Response to Bidder Queries (4)
Tender No. CMRL / PHASE 1 / SYS / ARE05 / 2025
Design, Manufacture, Supply, Testing, Commissioning of Standard Guage Metro Rolling Stock (Electrical Multiple Units) and Depot Machinery & Plant and Training of Personnel

Sl. No.	As per the Submission of Bidder(s)				CMRL Response
	Part/ Section No	Clause No.	Original Bid Condition	Bidder's queries	
1	Part 2 – Section VI A: ERTS – RS	10.11 POWERCONVERTER-INVERTER(10.11.10)	Wheel Slip / Slide control during powering and electrical regenerative brakingshall be providedusing speed sensor less vector control subject to its proven design in MetroTransits System.Uncontrolled slip / slide should be clearly recorded in TCMS, OCC, BCC &DCC as critical fault.	This clause mentions speed sensor-less control, whereas Clause 10.13.3defines speed sensors. Therefore, there is a contradiction between thesetwo clauses.	Tender conditions prevail.
2	Part 2 – Section VI A: ERTS – RS	10.13 TRACTION MOTORS(10.13.3)	The traction motor shall be self-ventilated and shall comply with therequirements of IEC 60349-2. An effective and efficient filtration system shall be provided to remove dirtand water from theself-ventilated traction motor cooling air. The air inlet openings shall include aprotective screendesigned in such a way as to preclude the accumulation of leaves and debris.If installed, filtersshall require cleaning in accordance with the manufacturer'srecommendations. Any sensor(s) ifused shall be easily accessible for replacement and shall not necessitateremoval of motor / itsdis-assembly. Speed sensors if used shall not generally be placed on the gearcase.	The application of speed sensor-less control is defined in Clause 10.11.10.Therefore, we propose to delete the sentence related to speed sensors.However, applying speed sensor-less control has certain disadvantages,such as the inability to detect slip/slide at the axle level (in general, axle-level speed cannot be detected when speed sensor-less control is used).This limitation applies to both bogie-level control and car-level control. **Proposed Amendment**: The traction motor shall be self-ventilated and shall comply with therequirements of IEC 60349-2. An effective and efficient filtration system shall be provided to remove dirt and water from the self-ventilated traction motor cooling air. The air inlet openings shall include a protective screen designed in such a way as to preclude the accumulation of leaves and debris. If installed, filters shall require cleaning in accordance with the manufacturer'srecommendations. Any sensor(s) if used shall be easily accessible for replacement and shall not necessitateremoval of motor / its dis-assembly. ~~Speed sensors if used shall not generally be placed onthe gear case.~~	Tender conditions prevail.
3	Part 2 – Section VI A: ERTS – RS	2.15.9 Wheel Slipand Slide ProtectionSystem (WSP)(2.15.9.2)	A system shall be provided todetect and control wheel slide on all axles. Detection of slip at axle level withcontrol at bogie orat car level for bogie/car control propulsion respectively, to ensure that anyreduction in requestedtractive effort or brake retardation during wheel spin/slide is kept to aminimum.	This clause mentions axle-level slip/slide detection, whereas Clause10.11.10 requires the use of speed sensor-less control. Therefore, it is notpossible to identify which axle is slipping or sliding, as only bogie- or car-level speed can be detected with such control. **Proposed Amendment:**A system shall be provided to detect and control wheel slide on all axles. Detection of slip at ~~axle level~~ with control at bogie or at car level for bogie/car control propulsion respectively, to ensure that any reduction in requestedtractive effort or brake retardation during wheel spin/slide is kept to a minimum.	Tender conditions prevail.