



भारत सरकार—रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226011

e-mail: dse1rdso@gmail.com

Telephone : 0522-2465739

Government of India - Ministry of Railways
Research, Designs & Standards Organization,
LUCKNOW – 226011

Telex: 0535-2424 RDSO-IN

Fax: 91-0522-2452581



No. EL/0.1.3/Driver

Dated: As signed

Principal Chief Electrical Engineer,

1. Central Railway, Mumbai CST-400 001
2. North Western Railway, Jaipur-302 006
3. East Central Railway, Hazipur-844 101
4. South Central Railway, Rail Nilayam, Secunderabad-500 071
5. East Coast Railway, Chandrashekharpur, Bhubaneswar-751 016
6. South East Central Railway, Bilaspur- 495 004
7. Eastern Railway, Fairlie Place, Kolkata-700 001
8. South Eastern Railway, Garden Reach, Kolkata-700 043
9. North Central Railway, Subedarganj, Allahabad-211 033
10. Southern Railway, Park Town, Chennai-600 003
11. Northern Railway, Baroda House, New Delhi-110 001
12. South Western Railway, Hubli-580 024
13. North Eastern Railway, Gorakhpur-273001
14. West Central Railway, Jabalpur-482 001
15. North East Frontier Railway, Maligaon, Guwahati-781 011
16. Western Railway, Churchgate, Mumbai- 400 020
17. Banaras Locomotive Works, Varanasi-221 004
18. Chittaranjan Locomotive Works, Chittaranjan- 713 331
19. Patiala Locomotive Works, Patiala- 147 003

Sub: Amendment no. 01 to Specification no. RDSO/2015/EL/SPEC/0118, (Rev.01) titled as 'Crew Voice & Video Recording System for Electric & Diesel Locomotives.'

Ref.: (i) MOM between RDSO, BLW & DMW on 14.09.2021 issued vide letter of even no. dated 21.09.2021.

(ii) This office letter of even no. dated 11.01.2022.

(iii) MOM between RDSO, BLW, PLW & DMW on 23.03.2022.

With reference to the above, following amendment is issued to the Specification no. RDSO/2015/EL/SPEC/0118, (Rev.01):

- **Clause 1.1:** Delete the text "2G/3G/" & " 2nd, 3rd & "
- **Clause 2.0: Brief Description of the Equipment**
 - The Para "Network Video Recorder.....Diesel Locomotive" should be replaced as "Network Video recorder with processing system and data storage capable of receiving standard RTSP stream from connected IP cameras & microphones. Minimum Direct 8 channel NVR shall be provided in each cab of electric Locomotive and Diesel Locomotive and both NVRs should work in redundant mode and should be capable of recording either cab. The tentative interconnection scheme of NVRs is given under Annexure-I."
 - **Add new Para in the last of the paragraph.** "• Separate flush type, screw mounted compact size microphone (02 nos.-one each in front of LP/ALP) shall be used to record the voice conversation of crews in the cab & suitably mounted on driver desk for clear voice recording."

- **Clause 2.1.1:**
 - **Line 1:** Add “comma (,)” in place of “with built in”
 - **Line 4:** The word “Inbuilt” has been replaced with “The”
 - **Clause 2.1.4: Add the following in last of the paragraph:** The audio recording shall be clear & audible and shall be verified in Lab as well as in field before considering prototype clearance.
 - **Clause 2.1.5:** The text ‘audio &’ has been added before ‘video.’
 - **Clause 2.1.9:** The text “, Microphones” has been added after “Cameras”
 - **Clause 2.1.12:** The word “Microphone” has been added before “SSD”
 - **Clause 2.2.2:** The existing text is replaced as “Housing of cameras shall be of IP 65 or better rating for Inside camera and IP 67 or better for outside camera. The housing of Microphone shall be IP 65 or better rating.”
 - **Clause 2.2.8:**
 - Line 1:** The text “& Microphones” has been added after “Cameras”
 - Line 2:** The text “& Microphone” has been added after “Camera”
 - **Clause 2.2.12:** The text “2G/3G/4G” has been replaced with “4G or above”.
 - **Clause 2.2.21: Add in the last of the paragraph:** The inside Cameras & Microphones shall be active in working cab only. All the outside cameras of the locomotive shall remain ‘ON’
 - **Clause 2.3 Technical Requirement:**

The description of IP Rating “ Dust protection vandal proof (Impact rating IK-10 to IEC 62262)” should be replaced as “ Dust protection with dehumidifying membrane, IP-67 to IEC 60529 for outdoor camera and IP 65 to IEC 60529 for Inside camera and vandal proof (Impact rating IK-10 to IEC 62262).”
 - Chapter 6 – Ordering information is deleted.
- This is for information and necessary action please.

(Arvind Pandey)

for Director General Std. / Electrical

Encl: As above

Copy to:

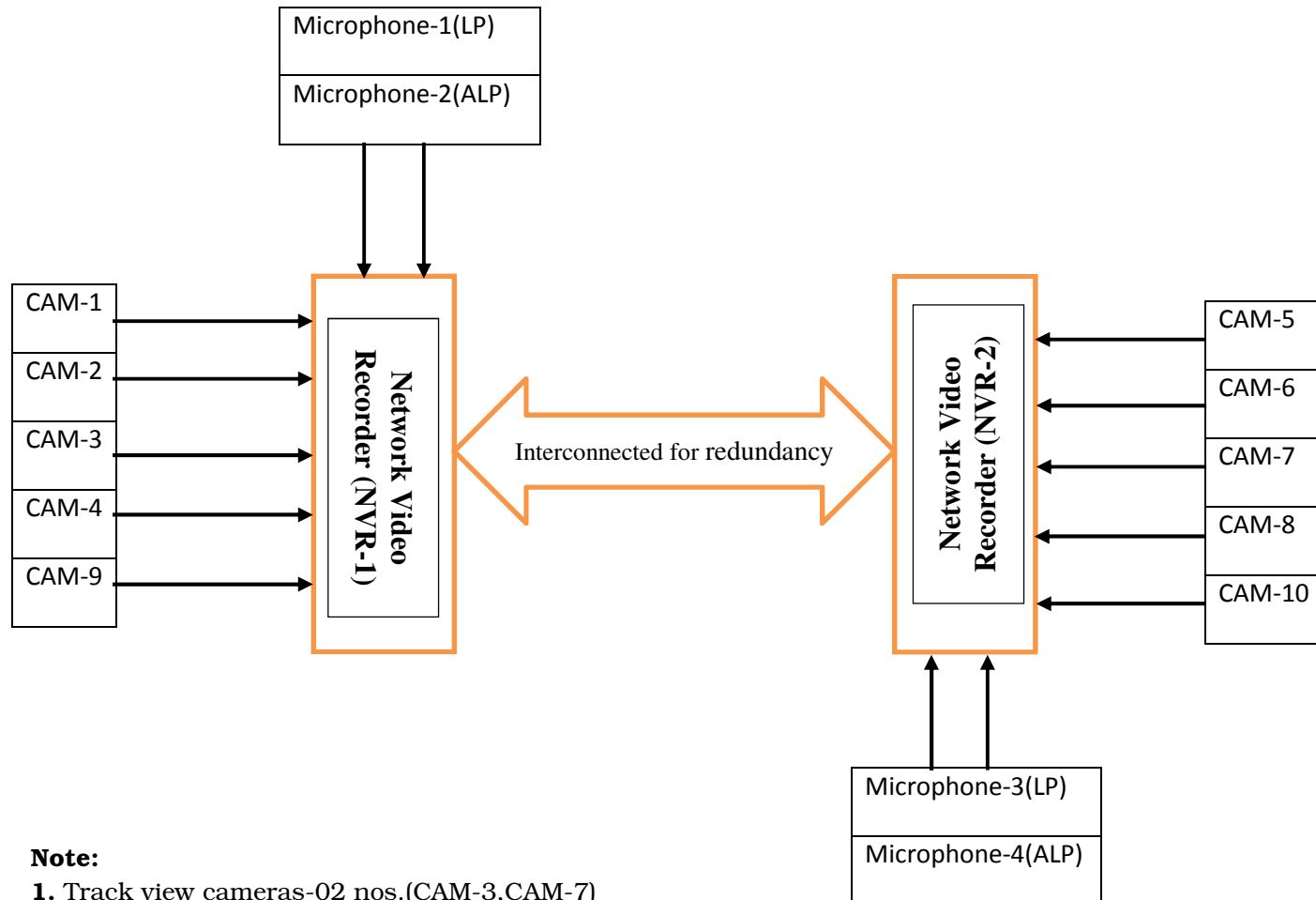
1. Secretary (Electrical), Railway Board, Rail Bhavan, New Delhi-110001; for kind information please.
2. Manufacturers of CVVRS; for information and necessary action please.

(Arvind Pandey)

for Director General Std. / Electrical

Encl: As above

Connection Scheme of sub systems of CVVRS



Note:

1. Track view cameras-02 nos.(CAM-3,CAM-7)
2. Cab view cameras-04 nos.(CAM-1,CAM-2,CAM-5,CAM-6)
3. Pantograph view cameras-02 nos.(CAM-4,CAM-8)
4. Additional cameras for future expansion-02 nos.(CAM-9,CAM-10)
5. Microphones for recording LP/ALP voice-04 nos.(Microphone-1, Microphone-2, Microphone-3, Microphone-4)