

## CCTV SURVEILLANCE SYSTEM FOR 3-PHASE MEMU RAKES

- 1.0 The Passenger Car Surveillance System shall comprise of an IP based close circuit television (CCTV) system network, surveillance cameras, routers and cables, monitors and other accessories as per RDSO Telecom Directorate Specification no. RDSO/SPN/TC/106/2022 (Version No. 2.1), Amendment no. 1 or Latest.
- 2.0 The Full HD Fixed Dome/Wedge type IP Colour Camera shall have security features which can be deployed meeting all the parameters applicable to cameras with relevant and equivalent safeguards as per Essential Requirement mentioned in Appendix "A" of MeitY Gazette Notification no. CG-DL-E-08032024-252738 dated 7<sup>th</sup> March 2024.

Note: The security testing certification of Cameras to be issued by Standardization Testing and Quality Certification (STQC) Laboratory or any other agency notified by MeitY from time to time.

- 3.0 The following shall also be applicable for CCTV surveillance system as applicable in MEMU rake:

Addendum/Corr. to spec. no. RDSO/PE/SPEC/EMU/0163-2022 Rev-3.	Clause No. of spec. no. RDSO/PE/SPEC/EMU/0163-2022 Rev-3.
Addendum/Corr. No. 1	4.26
Addendum/Corr. No. 2	4.19.1
<b>Annexure VI-D added to RDSO/PE/SPEC/EMU/0163-2022 Rev-3.</b> In this annexure the changes/additions in RDSO Telecom Directorate Specification no. RDSO/SPN/TC/106/2022 (Version No. 2.1 or Latest) are incorporated in clause no. 2.2, 2.4, 2.10, 2.11, 2.12, 2.13, 2.14 & 2.15 for EMU/MEMU type rakes.	
Addendum/Corr. No. 3	4.9.9, 4.26

### 4.0 Scope of Supply:

Scope of supply covers design, development, supply, installation and commissioning of complete set of CCTV surveillance system in 3-phase MEMU coaches. System shall broadly comprise of the following:

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S. No.	Item description	QPC	
		DMC	TC
1	Full HD Fixed Dome/Wedge type IP Colour Camera (as per clause 4.1 of RDSO/SPN/TC/106/2022 ver. 2.1 alongwith Amendment No.1):		
	i) IP saloon Cameras	04 Nos.	04 Nos.
	ii) Front view Cameras	01 no.	---
	iii) Platform view Cameras	02 Nos.	---
	iv) Cab Camera with inbuilt microphone	01 no.	---
2	Mobile Network Video Recorder / Video Recording Unit (VRU) with SSD storage and associated Software (as per clause 4.5/4.2 & 4.6 of RDSO/SPN/TC/106/2022 ver. 2.1 alongwith Amendment No.1)	As Required (#)	As Required (#)
	i) Built-in or external Wi-fi Access Point (as per clause 4.4 of RDSO/SPN/TC/106/2022 ver. 2.1 alongwith Amendment No.1)	01 Set	
	ii) Managed switch adequate no of PoE/non-PoE port (as per clause 4.3 of RDSO/SPN/TC/106/2022 ver. 2.1 alongwith Amendment No.1)	01 Set in each coach	
	iii) Pre-installed Face image cropping tool shall run on 4 CCTV cameras installed at 4 entry/exit doors of each coach. Face image cropping tool on the camera and/or video recording unit Mobile NVR shall identify the faces of person from the live feed and crop it which should meet the requirement of FRS (whenever facial recognition software is applicable). This face image with the metadata shall be sent over Wi-Fi or LTE network to Face matching Server at Datacenter/Cloud for matching. (as per clause 4.6.15 of RDSO/SPN/TC/106/2022 ver. 2.1 alongwith Amendment No.1)	As Required	
3	HMI Screen (10.1 inch) shall be provided in the Driver Desk as per OGA drawing no. SKED-974. (OGA to be got approved before commencement of supply)	01 Nos.	---
4	Redundant high speed Gigabit IP backbone (for making ring network) and accessories	As Required	As Required

(#) The Enclosure for VRU/Mobile NVR shall have ingress protection IP 54 rating as per IEC 60529. To familiarize with the interface requirements in DMC and TC, the

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supplier may visit and physically assess the existing 3-Phase MEMU rakes under manufacture at RCF. Software Development Kit (SDK) or API of all Hardware/ Software shall be shared with the purchaser for testing purposes, as and when required.

**Note:** The system display (HMI) shall automatically switch to platform view when the train stops and shall go back to default mode (saloon view) after the train leave the platform.

## 5.0 Audit and Testing:

The successful Bidder shall ensure the security of entire CCTV system which shall be subjected to Security Audit/Testing as mentioned below:-

“Vulnerability Assessment and penetration Testing (VAPT) for complete system along with Mobile NVR /VRU and associated components, such as PoE switches, Wi-Fi Access Points, GPS, Mobile Communication etc. The testing though STQC lab shall be got done by the firm.”

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