Charging interrupting Current of Incomer Load Break Switch: 25KA	Rated cable-charging or line-charging breaking current shall be 68A. Seeking Deviation	Accepted. Rated cable Charging interrupting Current of Circuit Breaker: 25A
87	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-4.0	Rated Magnetizing Interrupting Current of Incomer Load Break Switch: 10A	According to the IEC standard 62271-103, it is not possible to define a rated no-load transformer breaking current. For this reason we do not have a value for magnetizing current. Seeking Deviation	Rated cable Charging interrupting Current of Incomer Load Break Switch: 10A .pls clarify
88	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-4.0	Temperature Rise: Maximum permissible temperature for busbar shall not be 90 Deg C, as per IEC 6094 And IEC 62271. However, the Temperature rise for accessible enclosure and covers shall not exceed 30K and in case they are not required to be touched during	Permissible temperature rise at 40°C ambient air temperature as per standard Busbars: 75 K (115°C) Connections: 75 K (115 °C) Contacts: 65 K (105°C) Seeking Deviation	Accepted

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		normal, the limit shall be raised by 10K.		
89	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-4.1	RMU Configurations	<p>As per your BOQ we find the following combinations:</p> <p>iii) 3 Way Extension Type (For Indoor and Outdoor application): 2 Nos. 630A Incomer Load Break Switches + 1 No. 630A Local Feeder/transformer Control Vacuum Circuit Breaker with self powered O/C + E/F relays+1 No. Electronic Fault Passage Indicator per RMU + Extension provision on both sides of RMU for adding 630A circuit Breaker.</p> <p>iv) 4 Way Extension Type (For Indoor and Outdoor application): 2 Nos. 630A Incomer Load Break Switches + 2 Nos. 630A Feeder Vacuum Circuit Breakers with self powered O/C + E/F relays + 1 No. Electronic Fault Passage Indicator per RMU + Extension provision on both sides of RMU for adding 630A circuit Breaker. Pls confirm the above configurations</p> <p>All above RMUs are Indoor or Outdoor type, pls confirm</p> <p>The above RMUS are having LBS motor operated and VCBs manual operated. Pls confirm</p>	for this tender we have requested for 3W & 4W configuration for outdoor use. LBS as well the VCB required motorized
90	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-5.1.1	The switchgear and bus bar shall be contained in a stainless steel tank	Outer Enclosure shall be 2mm thick CRCA as per type tested design	Accepted for outer enclosure 2mm .The Tank should be made

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		filled with SF6 gas and the outer body shall be made of minimum CRCA of 3mm or GI high tensile steel 2mm thick with thick gland plates of 3mm as per IS 513.		of stainless steel with 2.5mm Thickness
91	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-5.1.1	The tank shall have SS sheet of 3mm thickness and meet the "sealed pressure system" criteria in accordance with the IEC 62271-200.	SF6 Tank thickness shall be 2.5mm as per type tested design	Accepted
92	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-5.1.4	Bidder shall provide type test report to prove compliance to the 'Internal fault IAC- A & B as per IEC 62271-200.	Internal Arc shall be AFLR 20kA/1sec as per type tested design	Accepted
93	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-5.1.6	Protection core CT complete details should be furnished as (CT Burden is 5 VA for Feeder and 2.5 VA for Transformer, Class - 5P20).	Protection Core Burden shall be 2.5VA & Class shall be 5P10. Also specify if Metering core is required for Isolator Seeking Deviation	Accepted. No metering core is required
94	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-5.1.7	The Sizes of cable should be 11kV 3 Core 400 sq.mm and 11kV 1CX630 sq.mm (optional) for termination.	Please confirm exact cable size required	The Sizes of cable should be 11kV 3 Core 400 sq.mm and 11kV 1CX630 sq.mm (optional) for termination.
95	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-5.1.8	The size of copper earth busbar should be Min.105 sq.mm or GI Strip earth busbar of 75X12 sq.mm inside the enclosure to withstand short time current carrying capacity.	Earth busbar shall be 90sqmm Copper as per past supply Seeking Deviation	Earthbus bar sizes should be 105sqmm to meet the fault current

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96	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-5.1.12	Signal requirement for field RTU (which shall be mounted near RMU) is attached (refer Annexure-1). Bidder shall quote the cost of field RTU (FRTU) separately with all technical details for acquisition of the signal as described in Annexure-1.	Please confirm if RTU is part of supply since it is not mentioned in the Annexure-1	FRTU not in the included for this tender
97	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-11	In the event any defect is found by the Purchaser up to a period of at least 48 months from the date of commissioning or 60 months from the date of last supplies made under the contract whichever is later,	Warranty shall be 48/60 whichever is earlier Seeking Deviation	Existing clause prevails as per tender document
98	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-17	Bidder has to provide below spare with one lot of RMU	Please confirm if Spares are mandatory spares and shall be part of Price Schedule	bidder to provide spare as per tender clause no-17
99	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-37	Make of Relay	Relay shall be of same make as that of RMU	Make of relay preapproval to be taken from TPCODL. 1) ASHIDA Make ADR241S 2) C&S Make CSPR5V 3) REJ603
100	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-67	RMU Cable Boot	Cable Boots shall be as per manufacturer standard	Accepted. RMU Cable boot has been kept out of Tender
101	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-8	TYPE TESTS	Type test reports conducted earlier on a similar sample shall be submitted in event of order. No further type testing is considered in our scope of supply	Accepted. If the Test report is not more than 5years Old. The report validity can be extended upto 10Years subject to there

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				is no design, plant & mechanism change
102	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-8	ROUTINE TESTS	Routine test shall be as per Siemens approved QAP. Only routine tests which are mentioned in the QAP as per standards shall be conducted at Goa factory.	Routine Test to be don as per TPCODL Approved QAP
103	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-8	TYPE TEST CERTIFICATE	Type Test Certificates shall be submitted on event of order	Accepted
104	Spec-CED-RMU-06-R9 33kV (FY 15).pdf-Clause-17	17.0 SPARES, ACCESSORIES & SPECIAL TOOLS / GAUGES	Please confirm if Spares are mandatory spares and shall be part of Price Schedule	bidder to provide spare as per tender clause no-17
105	Page 45 of 115-Clause-5.1.11	<p>Fault Passage Indicators shall be installed on the Ring Main Unit. These devices shall be, electronic devices with their own energy source and connected to Single 3 phase Split Core CTs (CBCT) . These shall be provided with bright LED s / flag Indicators, which shall be clearly visible in the day time. These shall have the following resetting facilities:</p> <ul style="list-style-type: none"> “ Manual reset “ Resetting after a set time duration “ Electrically reset from remote with at least 2-spare potential free contacts. “ Resetting on restoration of LV 	<p>Proposed:Fault Passage Indicators shall be installed on the Ring Main Unit. These devices shall be, electronic devices with their own energy source (Internal high capacity Battery with normal operating life of 10 years and at least ≥1200 hours of LED flashing time during fault indication mode) and connected to Single 3 phase Split Core CTs (CBCT) . These shall be provided with bright 5 nos of LED s / flag Indicators(3 for phase fault, 1 for Earth fault & 1 for Battery Health), which shall be clearly visible in the day time. These shall have the following resetting facilities:</p> <ul style="list-style-type: none"> “ Manual reset: By pressing reset button the device “ Resetting after a set time duration : Adjustable from 1 to 8 Hrs “ Electrically reset from remote: Extending command from remote to dedicated remote reset input terminals “ Resetting on restoration of LV.Justification-Flashing hours are linked to battery capacity. More number of flashing hours signify more capacity of battery. Better the 	Accepted

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			<p>battery life, less is the concern on changing battery in FPI.</p> <p>Dedicated LEDs are required to identify the faulty phase. Also dedicated LED for battery health status will help to monitor the battery condition.</p> <p>The reset option shall be available for the minimum time as flashing of the LED for longer duration will consume power and will reduce the battery life.</p>	
106	Page 46 of 115-Clause-5.1.11	<p>The unit shall have Short Circuit and Earth fault adjustable to different settings with separate Current transformer. They shall be fully field-programmable and shall have at least 16 settings for Earth Fault + 4 settings for Phase-Phase(O/C setting 200-1000 A and E/F setting 10-150 A). It shall be possible to Test these indicators at site thru "Test" push button. The Fault Passage Indicators shall also be provided with a SCADA output contact.</p>	<p>Proposed:The unit shall have Short Circuit and Earth fault adjustable to different settings with separate Current transformer. They shall be fully field-programmable and shall have wide setting range for Phase Fault Earth Fault (Phase fault 200 A/400 A/500 A/600 A/800 A/1000 A/1200 A, & Earth fault current range: 10 A/20 A/30 A/40 A/60 A/80 A/100 A).Device should have a dedicated "Test" push button which shall support on site test functions such as device test, battery test and cable test. The Fault Passage Indicators shall also be provided with 2 nos SCADA output (1 for phase fault & 1 for earth Fault) contact. Apart from that the device shall have one dedicated contact for External indication lamp also..</p> <p>Justification-Wider setting range is important to set threshold more precisely and accurately.</p> <p>Device test to check device is working fine.</p> <p>Battery test to check battery healthiness and Cable test for the health of optical inputs and the plastic fibre-optic cable.</p> <p>With battery and cable test, healthiness of complete solution</p>	Accepted

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			is tested. Separate SCADA contact for phase fault & Earth fault will provide information to SCADA.	
107	Page 46 of 115-Clause-5.1.11	IEC 60068-2-6, IEC 60068-2-9 : Environmental testing – For Vibration, solar radiations IEC 60950 : Information Technology equipment - Safety IEC 1000-2 : Electromagnetic compatibility for low-frequency conducted disturbances and signaling in public low power supply systems IEC 1000-4 : EMC - Testing & Measurement IEC 1000-6 : EMC- Immunity for Residential, Commercial and light industrial environments	Proposed:Fault passage indicator shall adhere to the standards as per the annexure: . Justification-Detailed Type test to ensure that proper working of the device as per the various standards defined by IEC.	Accepted
108	Page 60 OF 115-Clause-4: Auxiliary Supply voltage rating	Universal suitable for 12 V To 300 V external power supply AC and DC	Proposed relay have Dual power(CT Powered + Aux. Powered) option & it supports 24 V to 60 V DC, or 60 V to 240 V AC/DC. Please accept the same.	Accepted
109	Page 60 OF 115-Clause-8. Re-chargeable internal battery	Battery should be rechargeable. Bidder to mention offered size and rating.	Proposed:Battery should be high capacity Non-rechargeable type. Bidder to mention offered size and rating.. Justification-Proposed relay have CR123 A, 3 V 1400 mAh Li-Mn non rechargeable battery. Which is replacable type & suitable for this type of application. Please accept the same.	Accepted

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110	Page 60 OF 115-Clause-10. Conformal coating	The relay PCB should have conformal coating	Proposed relay have necessary certification for enclosure & environmental protection as per IEC (details provided in annexure - Tpe test). Please accept the same.	Accepted
111	Page 60 OF 115-Clause-5. GENERAL CONSTRUCTION	5. After tripping operation relay should maintain fault indication on LCD display. During this time, the relay uses power through internal rechargeable battery. Reading of fault data and setting of relay to be done on battery.	Proposed:5. After tripping operation relay should maintain fault indication on LCD display. During this time, the relay uses power through internal non-rechargeable battery. Reading of fault data and setting of relay to be done on battery.. Justification-Proposed relay have CR123 A, 3 V 1400 mAh Li-Mn non rechargeable battery. Which is replacable type & suitable for this type of application. Please accept the same.	Accepted
112	Page 61 OF 115-Clause-5.1 RELAY PROTECTION	5.1.3 The tripping current Setting Range with pick up current: 0.1 up to 32 x In in steps 0.001. These settings should be available on display.	Proposed:Definite time OC(50) : 20% to 2000% * In Time delayed OC (51):10% to 200% * In Definite time EF(50G,50N) : 20% to 2000% * In Time delayed EF (51G):6% to 80 * In Time delayed EF (51N):10% to 80 * In Step 0.01.Justification-Mentioned setting ranges are most suitable for various utility application. Please accept the same.	Accepted
113	Page 61 OF 115-Clause-	5.1.5 The relay should have following range of curves: Separate operating curve can be programmed for phase and EF. DEFT/ EINV/NINV3.0/NINV1.3/LINV,HV FUSE, RI.	Proposed:5.1.5 The relay should have following range of curves: Separate operating curve can be programmed for phase and EF: DTL, IEC-NI, IEC-VI, IEC-EI, IEC-LTI, ANSI-MI, ANSI-VI, ANSI-EI.Justification-These types of curves (DTL, IEC-NI, IEC-VI, IEC-EI, IEC-LTI, ANSI-MI, ANSI-VI, ANSI-EI) are mostly used & suitable for most of the utility application. Please accept the same.	Accepted

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114	Page 61 OF 115-Clause-	5.1.7 Operate time delay (DMT) of relay should be: 0.03...64 s in steps of 0.01. Operational Accuracy of Relay : $\pm 2.0\%$ of set value or ± 30 ms.	Proposed:5.1.7 Operate time delay (DMT) of relay should be: 0.0...20 s in steps of 0.01. Operational Accuracy of Relay : $\pm 1.0\%$ of set value or ± 30 ms..Justification-It is recommended to have minimum operate time & higher accuracy ($\pm 1.0\%$).	Accepted
115	Page 61 OF 115-Clause-5.2 ADDITIONAL PROTECTION FEATURES	5.4.1 Other than Over Current, Earth Fault protection, relay should have cold Load protection, thermal Overload, Inrush Blocking Protection (second and fifth harmonic), broken conductor, negative phase sequence (46) and Auto reclosing function.	Proposed:5.4.1 Other than Over Current, Earth Fault protection, relay should have thermal Overload, Inrush Blocking Protection (second harmonic) & Switch on to Fault protection ..Justification-Proposed relay have protection functions which was optimized considering self power relay application for RMU. Please accept the same. SOTF provides high-speed tripping in the event of energizing the feeder while the earth switch is closed or while the feeder is energized when the fault current/short circuit current persists. SOTF protection is only active during starting conditions and its fast acting protection to limit damage when closing onto faults.	Accepted
116	Page -Clause-5.3 FAULT / EVENT / DISTURBANCE RECORD OF RELAY	5.3.1 The relay should have Latching of fault current data up to last 5 faults with time stamping.	Proposed:Relay shall store atleast last 100 events and 10 fault records.Justification-Events and fault records are important for users to analyze various faults. More number of events and fault records storing is crucial as less capacity recording may lead to loss of non analyzed faults after new faults happens. This becomes more critical in non Scada systems where these records are not monitored continuously.	Accepted
117		5.3.2 Latching of pick up current up to last five occurrence with time stamping.		
118		5.3.3. The Relay should have actual waveform of current along with logical and physical status are		

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		captured and saved in the built-in memory, with date time stamping for analyzing fault condition.		
119	Page -Clause-5.4 MEASUREMENT AND COMMUNICATION FUNCTION	5.4.4 The relay communication should compatible with Modbus or IEC -60870-5-103/104 or MQTT protocol. For MQTT and IEC-104 separate Ethernet (minimum data transmission rate 10/100Mbps) port to be provided at the front side of the relay to report the data to SCADA through external modem	Proposed:..Justification-We assume relay should support any of the three communication protocol - Modbus or IEC 013/104 or MQTT. For SCADA communication it is recommended to use deicated rear port of the relay. In case external modem is required, will it be on bidder's scope? Also please confirm whether suitable type of SIM card will be arranged by Bidder or TPCODL.	Accepted
120	Page -Clause-5.6 DI/DO REQUIREMENT	5.6.1 Minimum 3 DI (Universal supply (i.e. DC/AC)), 4 DO (Other than tripping, Flag).	Proposed:..Justification-As per point no 5.6.1 & 5.6.2 we assume total 4 nos of Binary input is required. Please confirm.	Accepted
121		5.6.2 The relay should be provided with extra status input that can be connected to any contact to be monitor such position of isolator switch etc.		
122	Page -Clause-	5.6.4 The status of DO contact should be operable with the help of CT current itself and without battery as well as without any auxiliary supply. DI: 3 No, Universal supply (i.e. DC/AC), DO: 4 no. Make and carry continuously: 5 A, Make and	Proposed:5.6.4 The status of DO contact should be operable with the help of CT current itself and without battery as well as without any auxiliary supply. DI: 3 No, Universal supply (i.e. DC/AC), DO: 4 no. Make and carry continuously: 5 A, Make and carry continuously: 30 A, for 0.2 second.. Justification-Putput contacts of the proposed relay have below ratings Contact current rating: Please accept the same	Accepted

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		carry continuously: 30 A, for 2 second.	Continuous: 5 A AC or DC Short time: 20 A AC or DC for 0.5 s, 30 A AC or DC for 0.2 s Limiting Making Capacity: (L/R ≤ 40 ms): 1000 W Limiting Breaking Capacity: AC Resistive 1250 VA AC Inductive: 250 VA DC Resistive: 75 W DC Inductive (L/R ≤ 40 ms): 30 W Mechanical/Electrical Endurance: 10000 operations	
123	Page -Clause-5.7 IMPULSE OUTPUT FOR THE TRIPPING COIL	5.7.2 The trip energy (12 - 24 V DC, 0.1 W/sec) is required to be provided by a capacitor in the protection relay. Length of the trip impulse shall be 30 to 40ms and pause between the individual pulses depends on the impedance of the tripping coil and the current level.	Proposed:5.7.2 The trip energy (24 V DC, 0.1 W/sec) is required to be provided by a capacitor in the protection relay. Length of the trip impulse shall be 30 to 40ms and pause between the individual pulses depends on the impedance of the tripping coil and the current level. Justification-Pulse output of proposed relay supports 24V DC, 0.01 Ws pulses which is suitable for maximum type of RMU application. Please accept the same.	Accepted
124	Page -Clause-5.8 Voltage indicator lamps and phase comparators	5.8.2 Relay shall be equipped with minimum of 3.6V / 600mAH - Rechargeable battery	Proposed:5.8.2 Relay shall be equipped with minimum of 3V / 1400mAH - high capacity Non-rechargeable battery. Justification-Proposed relay have CR123 A, 3 V 1400 mAh Li-Mn non rechargeable battery. Which is replacable type & suitable for this type of application. Please accept the same.	Accepted
125	5v	5.8.7 Battery life minimum 5 years and battery shall be rechargeable type.	Proposed:5.8.7 Battery life minimum 5 years and battery shall be high capacity Non-rechargeable type. Justification-Proposed relay have CR123 A, 3 V 1400 mAh Li-Mn non rechargeable battery. Which is replacable type & suitable for this type of application. Please accept the same.	Accepted

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126	Page -Clause-5.11 LED INDICATIONS	LED Indication should be provided for E/F (Configurable) and O/C (Configurable) . One LED should be for relay on, one for relay trouble shooting and 3 LED (Configurable) for DI.	Proposed:LED Indication should be provided for E/F (Configurable) and O/C (Configurable) . 4 nos of fixed LED's for battery health , relay health , Trip and pickup to get detailed information on faults. 2 LED (Configurable) various applications. Justification-Proposed relay have total 9 LEDs, 4 Fixed, 4 configurable & 1 dedicated LED for battery health conditions. Please accept the same	Accepted
127	Page -Clause-5.12 OUTPUT FOR FLAG RELAY	Impulse Output for Flag Indicator or Auxiliary Relay, 12 V - 24 VDC (Energy <= 0.03 J)	Proposed: Impulse Output for Flag Indicator or Auxiliary Relay, 24 VDC, 0.01 Ws pulses. Justification-Flag output of proposed relay supports 24V DC, 0.01 Ws pulses which is suitable for maximum type of RMU application. Please accept the same.	Accepted
128	Page -Clause-5.13 RELAY AUX POWER SUPPLY	Relay Auxiliary power supply should support 12 V To 300 V external power supply AC and DC. So it should be universal in range.	Proposed relay have Dual power (CT Powered + Aux. Powered) option & it supports 24 V to 60 V DC, or 60 V to 240 V AC/DC. Please accept the same.	Accepted
129	Page -Clause-7.1 TYPE TESTS	The Relay should Confirm to following IEC standards & type tested accordingly.	Proposed: Fault passage indicator shall adhere to the standards as per the annexure: .Justification-Detailed Type test to ensure that proper working of the device as per the various standards defined by IEC.	Accepted
130	Additional Point		Proposed: Relay shall have 2 settings group.Change of settings group can be achieved both locally at the relay fascia and remotely over the data communications channel(s) or via a binary input.	Accepted

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			Justification-Different settings for various protection functions can be set in two different settings group for various load onditions. Frequent changing of settings can be cumbersome task instead pre-set settings into 2 settings group and change over setting group is easy, time saving and more accurate.	
131	Additional Point		Proposed: Relay shall have 1 mechanical flag indicator to indicate tripping condition Justification-Onboard flag indicator clearly shows if relay is in trip condition or not which removes need to access relay to check if relay is in operated condition. Also external flag indicator requirement and associated complex wiring procedure is avoided.	Accepted
132	Additional Point		Proposed: The Sensor to Indicator device connection shall be using plastic fiber-optic cable to provide higher levels of noise immunity. Justification- Fibre optic cable are not affected by electromagnetic interference and power fluctuations. Due to which,accuracy of measurements is improved and we have accuracy of 10%.	Accepted
133	Additional Point		Proposed: The FPI should accurately detect the phase-to-phase and phase-to-ground fault currents with 10% accuracy over the entire range. Justification-Precise accuracy is important to detect fault accuratly and isolate faulty sections in UGC network. If accuracy is not maintained then fault may be detected at incorrect healthy location	Accepted

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134	Additional Point		<p>Proposed: FPI shall have response time of 40 ms, 60 ms, 80 ms, 160 ms, 200 ms, 300 ms, 500 ms with tolerance of 45msec.</p> <p>Justification-(Response time is the minimum time that a fault current should persist in the network and to be termed as a valid fault.)</p> <p>Wide setting range with better tolerance. Better tolerance is important to detect fault accurately and consistently over entire range of settings</p>	Accepted
135	Additional Point		<p>Proposed:The FRTU shall be expandable by adding modules, the number of modules shall be sufficient to cater the requirement for monitoring the current RMU configuration and also the future expansion as well..</p> <p>Justification-The FRTU shall provision for future by adding the modules.</p>	Accepted
136	Additional Point		<p>Proposed:The FRTU shall comply with IEC 870-5-104, IEC 870-5-101 DNP3.0 standard protocol. The FRTU shall support Secure Authentication according to IEC 62351-3.</p> <p>Justification-The protocol majorly used for the communication with the control center is IEC-60870-5-104 which is ethernet base communication.The authentication for the ethernet communication via TLS is defined in the IEC62351-3</p>	Accepted
137	Additional Point		<p>Proposed:RTU shall have Integrated crypto chip and IPsec encryption to fulfill the high cyber security requirements as per IEEE 1686 and https protocol that ensures secure transmission of sensitive data..</p>	Accepted

Sr. No.	Detailed Reference to Tata Power Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPCODL RESPONSE
			Justification-Cyber security to protect the user from potential security breach from intruder.	
138	Additional Point		Proposed: The FRTU Shall have at least 2 * Ethernet port, 1 * RS232 port and 1 * RS485 port for Communication. Justification-This are basics requirement of ports required for essential communication in the distribution automation.	Accepted
139	Additional Point		Proposed: The FRTU shall have feature that reprograming in not required upon the replacemnet of module, it shall be automatically functional. Justification-This will reduce the time taken for the mainteance by avioding the reprograming and associated testing time.	Accepted
140	Additional Point		Proposed: The FRTU shall the PLC logic functionality as per IEC61131-3 .Justification-The FRTU shall to peform the complex logic operation as per the need of scheme.	Accepted
141	Additional Point		Proposed:The FRTU Shall have the OPC UA Pub Sub communication protocols..Justification-Since in this digitalize world its always good to go with the future compatible Communication protocol.	Accepted
142	Additional Point		Proposed: FRTU shall have the capability of automatic start-up and initialization following restoration of power after an outage without need of manual intervention.. Justification-In case of Power failure and power restoration the FRTU shall start functioning automatically , as it not possible all the time the operator to power ON the Device after the Power Restoration work.	Accepted

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143	Additional Point		Proposed: The offered FRTU should be proven one in the indian market, should not be the prototype, vendor should submit all the relevant documents for the offered equipment including the performance Certificate for 2 year, catalog , manual and type test reports as per attached Annexure. Justification-FRTU is critical part of the system so it shall have the satisfactory performance certificate and track record in the Indian environment.	Accepted
144	Additional Point		Proposed: Time Sync support via communication protocol or SNTP. Justification-To have the timestamped information regarding the events happening in the RMU, the FRTU has to be timesync so that the events reported have the actual timing.	Accepted
145	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 3.0.2 2 of 19	Maximum ambient air temperature 50°C	The Offered RMU is designed for 630A at max ambient temp of +40 Deg C with temperature rise as per relevant IEC. The suitable current derating is applicable at higher temperature.	Accepted
146	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 3.0.9 & 10 2 of 19	Earthquakes of an intensity in horizontal direction - equivalent to seismic acceleration of 0.3g Earthquakes of an intensity in vertical direction - equivalent to seismic acceleration of 0.15g (g being acceleration due to gravity)	The foundation/plinth of the RMU is to be designed suitably by the end user, then the RMU as such can withstand the shocks that will be experienced in the seismic zone	Accepted
147	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 5.1.1 5 of 19	The outer body shall be made of minimum CRCA of 3mm or GI high tensile steel 2mm thick with thick gland plates of 3mm as per IS 513.	Please accept outer body of CRCA of 2mm thick with gland plate of 3mm thick suitable for outdoor applications	Accepted

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148	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 5.1.2 5 of 19	The RMU shall be complete with all connection and tinned copper bus bar with continuous current carrying capacity of 630A	Material for main busbar will be bare copper	Accepted
149	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 5.1.4 5 of 19	Bidder shall provide type test report to prove compliance to the 'Internal fault IAC- A & B as per IEC 62271-200	For RMU, only Internal fault IAC-A is applicable. IAC-B is not applicable.	Accepted
150	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 5.1.6 6 of 19	CT Burden is 5 VA for Feeder and 2.5 VA for Transformer, Class - 5P20	VA burden for the CTs shall be 2.5VA; This much CT burden is enough to cater the load of microprocessor based relay. Necessary supporting calculation sheet shall be provided during detailed engineering. Also accuracy class will be 5P10 for protection	Accepted
151	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 5.1.13 8 of 19	The overall paint thickness shall not be less than 150 microns.	We will provide powder paint thickness upto 80 microns as per clause 19 (pt 26)	Accepted
152	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 5.1.13 8 of 19	The enclosure of the RMU shall be painted with shade Dark Gray, i.e., BS381C or RAL 7032.	Paint shade shall be IS 632 Dark Admiral Grey for the outdoor enclosure and RAL 7035 for front side and cable cover of RMU.	Accepted
153	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 19 (pt 24) 14 of 19	SF6 Gas leakage detector: 1 per 25 RMUs. Subjected to minimum one number.	Please confirm whether leakage detector is to be provided in spares or not.	Leakage detector to be provided as per the tender clause
154	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 19 (pt 37) 15 of 19	Make of Relay Suitable numerical relay with necessary elements or any other as per Purchaser's approval	Please provide approved MAKE list	1) REJ603 2) C&S CSPR5V 3) ASHIDA ADR241S

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155	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 19 (pt 48) 16 of 19	Height: Minimum 1200mm Above GL	Height between gland plate and bushing centre will be 885mm (above gland plate)	Accepted
156	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 19 (pt 67.e) 17 of 19	Bushing Diameter: Conical bushing as per EN50181, Type C	Type C, 400 Series	Accepted
157	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) - -	Auxiliary PT requirement	Please provide clarity on whether Auxiliary PT is required or not. If yes, then please specify burden of same.	No Aux PT is required
158	SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU) 7 10 of 19	Heat Run Test shall be carried out on one random sample/configuration/tender quantity as acceptance test.	Offered RMU is type tested as per IEC 62271-200; and hence separate testing of temperature rise is not envisaged.	Accepted
159	Tender Document 7.1 12 of 38	Delivery Schedule - Delivery period shall be 60 days from date of receipt of release order / CAT-A issuance, whichever is later	Please accept lot wise delivery for this project and completion in 90 days from date of receipt of release order / CAT-A issuance, whichever is later	The items are necessary for our operation and thus the Delivery period shall be 60 days from date of receipt of release order / CAT-A issuance, whichever is later
160	Pg. No 4 of 38 1.4 Mandatory documents required along with the Bid	Drawing, Type Test details along with a sample of each item as specified at Annexure I (as applicable)	Drawing, Type Test Report will be submitted. However, submission of sample item is not possible	Accepted

Sr. No.	Detailed Reference to Tata Power Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPCODL RESPONSE
161	Pg. No 4 of 38 1.7 Qualification Criteria	a) The bidder should have an average annual turnover of Rs.50 Crores in last three financial years (FY 17-18, FY 18-19 and FY 19-20). Copy of audited Balance Sheet and P&L Account to be submitted in this regard.	Due to current pandemic breakout the audit for FY 19-20 was not possible. So we request to consider balance sheet for (FY- 16-17, FY 17-18, and FY 18-19)	Owing to Covid we shall consider audited balance sheet of FY 2016-17, 2017-18 and 2018-19 for meeting the Qualification requirement. However, the bidder can submit Provisional Balance sheet of 2019-20 (if available) and shall have to submit the audited balance sheet of year FY 2019-20 at later stage before awarding of tender
162	Pg. No 5 of 38 2.0 Evaluation Criteria	TPCODL reserves the right to split the order line item wise and / or quantity wise, among more than one Bidder. Hence all bidders are advised to quote their most competitive rates	What will be deciding factor & ratio of split up	The key deciding factor for split is to mitigate delivery risk. Split up ratio shall be decided at later stage before awarding
163	Pg. No 6 of 38 3.1 Bid Submission First Part: EMD	EMD Original Hard Copy	Pls note that we will be submitting scan copy of EMD on or before due date of submission of tender. However, please note that there might be some delays in physical original hard copy submission of EMD and you will have to bear with us, as due to lockdown conditions courier industry is also affected and there has been delays observed.	Kindly upload Courier receipt along with scan copy of Bank Guarantee so that we can accommodate delay of 2-3 days owing to Courier issue. Further, we have option of NEFT transaction where-in scan copy of Transaction with UTR number is acceptable as EMD.

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164	Pg. No 7 of 38 3.1 Bid Submission Signing of Bid Documents	The bid must contain the name, residence and place of business of the person or persons making the bid and must be signed and sealed by the Bidder with his usual signature.	Considering current situation we are adapting minimum paper transicion. In view of which, please allow us to sign the documents through digital signature format other then hard copy signature.	Accepted
165	Pg. No 9 of 38 3.9 Type Test	The type tests specified in TPCODL specifications should have been carried out within five years prior to the date of opening of technical bids and test reports are to be submitted along with the bids. If type tests carried out are not within the five years prior to the date of bidding, the bidder will arrange to carry out type tests specified, at his cost. The decision to accept/ reject such bids rests with TPCOD	As per CEA guideline the validity of type test for medium voltage switchgear is for 10 years, attached copy for your referemnce. Further we confirm that there is no change in offered design.	Accepted
166	Pg. No 11 of 38 7.1. Special Conditions of Contract	Any change in statutory taxes, duties and levies during the contract period shall be borne by TPCODL	Any statutory variation in taxes & duties shall be applicable as as actual at the time of dispatch	Existing clause prevails
167	Pg. No 02 of 19 T.S.RMU 1.0 Scope of RMU	design, manufacture, testing at manufacturer's works, packing, forwarding, supply and unloading at site/store	Please confirm unloading at site/store is in TPCODL scope.	Not acceptable, is under scope of BA

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168	Pg. No 02 of 19 T.S.RMU 3.0 Climatic Conditions of Installation of RMU	2.Maximum ambient air temperature 50°C	The Offered RMU is designed for 630A at max ambient temp of +40 Deg C with temperature rise as per relevant IEC. The suitable current derating is applicable at higher temperature.	Accepted
169	Pg. No 03 of 19 T.S.RMU 4.0 General Technial Requirment of RMU	Temperature Rise:Maximum permissible temperature for bus bar shall not be 90 deg C at an ambient temperature not exceeding 40 deg C, as per IEC 60694 And IEC 62271.	Maximum permissible temperature for bus bar shall be 105 deg C i.e. Temperature rise of 65 Deg over an ambient temperature of 40 Deg C in line with IEC 62271-1	Accepted
170	Pg. No 04 of 19 T.S.RMU 4.0 General Technial Requirment of RMU	Motors:Coupled type DC operated motors shall be suitable for the installation on the indoor type RMU's on the isolator function and to be flitted in/from the LV compartment side. There shall be provision to fit the motor on Circuit breaker also	We understand that for the offered RMU the motor requirement is for Ring Switch (LBS) on the mechanism on the front fascia and kindly confirm Circuit Breaker to be Motorized or Manual.	Motorized to be done for both LBS & VCB
171	Pg. No 04 of 19 T.S.RMU 4.0 General Technial Requirment of RMU	Operating Time: 4-8 second	The operating time shall be <15 sec is per manufacturer design.	Accepted
172	Pg. No 04 of 19 Types of Ring Main Unit 3Way Extension Type	1 No. Electronic Fault Passage Indicator per RMU	Kindly confirm (N-1) rules is apply, where: N=No of LBS	Yes.N-1 rules apply
173	Pg. No 05 of 19 General construction of RMU	5.1.2 tinned copper bus bar	Bare electrolytic copper bus bars are encapsulated in SF6 environment hence tin plating of the bus bars is not required. All type tests were carried out accordingly.	Accepted

Sr. No.	Detailed Reference to Tata Power Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPCODL RESPONSE
174	Pg. No 05 of 19 General construction of RMU	5.1.4 In case of SF6 gas leakage from gas tank or any kind of repair should be done at site instead of replacement of complete RMU free of cost within guarantee period.	In rear event of SF6 gas leakage from the tank after assement the RMU may require repair to de done at the factory and gas filling in vaccumised enviroment. The same may not possible at site.	Accepted, however Bushing replacement to be done at Site
175	Pg. No 05 of 19 General construction of RMU	5.1.5The position of power contacts and earthing contacts clearly visible on the front of RMU	All contacts are in sealed SS tank. Cladding is provided over the tanks housing the interlocks with front panel. Mechanical Position indicators are provided on the front mimic without transparent covers.	Accepted
176	Pg. No 06 of 19 5.1.6 Circuit Breaker for Transformer	The position of the power and earthing contacts shall be clearly visible on the front of the RMU	All contacts are in sealed SS tank. Cladding is provided over the tanks housing the interlocks with front panel. Mechanical Position indicators are provided on the front mimic without transparent covers.	Accepted
177	Pg. No 06 of 19 5.1.6 Circuit Breaker for Transformer	The Breaker contact resistance should be <=50mico ohms .	The contact resistance of the circuit breaker will be as per manufacturer's type tested design	The Breaker contact resistance should be <=50mico ohms .
178	Pg. No 06 of 19 5.1.6 Circuit Breaker for Transformer	The operating mechanism shall be compatible for remote/ SCADA operation.	Kindly clarify CB to be manual or motorized.	Motorised to be done for both LBS & VCB
179	Pg. No 06 of 19 5.1.6 Circuit Breaker for Transformer	three toroid transformers incorporated in the transformer tee-off bushings	CT shall be mounted on cable in the cable compartment	Accepted
180	Pg. No 06 of 19 5.1.6 Circuit Breaker for Transformer	Protection core CT complete details should be furnished as (CT Burden is 5 VA for Feeder and 2.5 VA for Transformer, Class - 5P20).	We recommended CT's of CL 5P10, 2.5VA, because CL 5P20 increase the core size which is difficult to mount inside cable compartment.	Accepted

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181	Pg. No 07 of 19 5.1.6 Circuit Breaker for Transformer	Termination boots as approved by the Purchaser's should have a proper opening to facilitate the testing.	Please provide approved make list for terminations boots	Termination boot out of tender
182	Pg. No 07 of 19 5.1.6 Circuit Breaker for Transformer	The circuit breaker and earth switch shall be lockable in the open or closed positions by 1 to 3 padlocks.	Only arrangement for pad lock is provided	Accepted
183	Pg. No 07 of 19 5.1.6 Circuit Breaker for Transformer	The circuit breaker shall be compatible for remote operation and can close (ON) and open (OFF) by remote operation.	Kindly clarify CB to be manual or motorized	Motorised to be done for both LBS & VCB
184	Pg. No 07 of 19 5.1.6 Circuit Breaker for Transformer	The Sizes of cable should be 11kV 3 Core 400 sq.mm and 11kV 1CX630 sq.mm (optional) for termination.	Please confirm cable size for Ring switch and Circuit Breaker	The Sizes of cable should be 11kV 3 Core 400 sq.mm and 11kV 1CX630 sq.mm (optional) for termination.
185	Pg. No 08 of 19 5.1.12 Remote Control of the RMU	GI Strip earth busbar of 75X12 sq.mm inside the enclosure to withstand short time current carrying capacity.	The sizing of the copper/GI earth busbar shall be suitable to carry the withstand short time current rating	GI Strip earth busbar of 75X12 sq.mm inside the enclosure to withstand short time current carrying capacity.
186	Pg. No 08 of 19 5.1.12 Remote Control of the RMU	Necessary terminal clamps and connectors shall be included in the scope of supply	terminal clamps and connectors to external earth pit is not in LEI scope	Accepted
187	Pg. No 08 of 19 5.1.12 Remote Control of the RMU	Remote operation of the RMU line switches shall be possible using motors fitted to the operating mechanism for both line switch and circuit-breaker functions	Both LBS & CB to be motorized	Motorised to be done for both LBS & VCB

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188	Pg. No 08 of 19 5.1.12 Remote Control of the RMU	All the necessary accessories shall be supplied separately to stores	All the necessary accessories shall be factory installed only.	Accepted
189	Pg. No 09 of 19 7.0 Type Tests	Bidder shall quote the cost of field RTU (FRTU) separately with all technical details for acquisition of the signal as described in Annexure-1.	Please provide detail specification of FRTU along with any approved/preferred list. Also, share price schedule for FRTU.	FRTU not considered in the Tender
190	Pg. No 09 of 19 7.0 Routine Tests	7)Operational & Interlock performance Test 12) Dimensions and Visual Checks.	7)Operational & Interlock performance Test 12) Dimensions and Visual Checks are not type tests but they as routine tests	Accepted
191	Pg. No 10 of 19 7.0 Acceptance Test	5) SF6 Pressure withstand test	5) SF6 leakage test is part of the Routine test at the tank stage and cannot be carried out as acceptance test during final inspection. We shall provide SF6 gas leakage test as an part of routine test report	Accepted
192	Pg. No 10 of 19 7.0 Acceptance Test	Heat Run Test shall be carried out on one random sample/configuration/tender quantity as acceptance test.	The Offered RMU are tested for temperature rise and no sperate heat run test is envisaged.	Accepted
193	Pg. No 10 of 19 8.0 Type Test	Pre-Commissioning test to be conducted on each RMU before installation and commissioning are as under- 1.IR Value 2.HV test(AC) 3.Primary Injection with timer of	As per Annexure-I, our scope is limited to supply portion only. Testing at site shall not be in our scope.	Accepted

Sr. No.	Detailed Reference to Tata Power Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPCODL RESPONSE
		breaker including relay and CT circuit 4.Contact resistance		
194	Pg. No 10 of 19 8.0 Type Test	Type tests shall have been conducted in certified Test laboratories during the period not exceeding 5 years from the date of opening the bid	As per CEA guideline the validity of type test for medium voltage switchgear is for 10 years, attached copy for your reference. Further we confirm that there is no change in offered design.	Accepted
195	Pg. No 10 of 19 9.0 Pre Dispatch Inspection		Final inspection of the RMU shall be conducted at our Factory. All cost towards the To & Fro, lodging, boarding, local conveyance will have to be borne by TPCODL.	Accepted
196	Pg. No 11 of 19 11.0 Guarantee	Equipment shall be subject to inspection by a duly authorized representative of the TPCODL, Odisha. Inspection may be made at any stage of manufacture at the option of the purchaser and the equipment if found unsatisfactory as to workmanship or material is liable to rejection. Supplier shall grant free access to the places of manufacture to TPCODL's representatives at all times when the work is in progress	Guarantee / Warrantee shall be 48 months from the date of commissioning or 60 months from the date of supply, whichever is earlier. We shall undertake to repair / replace free of cost the products supplied, should it become defective under proper use due to faulty materials or workmanship. However any rectification of a defect caused due to mishandling of the equipments shall be charged extra at actuals to your account. Chain Guarantee / Warranty shall not be applicable. The warranty period for repaired / modified shall not exceed the base warranty period.	Accepted
197	Pg. No 12 of 19 17. Spares, Accessories & Special Tools/Gauges	Auto changeover in-built requirement utilization VPI(Voltage Passage indicator) or through separate core of PT proposed on	Auto changeover arrangement is not consider	Accepted

Sr. No.	Detailed Reference to Tata Power Technical Document. Please specify Document No / Clause No / Page No	Description as per Bid Document	Remarks - Query / Clarification	TPCODL RESPONSE
		each breaker along with associated circuitry		
198	Pg. No 15 of 19 19.0 GTP of RMU	Bidder has to provide below spare with one lot of RMU	Is this list is mandatory to quote with the bid. If yes, then will it be consider while evaluating the offer. Kindly, also provide price scheule for the same.	Yes
199	Pg. No 15 of 19 19.0 GTP of RMU	37.0 Make of Relay	Kindly provide the list of preferred/approved make of relay	1) ASHIDA ADR241S 2) C&S CSPR5V 3) REJ603
200	Pg. No 16 of 19 19.0 GTP of RMU	48.0 Height Minimum 1200mm Above GL	The height of cable box will be maximum 850mm from Bushing to gland plate	Accepted
201	Pg. No 16 of 19 19.0 GTP of RMU	55.0 Current Transformer The CTs around the cables shall be supported on the sheet steel bracket base sized for CTs.	The CTs shall be suitable base supported as per manufacturer design	Accepted
202	Pg. No 19 of 19 Additional IOs	FRTU Switchgear supply OFF	We assume this signal will be the RMU 230V AC supply input and shall be available as digital input signal for FRTU. Please confirm.	FRTU not considered in the Tender
203	Pg. No 19 of 19 Additional IOs	FRTU Aux Supply OFF	We assume this signal will be the RMU FRTU 24VDC supply input and shall be available as digital input signal for FRTU. Please confirm.	FRTU not considered in the Tender
204	Pg. No 19 of 19 Additional IOs	FRTU Fault	LED is available on front of FRTU and same can be available as soft signal in FRTU	FRTU not considered in the Tender
205	Pg. No 19 of 19 Additional IOs	Relay Operation	We considered this signal as Remote Reset Command. By using this, we can reset the auto trip LED indication which is coming on Relay. Please Confirm.	Accepted
206	Pg. No 02 of 15 T.S.Relay 1.0 Scope	design, manufacture, testing at manufacturer's works, packing,	Relay is in intergal part of an RMU.	Accepted

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		forwarding, supply and unloading at site/store		
207	Pg. No 03 of 15 T.S.Relay 4.0 General Technical Requirement	design, manufacture, testing at manufacturer's works, packing, forwarding, supply and unloading at site/store	Kindly provide the list of preferred/approved make of relay	1) ASHIDA ADR241S 2) C&S CSPR5V 3) REJ603
208	Pg. No 05 of 15 T.S.Relay 5.4 Measurement and communication function	5.4.4 The relay communication should be compatible with Modbus or IEC -60870-5-103/104 or MQTT protocol. For MQTT and IEC-104 separate Ethernet (minimum data transmission rate 10/100Mbps) port to be provided at the front side of the relay to report the data to SCADA through external modem.	The relay communication will be done on Modbus. We have 2 ETH port out of which one port is used for external modem connection and one port is used for local configuration of FRTU. Data transmission to SCADA control center will be on IEC 60870-5-104 Protocol. Please confirm.	Accepted
209	Pg. No 13 of 15 T.S.Relay 13.0 Tender Sample	Bidders to submit one sample of relay at TPCODL, Odisha Protection Department for verification of all desired features. Bidders to provide all required support for this testing and only successful model of relay shall be qualified for further processing.	Relay is an integral part of an RMU, so no separate relay will be submitted as a sample & no support for separate relay testing is provided.	Accepted
210	Pg. No 13 of 15 T.S.Relay 14.0 Training	The bidder shall arrange to provide the installation and operating training at TPCODL, Odisha offices as and when required for better	The tender NIT clearly mentioned supply of RMU only. No training for RMU & Relay will be provided.	The bidder shall arrange to provide the installation and operating training at TPCODL, Odisha offices as and when

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		installation and usage of the product.		required for better installation and usage of the product.
211	Pg. No 06 of 43 GCC 4.0 Scope of Work	Completeness: Any supplies and services which might have not been specifically mentioned in the Contract but are necessary for the scope mentioned in Special Terms & Conditions and/or completeness of the works at the highest possible level, including any royalties, license fees & compensation to be paid, whether incurred by the associates or by a third party for the work covered in the scope, regardless of when incurred, shall be supplied/provided by the associate without any extra cost and within the time schedule for efficient , smooth and satisfactory operation and maintenance of the works at the highest possible level under Indian conditions (but according to international standards for facility of this type), unless expressly excluded from the scope of supplies and services in this Contract.	Completeness point followed by sub-sequent paragaph i snot in LEI scope.	Existing clause prevails (As per company policy GCC Can't be ammended, however any dispute arising owing to this clause can be mutually discussed and agrred upon)

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212	Pg. No 06 of 43 GCC 5.0 Prices/Rates/taxes	the prices/rates are inclusive of cost of finished product for which MDCC will be issued by TPCODL, packaging and forwarding charges, freight and transit insurance charges covering loading at Associate's works, transportation to TPCODL store/site & unloading & delivery at TPCODL stores/TPCODL site	Unloading at site/store in TPCODL Scope	Not acceptable, is under scope of BA
213	Pg. No 11 of 43 GCC 11.2 Facilitating Inspection	The Associate shall provide free of charge office accommodation, office facilities, secretarial services, communication facilities, general and drawing office stationary, etc. as may be reasonably required by the TPCODL's engineers. Similarly, facilities shall also be provided by Associate's outsource agencies/partners/authorized dealers (collectively termed as sub associates) if such basic and detail engineering activities are carried out in the design offices of sub-Associates	Our scope is limited to supply of RMU.	ok , supervision in Installation, testing and successful Commissioning is under BA scope
214	Pg. No 24 of 43 GCC 27.0 Insurance		In TPCODL scope	In BA Scope

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215	Clause 4 (GCC)	SCOPE OF WORK	Please confirm scope of work; Scope cannot be changed without written consent of Associate on terms mutually acceptable to both parties	Existing clause prevails (As per company policy GCC Can't be amended, however any dispute arising owing to this clause can be mutually discussed and agreed upon)
216	Clause 5 (GCC)	5.0 PRICES/RATES Unless specified elsewhere in the contract document, the prices/rates are inclusive of cost of finished product for which MDCC will be issued by TPCODL, packaging and forwarding charges, freight and transit insurance charges covering loading at Associate's works, transportation to TPCODL store/site & unloading & delivery at TPCODL stores/TPCODL site, cost of documentation including all the relevant test certificates and other supportive documents to be furnished./TAXES	unloading at store/site shall be in TPCODL Scope	Not acceptable, is under scope of vendor /supplier
217	Clause 13 (GCC)	GUARANTEE	Guarantee would be replaced by word warranty. Equipment Warranty shall have following exclusions: a. unauthorised modifications, repairs b. unauthorised connection with third party equipment c. natural wear and tear	No change in GCC clause. Refer Clause-11 of Annexure II (Technical Specification) (As per company policy GCC can't be amended, however any

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			<p>d. use of software on hardware for which it was not licensed</p> <p>Further repair, replacement or, as a last resort, reduction of purchase price to be customer's exclusive remedy in case of defect.</p>	dispute arising owing to this clause can be mutually discussed and agreed upon)
218	Clause 13.3 (GCC)	Failure in Guarantee Period (GP) Tata Power DDL's own charges (@ 20% of expenses incurred), from the Associate or from the "Security cum Performance Deposit" as the case may be	charges of 20% is not acceptable, kindly remove; LD not agreeable for warranty claims;	Not accepted Existing clause prevails (As per company policy GCC can't be amended, however any dispute arising owing to this clause can be mutually discussed and agreed upon)
219	Clause 13.3 (GCC)	Latent Defect Hidden defects in manufacturing or design of the product supplied and which could not be identified by the tests conducted but later manifested during operation of the equipment are termed as latent defects. Associates shall further be responsible for 'free replacement' for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the Company	additional three year over warranty not acceptable	Not acceptable

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220	Clause 13.7 (GCC)	<p>Support beyond the Guarantee Period</p> <p>The Associate shall ensure availability of spares and necessary support for a period of atleast 10 years post completion of guarantee period of equipment supplied against the contract</p>	additional support shall be through separate agreement and with additional cost;	Not acceptable
221	Clause 14 (GCC)	<p>For delay of each week and part thereof from the delivery schedule specified in the contract, 1% of contract value corresponding to undelivered quantity, provided full quantity is supplied within 130% of the original contract time. If full contractual quantity is not delivered within 130% of contract time for delivery, TPCODL has the right to levy LD on the entire contract value, subject to a maximum of 10% of the total contract value</p>	LD should be capped to 10% of the delayed portion only & not to 10% of overall contract value	<p>Not accepted</p> <p>Existing clause prevails (As per company policy GCC can't be amended, however any dispute arising owing to this clause can be mutually discussed and agreed upon)</p>
222	Clause 17 (GCC)	INTELLECTUAL PROPERTY RIGHTS	<p>INTELLECTUAL PROPERTY RIGHTS</p> <p>request you to replace the same as mentioned below: "Supplier shall own all newly created Intellectual Property Rights which have been developed solely during execution of</p>	<p>Existing clause prevails (As per company policy GCC Can't be amended, however any dispute arising owing to</p>

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			<p>this Contract, including but not limited to all Source code, Object code, records, reports, designs, application configurations, data and written material, products, specifications, reports, drawings and other documents which have been newly created and developed by the Supplier solely during the performance of the agreement. Purchaser shall have a non-exclusive right to use all newly created Intellectual Property Rights for the purposes for which the Services were provided. However, the Purchaser agrees not to modify or reverse-engineer any Source code, Object code, or any other product supplied by Supplier to Purchaser under this Agreement. In case of any claim of infringement involving Services provided by the Supplier, the Supplier shall have sole control of the defense and all related settlement negotiations. In the defense or settlement of a claim, if sale or use of any product or Service provided by the Supplier's is enjoined, Supplier may, at its expense and option:</p> <ul style="list-style-type: none"> (a) procure for Purchaser the right to continue using the product or Service; or (b) replace or modify the product or Service so it becomes non-infringing. <p>Supplier will not be liable to Purchaser for any claim that is based upon:</p> <ul style="list-style-type: none"> (i) use of the Supplier's product in modified form or in a manner for which they were not designed, or (ii) use of the Supplier's product in combination with goods or services not provided by Supplier or approved by Supplier 	<p>this clause can be mutually discussed and agreed upon)</p>

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			in writing, or (iii) infringement arising out of Purchasers specifications.	
223	Clause 19.1 (GCC)	Liability	<p>Kindly delete below texts</p> <p>1). Except for any specific liability which may be identified in the Contract and which may be payable hereunder</p> <p>2. unless caused by Associate's negligence, willful misconduct or breach of cont</p> <p>Further Liability shall be for respective POs instead of full Rate Contract (as it is Rate Contract)</p>	<p>Not accepted Existing clause prevails (As per company policy GCC Can't be amended, however any dispute arising owing to this clause can be mutually discussed and agreed upon)</p>
224	Clause 21.1 (GCC)	Suspension for Convenience	<p>Suspension by Owner can be accepted only upon payment of work completed till the date and payment of all costs incurred or committed or have to incur; Suspension to have longstop date in aggregate of 60 days, post which Associate to have right of termination with entitlement to payment of all work completed, all costs committed, 10% of the Contract Value as termination fee and reasonable profit on terminated works</p>	<p>Not accepted Payment shall be released against accepted supplied items and already completed work. No termination fee shall be paid.</p>
225	Clause 21.1 (GCC)	Suspension for Convenience	<p>Termination of contract under present opportunity / transaction cannot be trigger for terminating all contracts with Associate – Not Acceptable; Following sub-clause not acceptable – “a) In case TPCODL exercises its right of termination as stated above the associate shall not dispute or object to the same.”</p>	<p>Termination of Clause is Section 22 The clause stands as it is. (As per company policy GCC Can't be amended, however any dispute arising owing to</p>

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				this clause can be mutually discussed and agreed upon)
226	Clause 22.3 and 24.1 (GCC)	Termination for Convenience of Tata Power DDL Cancellation	accepted subject to payment of all work completed, all costs committed, 10% of the Contract Value as termination fee and reasonable profit on terminated works;	Not accepted
227	Annexure-I	Prices shall be FOR TPCODL Locations	Delivery shall be up to store of TPCODL and not diffrent site locations Kindly provide location of Store (it should be one location)	The main Delivery location shall be to Choudwar & Bhubaneswar stores However, the location can vary depending on site requirement and the same shall be conveyed in RO.
228	1.7 Qualification Criteria	e) The bidder should have dedicated service team in TPCODL hours or bidder shall develop dedicated service team in this area in the event of award of contract, before commencement of supplies. Bidder should submit the undertaking in this	Our Authorized service partner (located in Bhubaneshwar/cuttak) will attend the site in order to support in less time	Acceptable, however assurity of service along with coordination with the service partner to resolve issues pertaining to supplied items and other site activities shall be the responsibility of BA
229	4.6. Reverse Auctions	4.6. Reverse Auctions TPCODL reserves the right to conduct the reverse auction (instead of public opening of price bids) for the products/ services being asked for in the tender. The terms and	Kindly confirm the possibility of Reverse Auction	Reverse Auction is integral part of the entire tendering process. All the bidders who are found as technically qualified based on the tender requirements

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		conditions for such reverse auction events shall be as per the Acceptance Form attached as Annexure VI of this document. The bidders along with the tender document shall mandatorily submit a duly signed copy of the Acceptance Form as Annexure-VI as a token of acceptance for the same		shall be eligible to participate in the reverse auction event.
230		Offer validity-180 days and RC for 1 year	Kindly confirm exact Timeline / period of RC as 180 days price validity has cost impact	Rate contract shall be valid for 1 year. The prices shall remain firm during the entire contract period
233	Suspension/ Termination by SEIL		<p>We request to kindly add the following clauses: SUSPENSION AND TERMINATION</p> <p>1. If the Customer fails to pay any sum due under the Agreement by the due date, Schneider Electric may by notice, in addition to any other rights it may have, suspend supplying the Products, Services and Projects until all overdue amounts are paid. The Customer will be liable to Schneider Electric for all expenses, including reasonable legal fees, relating to the collection of overdue amounts.</p> <p>2. A Party may terminate the Agreement by providing prior written notice to the other Party if any of the following events or circumstances occurs:</p>	<p>Not accepted The clause stand as it is (As per company policy GCC Can't be amended, however any dispute arising owing to this clause can be mutually discussed and agreed upon)</p>

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			<p>a. A Party goes into liquidation, has a receiver or receiver and manager appointed to it or any part of its assets, enters into a scheme of arrangement with creditors or suffers any other form of external administration (or the equivalent under the laws of another jurisdiction); OR</p> <p>b. A Party fails to remedy any breach of an essential obligation under the Agreement within thirty (30) days after receipt of written notice from the other Party of details of the breach.</p> <p>3. Without prejudice to other rights and remedies available to Schneider Electric under the Agreement and/or at law, in case of termination by Schneider Electric for Customer's breach or default as mentioned above, Schneider Electric shall be entitled to receive from the Customer (i) full payment towards all the work performed till effective date of termination, and for any payment; and (ii) fees and expenses due towards confirmed commitments with respect to costs of materials, products and services ordered by Schneider Electric with its sub-contractors or suppliers for performance of the Agreement or Order.</p> <p>4. Any termination of the Agreement will not affect any rights or obligations which by their nature continue beyond the effective date of termination, including this clause 14,</p>	

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			clause 11 (Confidentiality) and clause 15 (Limitation of liability).	
234	Performance Bank Guarantee		5% of Contract value valid till Contract period and 10% of each release order valid upto warranty period plus 1 month. Kindly confirm	Refer section 8.0 of GCC
235	Delivery		Shall commence 12 weeks from drg approval/Manufacturing clearance whichever is later @20-30 RMU per month and there after 20-30 nos per month however final delivery shall confirm at the time of finalization depending upon the qty of Rate contract	Existing Delivery clause prevails (However any dispute arising owing to this clause can be mutually discussed and agreed upon)
236	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(1.0 Scope for RMU)	Scope of work	Please note Schneider scope shall be limited to supply for the RMU only. Any kind site activity like erection , testing and commissioning shall not be in the scope Schneider	Accepted
237	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(3.0 CLIMATIC CONDITIONS OF THE INSTALLATION OF RMU:)	Location of the RMU to be installed	Please confirm the location of the RMU to be installed. Is the site is more than 3 km from the sea?	Yes

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238	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(4.0 GENERAL TECHNICAL REQUIREMENTS OF RMU:)	Temperature Rise : Maximum permissible temperature for bus bar shall not be 90 deg C at an ambient temperature not exceeding 40 deg C, as per IEC 60694 And IEC 62271. However, the temperature rise for accessible enclosures and covers shall not exceed 30K and in case, they are not required to be touched during normal operation, the limit shall be raised by 10K.	Please note the temperature rise for different part of the RMU (Parts inside SF6 & in Air) shall be as per the guideline of the relevant IEC.	Accepted, however SIEL should mention their offering as per IEC
239	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(4.0 GENERAL TECHNICAL REQUIREMENTS OF RMU:)	Power Supply : There shall be provision of 230 V AC (maximum 5 Amp current) & 24 V DC	Schneider understand that 24 V DC battery and charger shall not be in RMU manufacturer scope. Also Schneider understand that customer will supply the 230 V AC control voltage at site. No Control Transformer shall be in RMU manufacturer scope.	Accepted,
240	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(4.0 GENERAL TECHNICAL REQUIREMENTS OF RMU:)	Extensibility - both side	The RMU shall be extensible on both side. Subject to no metering PT / Auxiliary PT is required since in case of Metering PT/Aux PT requirement one side occupied by Air insulated panel to accommodate PT/Aux PT and other side will available for extension Kindly confirm requirement of meter provision and Aux	Accepted

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			supply provision of 24 V DC and 230 V AC as all three not clear in Tender spec	
241	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.0 General construction for RMU)	The switchgear and bus bar shall be contained in a stainless steel tank filled with SF6 gas and the outer body shall be made of minimum CRCA of 3mm or GI high tensile steel 2mm thick	Please note Schneider offered RMU shall have the outer body (load bearing) with 2.5 mm thick CRCA as per our validated design which is sufficient to cater the load. Kindly accept the same.	Accepted
242	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.0 General construction for RMU)	The tank shall have SS sheet of 3mm thickness	all load bearing members are with 2.5mm thick Stainless steel, few non load bearing partition sheets are with lesser thickness which is reinforced with stiffeners and this being a locally type tested global design product with more than 15000 installations in India, supplied across segments, manufactured in our plant at Vadodara for the last > 10 years, we confirm our RMU (indoor/outdoor) type FBX and all its variants with the above patented custom design configuration meets your performance and functional requirements and to deliver these results, our product requires SF6 to be only at 0.3 bar above atmospheric pressure.	Accepted
243	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN	Protection for Outdoor RMUs shall be minimum IP 54 and IP41 (Main door Open).	Please note the degree of protection for outdoor enclosure shall be IP54 & Degree of protection with main door open shall be IP2X for Mechanism chamber & IP3X for cable chamber. Kindly accept the same.	Accepted

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	UNIT (RMU)(5.0 General construction for RMU Sub Clause : 5.1.1)			
244	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.0 General construction for RMU Sub Clause : 5.1.2)	The RMU shall be complete with all connection and tinned copper bus bar with continuous current carrying capacity of 630A.	Please note the busbar shall be inside the SF6 gas tank thus there is no live part of the BUSBAR exposed to environment. Thus there is no need for tinning of the busbar. Thus Schneider propose to consider bare copper busbar.	Accepted
245	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.0 General construction for RMU Sub Clause : 5.1.4)	Bidder shall provide type test report to prove compliance to the 'Internal fault IAC- A & B as per IEC 62271-200.	Please note the RMU shall internal arc tested for IAC-A only.	Accepted
246	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.1.6 Circuit Breaker For Transformer / Local Feeder Control)	Shall include three toroid transformers incorporated in the transformer tee-off bushings, an electronic self powered relay	Please note placement of the CT on the bushing shall create stress on ths bushing which connected to the SF6 gas tank. Also space is very limited on busing to mount CTs Thus it is recommended to have the cable mounted CT. Thus Schneider is proposing cable mounted CT. Kindly accept the same.	Accepted

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247	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.1.6 Circuit Breaker For Transformer / Local Feeder Control)	CT Burden is 5 VA for Feeder and 2.5 VA for Transformer, Class - 5P20).	Please note the VA burden of the CT shall be 2.5 VA which is sufficient enough to cater the load of the self powered realy.	Accepted
248	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.1.7 Bushings and Cable terminations:)	The Sizes of cable should be 11kV 3 Core 400 sq.mm and 11kV 1CX630 sq.mm (optional) for termination	Please note the maximum size of the cable which can be terminated in 1 RUN X 3C X 400 sqmm . There shall be space limitation in the cable chamber for termination of 630 sqmm cable .hence not possible to terminate 630 sq mm cable	The Sizes of cable should be 11kV 3 Core 400 sq.mm and 11kV 1CX630 sq.mm (optional) for termination
249	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.1.11 Fault Passage Indicators)	The unit shall have Short Circuit and Earth fault adjustable to different settings with separate Current transformer. They shall be fully field-programmable and shall have at least 16 settings for Earth Fault + 4 settings for Phase-Phase(O/C setting 200-1000 A and E/F setting	Both setting range of both (O/C and E/F) mentioned are not complying with any make FPI avialable in market.We shall provide OC setting up to 800A in place of 1000A which is sufficient as RMU rating itself is 630A only	Accepted
250	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV	Preferred Communication protocol for FRTU shall IEC-60870-5-104	Schneider understand that FRTU shall not be in RMU manufacturer scope. Only RMU shall be provided with necessary auxiliary contacts for SCADA connectivity.	Accepted. No FRTU considered in Tender

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	MOTORIZED RING MAIN UNIT (RMU)(5.1.12 Remote Control of the RMU:)		If it is in the scope of RMU manufacturer, kindly share the FRTU specification.	
251	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.1.12 Remote Control of the RMU:)	Signal requirement for field RTU (which shall be mounted near RMU) is attached (refer Annexure-1). Bidder shall quote the cost of field RTU (FRTU) separately with all technical details for acquisition of the signal as described in Annexure-1.	Schneider understand that no field RTU shall be in RMU manufacturer scope. No Separate technical specification is there for field RTU.	Accepted. No FRTU considered in Tender
252	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(5.1.13 Paint)	All paint shall be applied on clean dry surfaces under suitable atmospheric conditions by seven tank process and powder coating The overall paint thickness shall not be less than 150 microns.	As per GTP sr no-26-Overall paint thickness not less than 70 micron.we shall provide the same havinh suitability for std outdoor application	Accepted
253	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(7.0 TESTS FOR RMU)	Heat Run Test shall be carried out on one random sample/configuration/tender quantity as acceptance test.	Please note only the type test report for heat run test shall be provided. No fresh test shall be done.	Accepted

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254	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(7.0 TESTS FOR RMU)	Pre-commissioning test to be conducted on each RMU before installation and commissioning are as under.	Since no ETC scope is there ; the scope is only for supply of RMUs so pre commissioning test shall not be the part RMU manufacturer scope.	Accepted
255	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(11.0 GUARANTEE)	Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the Purchaser up to a period of the date of commissioning or 60 months from the date of last supplies made under the contract whichever is later	Warranty period shall be 48 months from date of commissioning or 60 months from the date of supply whichever is earlier for respective lot supplied.	Accepted
256	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(17.0 SPARES,	SPARES, ACCESSORIES & SPECIAL TOOLS / GAUGES	modality of evaluation of Spares & ordering is not clear. Price Schedule does not indicate any Line item for "Spares". Need clarity	Spares to be provided as per clause no-17

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	ACCESSORIES & SPECIAL TOOLS / GAUGES)			
257	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(19.0 GENERAL TECHNICAL PARTICULARS FOR RMU)	Earth fault passage indicator : One per RMU with make as a part of RMU	There is conflict between the clause number : "5.1.11 Fault Passage Indicators" & Clause number : " 19.0 GENERAL TECHNICAL PARTICULARS FOR RMU" Schneider understand that the FPI shall have both "over current" and "Earth fault" indication. Kindly confirm.	FPI should have both over current & Earthfault feature
258	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(19.0 GENERAL TECHNICAL PARTICULARS FOR RMU)	68 . Technical Details of motors e .Power Supply : There shall be provision of 230 V AC (maximum 5 Amp current) & 24 V DC	Please note the Motor and other control voltage shall be 24 V DC . Kindly accept the same. Also please note Schneider understand that 230 V AC control voltage & 24 V DC control voltage shall be supplied by customer.	Accepted.
259	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(19.0 GENERAL TECHNICAL PARTICULARS FOR RMU)	33. Moving contacts of earthing switch shall be visible in closed position thru transparent covers.	We shall provide Mimic for indication of position of earth switch on front , there shall not be any Transparent cover for viewing the moving contact position of the earth switch.	Accepted

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260	<p>TECHNICAL SPECIFICATION (Annexure-2)</p> <p>SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(19.0 GENERAL TECHNICAL PARTICULARS FOR RMU)</p>	<p>Degree of protection : IP 67 for the tank and IP2X for the front cover / mimic board and IP54 for Outdoor RMUs. The RMU metal parts shall be greater than 3mm thickness high tensile steel which must be shot blasted, spray galvanized with minimum thickness of 30 micron and subsequently powder coated. The overall paint thickness shall be not less than 70 microns</p>	<p>All fabrication part thickness shall be with 2-2.5 mm thickness of CRCA. Only MIMIC plate / Mechanism cover shall be with 1.2 mm thickness of CRCA & it is on supporting on 2 mm sheet of support structure. We have supplied more than 10,000 RMUs with this design which are running satisfactorily so kindly accept the same</p>	Accepted
261	<p>TECHNICAL SPECIFICATION (Annexure-2)</p> <p>SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(19.0 GENERAL TECHNICAL PARTICULARS FOR RMU)</p>	<p>56. Remote operation of motor fitted with operating mechanism of circuit breakers (as per future requirements).</p>	<p>Schneider understand that the VCB function shall be Manual only having future motorization provision. The LBS function shall be motorized.</p>	LBS & VCB Shall motorized
262	<p>TECHNICAL SPECIFICATION (Annexure-2)</p> <p>SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(19.0 GENERAL TECHNICAL PARTICULARS FOR RMU)</p>	<p>65.LBS & Earth Switch operation counter Should provide</p>	<p>Schneider propose to have counter in the LBS only. As the operation of the LBS will also linked with operation of the earthswitch. Thus the operation number in the LBS counter will also depict the operation number of the earth switch.</p>	Accepted

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263	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(ANNEXURE – 1 SIGNAL LIST FOR AUTOMATION)	SIGNAL LIST FOR AUTOMATION	Please elaborate the requirement. Please clarify how to get the analog signal of ampere loading / Phase voltage.	Ampere loading to be taken from relay. Phase voltage not in scope
264	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(ANNEXURE – 1 SIGNAL LIST FOR AUTOMATION)	FRTU SIGNAL LIST	Please elaborate the requirement. Please clarify how to get the analog signal of ampere loading / Phase voltage/ power factor.	Ampere loading to be taken from relay. Phase voltage not in scope
265	TECHNICAL SPECIFICATION (Annexure-2) SPECIFICATION FOR 11kV MOTORIZED RING MAIN UNIT (RMU)(ANNEXURE – 1 SIGNAL LIST FOR AUTOMATION)	Additional Ios	Schneider understand that the FRTU is not in RMU manufacturer scope. Thus RMU manufacturer scope shall be limited to supply of the IOs pertaining to RMUs only.	FRTU is not part of tender
266	Technical Specification of Self-Powered Relay for RMU(4. GENERAL	Auxiliary Supply voltage rating : Universal suitable for 12 V To 300 V external power supply AC and DC.	Please note the auxiliary voltge shall be 24 V DC which shall be derived from the battery provided in RMU.	Accepted

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	TECHNICAL REQUIREMENTS)			
267	Technical Specification of Self-Powered Relay for RMU(4. GENERAL TECHNICAL REQUIREMENTS)	Re-chargeable internal battery : Battery should be rechargeable. Bidder to mention offered size and rating.	Please note the internal battery shall be AA type 1.5volts non rechargeable batteries. For capacity 4.5 Volts the the configuration is 1.5V x 3 nos. Recommended Lithium batteries (Make - ENERGIZER L91 Ultimate Lithium) Life span shall be 15 Years. Kindly accept the same.	Accepted
268	Technical Specification of Self-Powered Relay for RMU(5. GENERALCONSTRUCTION)	6. During normal condition battery should be continuously charged on CT current.	Please note the internal battery shall be Non Rechargeable Lithium battery with life of 15 Years	Accepted
269	Technical Specification of Self-Powered Relay for RMU(5.1 RELAY PROTECTION)	5.1.3 The tripping current Setting Range with pick up current: 0.1 up to 32 x In in steps 0.001. These settings should be available on display.	Setting range range shall be as below IDMT: 0.2 In - 2.5In Amp in steps of 0.01AmpDT: 0.2In - 25In Amp in steps of 0.01 Amp	Accepted
270	Technical Specification of Self-Powered Relay for RMU(5.1 RELAY PROTECTION)	5.1.6 The unit should have - Time Multiplier Setting (TMS) from x0.01 to x1.0 in steps of x0.01 (separate for phase and EF) for IDMT delay multiplication.	Please note the time setting shall be as below 0.025 - 1.5 in steps of 0.01	Accepted
271	Technical Specification of Self-Powered Relay for RMU(5.4 MEASUREMENT AND COMMUNICATION FUNCTION)	5.4.4 The relay communication should compatible with Modbus or IEC 60870-5-103/104 or MQTT protocol. For MQTT and IEC-104 separate Ethernet (minimum data transmission rate 10/100Mbps) port	i. Relay Complies with Rear RS-485 Port with IEC 60870-5-103 & MODBUS Protocol. Front USB Port shall be there for configuration of Setting in Relay .	Accepted

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		to be provided at the front side of the relay to report the data to SCADA through external modem.		
272	Technical Specification of Self-Powered Relay for RMU(5.6 DI / DO REQUIREMENT)	5.6.1 Minimum 3 DI (Universal supply (i.e. DC/AC)), 4 DO (Other than tripping, Flag).	I.Please note 4 No. Binary Input available II. Please note 3 No. Output Contact available with 1 No. Latching Type Changeover Contactii. 2 No. Pulse Output Contact with 24 V (0.1 Joule)	Accepted
273	Technical Specification of Self-Powered Relay for RMU(5.9 SOFTWARE SUPPORT)	5.9.9 Active power, reactive power, harmonic analysis should be possible through the software.	Please note active power and reactive power shall not be available. Kindly accept.	Accepted
274	Technical Specification of Self-Powered Relay for RMU(5.12 OUTPUT FOR FLAG RELAY)	Impulse Output for Flag Indicator or Auxiliary Relay, 12 V - 24 VDC (Energy <= 0.03 J)	3 No. Output Contact available with 1 No. Latching Type Changeover Contacti 2 No. Pulse Output Contact with 24 V (0.1 Joule) All 3 No. Output Contact are programmable	Accepted
275	Technical Specification of Self-Powered Relay for RMU(7.1 TYPE TESTS)	High Frequency Disturbance Test (IEC 61000-4-18) At Power supply, CT inputs, Binary inputs, RelayContact outputs: 2.5KV in CM and 1KV in DM: Communication: 1KV in CM.	Not Available as per mentioned IEC Standard	Accepted
276	Technical Specification of Self-Powered Relay for RMU(7.1 TYPE TESTS)	Fast Transient Disturbance Test (IEC 60255-26 and IEEE C37.90.1) : 2KV at Power supply, CT inputs, Binary inputs, Relay contact outputs in common mode and Differential mode.: Communication (CM): 2KV:	Not Available as per mentioned IEC Standard	Accepted

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		Communication (DM): 0KV: Functional earth port (CM): 4KV		
277	Technical Specification of Self-Powered Relay for RMU(7.1 TYPE TESTS)	Damp heat test, cyclic (IEC 60255-1,IEC 60068-2-30) Lower temperature: 25°C: Humidity at lower temperature: 97%: Upper temperature: 40°C: Humidity at upper temperature: 93%: Duration of exposure: 6 days	Not Available	Accepted
278	Technical Specification of Self-Powered Relay for RMU(7.1 TYPE TESTS)	CE compliance Immunity IEC-60255- 26 Emissive Test IEC-60255-26 Low voltage directive EN-50178	Please confirm whether it need to comply for all CE Compliance Test as mentioned.	Accepted
279	Technical Specification of Self-Powered Relay for RMU(7.1 TYPE TESTS)	Bump Test IEC 60255-21-2 Class 1 : Peak acceleration: 10 g: Pulse duration: 16 ms: 1000 pulse per direction	Not Available	Accepted
280	Technical Specification of Self-Powered Relay for RMU(7.1 TYPE TESTS)	Seismic Test IEC 60255-21-3 Class 1	Not Available	Accepted
281	General requirement of RMU-4.0		IAC requirement clarification - IAC requiriment mentioned in spec as 20ka for 1s. Kindly confirm is it required for only Tank or it is required for both Tank & Cable compartment. Kindly confirm	It is for both Tank & cable compartment

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282	General requirement of RMU-4.0		230V AC external supply is in customer scope. We will provide a converter to convert from 230V AC to 24V DC to RMU control supply	OK. 230V External supply in TPCODL scope
283	5.1.1		outer body shall be made of minimum CRCA of 3mm. Eaton will provide 2 mmy CRCA for outer body. 2 mm is a standard RMU enclosure. Kindly confirm	Accepted
284	5.1.1		The tank shall have SS sheet of 3mm thickness.Eaton will provide 2mm thickness. Kindly confirm	Accepted
285	5.1.2		Tinned copper bus bar with continuous current carrying capacity of 630A. Eaton will provide Bare Copper bus bar as the entire bus bar is within SF6 gas tank, tinned copper is not required	Accepted
286	5.1.6		In 3 way or 4 way RMU,kindly confirm which circuit breaker is for feeder & which one is for Transformer as to provide the CT burden correctly. The CT ratio is same for CB if transformer: 2.5VA if feeder: 5VA Kindly confirm	As per TPCODL Specification-CT Burden is 5 VA for Feeder and 2.5 VA for Transformer, Class - 5P20.
287	5.1.6		We are not considering any Metering CT as the same is not asked in specification. Kindly confirm	Accepted
288	5.1.11		FPI will be provided 1 st LBS feeder (LHS). Kindly confirm.	Accepted
289	5.1.11		FPI range for S/C (200-1000A) and E/F (10-150A) as specified is possible, but the settings steps may vary as per the manufacturers standard.	Accepted. Pls provide as per latest supply in TPDDL & TPC
290	Annexure-1 page-57		Kindly confirm whether you need 3 Phase PT also ?	Not required

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291	Annexure-1 page-57		FRTU is not our scope. Kindly confirm	FRTU out of Tender scope
292	Relay Make		Standard RMU self-powered relay is C&S make CSPR-V5 and Ashida make ADR241S. kindly confirm which relay to be considered?	both are acceptable