



MC/ACF/Fire Detection/AC

Date- 12.08.2024

Principal Chief Mechanical Engineer,

1. मध्य रेलवे, छत्रपति शिवाजी टर्मिनस, मुम्बई – 400 001.	12. उत्तर मध्य रेलवे, हास्टिंग रोड, इलाहाबाद –211 001.
2. पूर्व रेलवे, फेयरली प्लेस, कोलकाता – 700 001.	13. उत्तर पश्चिम रेलवे, जयपुर – 302 006.
3. उत्तर रेलवे, बड़ौदा हाउस, नई दिल्ली – 110 001.	14. दक्षिण पश्चिम रेलवे, हुबली – 580 023.
4. दक्षिण रेलवे, पार्क टाउन, चेन्नई – 600 003.	15. पश्चिम मध्य रेलवे, जबलपुर – 482 001.
5. दक्षिण मध्य रेलवे, रेल निलायम, सिकन्दराबाद –500 071.	16. दक्षिण पूर्व मध्य रेलवे, आर ई आफिस काम्प्लेक्स, बिलासपुर – 495 004.
6. दक्षिण पूर्व रेलवे, गार्डन रीच, कोलकाता – 700 043.	17. इन्टीगरल कोच फैक्टरी, चेन्नई – 600 038.
7. पूर्वोत्तर रेलवे, गोरखपुर – 273 012.	18. रेल कोच फैक्टरी, हुसैनपुर, कपूरथला – 144 602.
8. पूर्वोत्तर सीमान्त रेलवे, मालीगाँव, गुवाहाटी – 781 011.	19. बी.ई.एम.एल., बेंगलूर काम्प्लेक्स, न्यू थिप्पासान्द्रा, पोस्ट बाक्स नं. 7501, बेंगलूर – 560 075.
9. पश्चिम रेलवे, चर्चगेट, मुम्बई – 400 020.	20. कोंकण रेलवे कार्पोरेशन लि., कार्पोरेट आफिस, बेलापुर भवन, नवी मुम्बई – 400 614.
10. पूर्व मध्य रेलवे, हाजीपुर – 844 101.	21. माडर्न कोच फैक्टरी रायबरेली .229206
11. पूर्व तटीय रेलवे, बीडीए रेंटल कालोनी, रेलवे काम्प्लेक्स, चन्द्रशेखरपुरा, भुवनेश्वर, उड़ीसा – 751 016.	

Sub: Power supply and MCB of FSDS System.

Ref: PS & EMU Directorate letter no. EL/6.8.21 dated 15.07.2024 (copy enclosed).

- Various cases have been reported by Zonal Railways wherein provision of MCB from power supply point to FSDS and separate conduits of positive and negative wire have not been done during installation of FSDS system. In this regard, relevant clauses of RDSO specification are reproduced below:

Clause 8 (Section-A) of RDSO specification no. RDSO/2008/CG-04 deals with Supplier/OEM's responsibility. As per Clause 8.4 Supplier/OEM is responsible "For ensuring that the equipments/systems do not lead to unsafe or hazardous conditions for IR passengers & equipments".

Further, as per clause 8.1 (Section-A) "The Supplier/OEM shall be completely responsible for the execution of the contract strictly in accordance with the terms of this specification and the conditions of contract, notwithstanding any approval which purchaser or the Inspecting Officer may have given".

Above makes it amply clear that Supplier/OEM must ensure availability of all safety precaution while installing the FSDS system.

- Additionally, as per Clause 1.7 (Section-B) of spec no. RDSO/2008/CG-04(Rev-5) following needs to be ensured:
 - The control supply to the Fire Detection System will be provided from Terminal Block (TB) X1 of Switch Board Cabinet (SBC) for LHB AC coaches and TB-4 for ICF AC coaches through DC MCB of adequate rating. The MCB shall be always in 'on' position.
 - Positive and negative wire of 110 V DC supply shall be segregated by placing them in separate conduits.
- PS & EMU Directorate of RDSO have also issued clarification for provision of power supply and MCB for FSDS system (copy enclosed).

In view of the above, it is advised that MCB for power supply connection and provision of separate conduits must be implemented to ensure reliability of FSDS system. Accordingly, Zonal Railways are advised to instruct the Suppliers/OEMs of FSDS system to ensure the compliance of above.

This is for your information and further necessary action please.

DA: As above

Anurag 12.08.24
(Anurag Malik)
Jt. Director/SS/Carriage

Copy to:

- | | | |
|--|---|---|
| <ol style="list-style-type: none">1. M/s Sanrok Enterprises, E-14, Greater Kailash Enclave-1, New Delhi-110 0482. M/s FOGPRO India Pvt. Ltd., Plot No. 54, Sector 58, HSIIDC, Industrial Estate, Bahadurgarh, Faridabad - 1210043. M/s N & S Solutions Private Limited, No. 37-38 Reliable Residency, 1st main, 8th cross, Harlur, HSR Layout, Bangalore -5601024. M/s J. K. Exim, Pvt. Ltd., 267, Sector-10, First Floor, Ambala City, Haryana - 1340035. M/s Advance Hi-Tech, 1765 MIE, Part-B, Bahadurgarh, Jhajjar, Haryana – 124507.6. M/s Tayal & amp; Co. D– 85, Phase VII, SAS Nagar, Mohali, Punjab. | } | For information and compliance on priority please |
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सत्यमेव जयते

No. EL/6.8.21

Dated As signed

PCMEs/PCEEs

All Zonal Railways & RCF, ICF, MCF

Sub: Guidelines for continuous power supply to fire and smoke Detection System (FSDS) shall be provided from terminal Block (TB) X1 of Switch Board Cabinet (SBC).

Ref: (i) Carriage Directorate note no. MC/ACF/Fire Detection/AC dtd.29.04.2024.
(ii) Carriage Directorate note no. MC/ACF/Fire Detection/AC dated 12.06.2024.
(iii) This office letter of even no. dated 19.06.2024.
(iv) ICF letter no. MD/D/LHB/103B AC dated 19/24.06.2024.
(v) Southern Railway letter no. E.5/III/LHB 25.06.2024.
(vi) NWR letter no. EL/245/2 (Spec.) dated 28.06.2024 & 10.07.2024.
(vii) Central Railway letter no. L.326.TL.RDSO.MOD dated 10.07.2024.

1. Carriage Directorate vide note under ref (i) above, have informed that, "MCB connection for FSDS electrical supply is not standard and through common MCBs in many coaches which need to be standardized". Further, Carriage dte. RDSO vide Note under ref(ii) above have mentioned that, "As per information provided by OEM's, maximum power consumption requirement for FSDS is **150 watts** both at rated load & peak load @ 110V DC".
2. Based on the above, a draft guidelines was prepared and communicated to Zonal Railways/PUs vide RDSO letter under ref (iii) for comments/suggestions. Comments have been received from ICF, SR, NWR & CR.
3. Hence, as per maximum electrical load of FSDS @110V DC, current taken by FSDS system comes out to be 1.36A and further, as per report submitted by NWR, the maximum current taken by FSDS is lower than this in deep discharge condition of internal battery (24V, 7AH).
4. In view of the comments and suggestions received from Zonal Railways and PUs and as per the design requirements/actual current taken by the FSDS system, following guidelines to be followed :
 - a) Power Supply arrangement for FSDS system fitted with internal battery of 24V, 7AH to be as under:

S. No.	Type of Coach	Place of Installation
i	LHB variant of AC coaches.	Supply may be taken from the place of installation of MCB S1F33 with 2A, 2P, C-curve, 110V DC MCB. The indication of MCB in Sheet no. 11 of 48 of RDSO drawing no. RDSO/PE/SK/AC/0206-2019 (Rev.0) attached as ANNEXURE A
ii	ICF type SG AC coaches	Dedicated 2A, 2P, C-curve 110V DC MCB to be provided after the common 40A DC MCB as shown in RCF drawing no. CC70401 (Copy enclosed). The MCB to be placed in The Power Panel besides other DC MCBs. New 2A MCB provided to be marked as FSDS. The indicated drawing is attached as ANNEXURE B

- b) Code of Practice for wiring for 110V DC Self Generation Train Lighting System as per RDSO Specification no. EL/TL/48 (Rev.1)-2005 or latest needs to be followed.
- c) Code of Practice for Train Lighting Maintenance on Prevention of fires on 110V DC Self generating coaches as per RDSO Specification no. EL/TL/56-1992 or latest needs to be followed.
- d) Code of Practice for Prevention of fire in AC coaches as per RDSO specification no. RDSO/PE/O/0008-2005 (Rev.0) or latest needs to be followed.

This is for information and necessary action please.

DA: As above

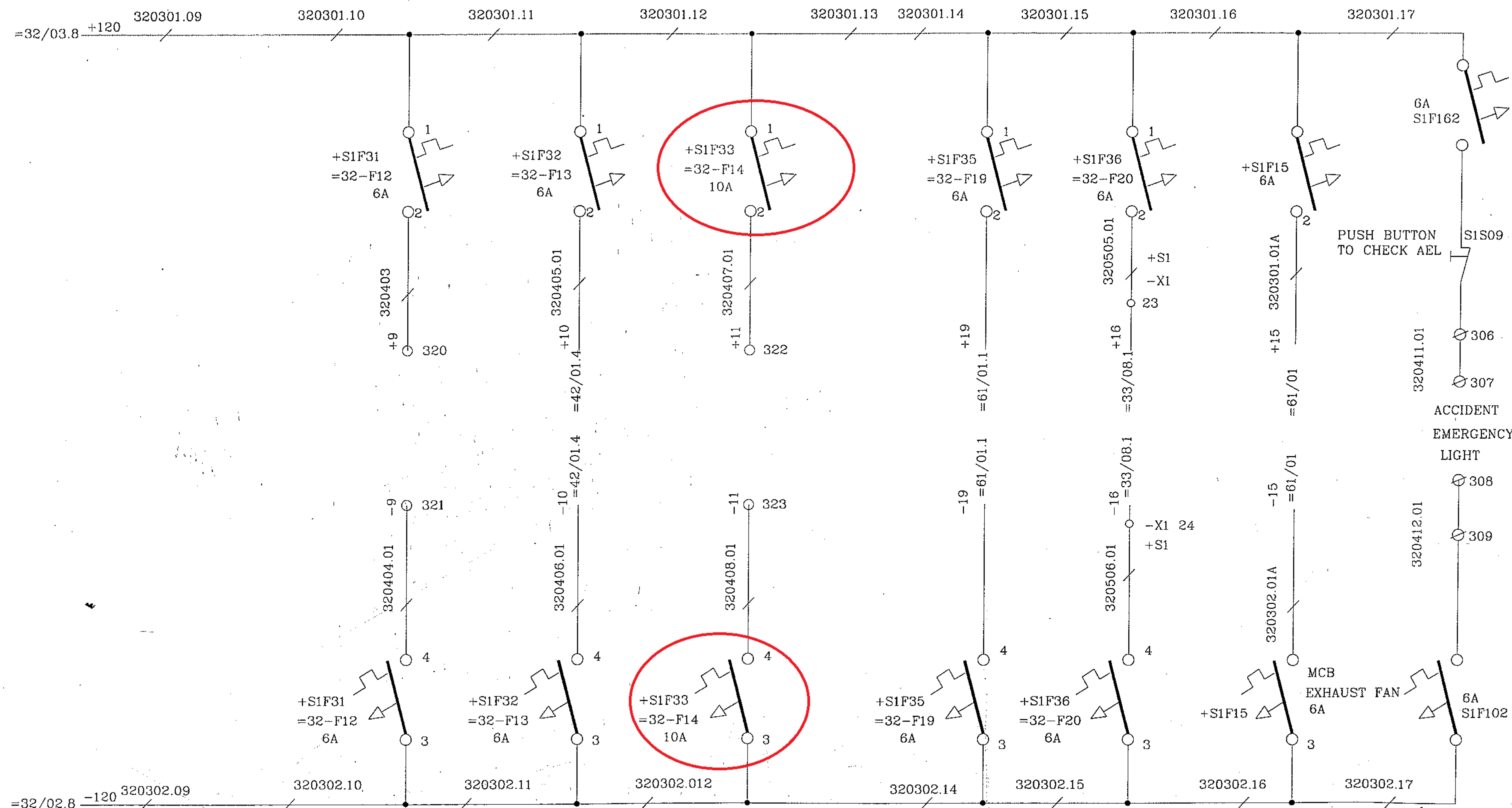
Copy to:

ED/Carriage-II/RDSO- For information and with request to review the rating of MCB provided inside FSDS Panel as suggested by CR vide letter under ref. (vi) and issue necessary guidelines to ZRs/Pus.

(Manjay Kumar)
DSE (TL-AC System Design)
for Director General/PS&EMU

ANNEXURE A

MINIMAL VOLTAGE	TELEPHONE	DIAGNOSIS	POWER	AIR CONDITION UNIT	PUMP CONTROL	EXHAUST FAN	AEL(EMERGENCY LIGHT)
RELAY (DELETED)	first class only		SUPPLY				



REF:- RCF DRG. NO.(3)11.0788.101-GR32-PG04 SCALE 1:1 APPROVED BY :- (DSE TLAC FOR D.G.)

GENERAL WIRING DIAGRAM FOR POWER & CONTROL CIRCUITS (FOR SBC S1 FOR LHB
AC EOG / HOG AND GARIB RATH COACHES) BATTERY DISTRIBUTION

RESEARCH DESIGN STANDARDS ORGANISATION LUCKNOW

DRG NO. RDSO/PE/SK/AC/0206-2019 (Rev. 0) SHEET. 11 OF 48

SUPERSEDES

SUPERSEDED BY

DT.	16/09/2020
D	AKS
C	AKS

STATUS	REV./ALT.	REF. NO.	DESCRIPTION	APPD. B'DATE

I/62881/2024

ANNEXURE B

