

Sr No	Clause No.	Existing Clause	Amendment
1	Clause No. - 5.28	VPIS shall be provided with terminals facility for phasing purpose. VPIS sensor shall be installed on screened bushing. NO/NC Contact shall be provided with VPIS for taking the Live line indication status to remote SCADA through FRTU.	VPIS shall be provided conforming to IEC62271-213 standard. VPIS shall be provided with terminals facility for phasing purpose. VPIS sensor shall be installed on screened bushing. NO/NC Contact shall be provided with VPIS for taking the Live line indication status to remote SCADA through FRTU.
2	Clause No. - 6.13.1.1	Battery Type - Li-Ion/SMF lead acid battery	Battery Type - Li-Ion battery
3	Clause No. - 6.13.4	FRTU shall be provided and integrated with RMU and LV compartment with completely wired along with Modem suitable for communicating over GSM network. Bidder shall demonstrate the data communication of FRTU modem with MCC/BCC for the proposed modem for approval of owner in the Pre Order technical evaluation stage. For detailed specification of FRTU, I/O requirements , refer standard specification of Annexure H	FRTU shall be provided and integrated with RMU and LV compartment with completely wired along with Modem suitable for communicating over GSM network. FRTU Compartment shall be continuously welded with base frame of RMU. Bidder shall demonstrate the data communication of FRTU modem with MCC/BCC for the proposed modem for approval of owner in the Pre Order technical evaluation stage. For detailed specification of FRTU, I/O requirements , refer standard specification of Annexure H
4	Annexure - G : 21	Antenna: 12dB High Gain Antenna with SMA connector. 15mtr wire length to be provided with the High Gain Antenna.	Antenna: 2 Nos to be provided 1) 12dB High Gain Antenna with SMA connector and 15mtr wire length 2) 7dB High Gain Antenna with SMA connector and 5mtr wire length It shall be ensured that the male pin SMA Connector of Antenna is of copper at the Antenna base and also at the point of modem connection. '
5	Annexure - G : 22 (b)	1 Meter Standard Ethernet (Straight) data cable	1 Meter Standard Ethernet (Straight) data cable with metallic connector (SS/MS)
6	Annexure - H : 1.2.1	Addition of point	u) The RTU shall comply to IEC62351- 3 for cyber security in communication between RTU and master station and IEC62443-4-2 for cyber security for product including testing requirement as per MoP order no. 12/34/2020-T&R dtd 08.06.21 & CEA/PLG/R&D/MII/2021 dtd 11.6.21 and any amendment from time to time.
7	Annexure - H : 1.2.4	Addition of point	In addition to IEC 104 protocol, FRTU shall also able to communicate all data over secure MQTT with latest version.
8	Annexure - H : 1.2.13	The FRTU shall support the advanced cyber security standard ISO 27002 2005 (previously known as ISO IEC 17799 2005), NERC CIP-009-1 and ISA-99.02.01[5]- [7].	The FRTU shall comply to IEC62351- 3 for cyber security in communication between FRTU and master station and IEC62443-4-2 for cyber security for product including testing requirement as per MoP order no 12/34/2020-T&R dtd 08.06.21 & CEA /PLG/R&D/MII/2021 dtd 11.6.21 and any amendment from time to time. All the eligible equipments should complied to requirement of Mandatory Testing and Certification of Telecom Equipment (MTCTE) vide MoP order No. 14/02/2021-UR&SI-II-Part(1)(E-258136).
9	Annexure - H : 1.2.10	Addition of point	1 Meter Standard Ethernet (Straight) data cable with metallic connector (SS/MS) to be provided for connection between FRTU and Ethernet SPD
10	Annexure - H : 1.11.0	DI/DO/AI Requirement for 3 Way & 4 Way RMU DI - 48 DO - 16 AI - 6	DI/DO/AI Requirement for 3 Way & 4 Way RMU DI - 64 DO - 16
11	Annexure - H : 1.11.0	Signal List for Motorized RMU	DI 49 - 64 to be used for future LT ACB Automation
12	Annexure - H : 1.11.0	Signal List for Motorized RMU	Analogue Inputs Signals removed
13	Annexure 1.4.0 FRTU Power Supply	b) The main DC circuits shall be protected by incoming circuit breakers. Each circuit shall be tapped through single pole MCBs so as to provide an individual DC feed to each of the I/O modules, modems and protocol converters. Contractor shall provide maximum power consumption data of each of the type of FRTU. To protect the batteries from the theft the battery in RMU compartment should have separate pad lock arrangement.	b) The main DC circuits shall be protected by incoming circuit breakers. Each circuit shall be tapped through single pole MCBs so as to provide an individual DC feed to each of the I/O modules, modems and protocol converters. Contractor shall provide maximum power consumption data of each of the type of FRTU. To protect from the theft the batteries should be enclosed in a protected box with anti theft shear head type nut and bolts. Battery encloser should be concealed and not visible.