

SPECIFICATION FOR 'HARNESS OF UNDER FRAME AND ROOF ARRANGEMENT' FOR LHB EOG SCN COACHES

- 1.0 This specification covers manufacturing, assembly and supply of readymade 'CABLE HARNESS FOR UNDER FRAME AND ROOF FOR LHB EOG SCN COACHES'. These harnesses shall comprise of thin walled flexible elastomeric cables with copper conductors duly cut to specified lengths and ferruled for cable identification. The free ends of the cables shall be stripped & taped with FRLT cotton insulation tapes of approved makes.
- 1.1 The harness manufacturer shall quote for supply of the harness without commissioning.
- 1.2 The firm shall maintain date wise in house quality control system and in-house quality control records etc. for in stage process inspection and testing at harness manufacturer's premises and the same shall be made available to the inspecting official during type testing.

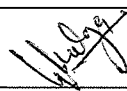
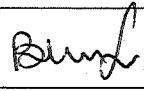
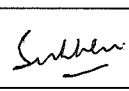
2.0 SCOPE OF SUPPLY:

TYPE	DESCRIPTION
TYPE-1	HARNESS OF 'UNDER FRAME ARRANGEMENT' FOR LHB EOG SCN COACHES
TYPE-2	HARNESS OF 'ROOF ARRANGEMENT' FOR LHB EOG SCN COACHES

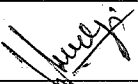
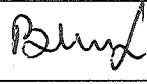
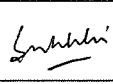
- a. Procurement of the items specified in the BOM of the specification shall be procured from RDSO/RCF/ICF/MCF approved vendors mentioned in latest revision of the vendor directory issued by RDSO/RCF/ICF/MCF respectively. Wherever some specific makes have been mentioned, procurement is to be done from those sources.
- b. SAFETY: All PPE/Safety related gears availability shall be ensured while working in coaches.

2.1 TYPE-1: 'HARNESS OF UNDER FRAME ARRANGEMENT' FOR LHB EOG SCN COACHES:-**2.1 (a) : BILL OF MATERIAL FOR UNDERFRAME WIRING:****A) THIN WALLED FLEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-**

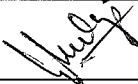
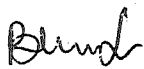
Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable color	Detail drg./ Spec.	QPC	Remarks
1.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	150	Red	ELRS/SPEC/ELC/ 0019, Rev-4	48.2 Mtr	Feeder cables

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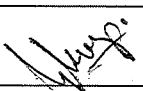
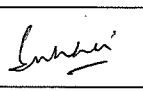
2.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	150	Yellow	ELRS/SPEC/ELC/ 0019, Rev-4	48.2 Mtr	Feeder cables
3.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	150	Blue	ELRS/SPEC/ELC/ 0019, Rev-4	48.2 Mtr	Feeder cables
4.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	95	Black	ELRS/SPEC/ELC/ 0019, Rev-4	48.2 Mtr	Feeder cables
5.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	70	GNYE	ELRS/SPEC/ELC/ 0019, Rev-4	9.8 Mtr	For Feeder Earthing
6.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	50	GNYE	ELRS/SPEC/ELC/ 0019, Rev-4	0.5 Mtr	For Earthing
7.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	25	Red	ELRS/SPEC/ELC/ 0019, Rev-4	19 Mtr	Feeder junction boxes to SBC
8.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	25	Yellow	ELRS/SPEC/ELC/ 0019, Rev-4	19 Mtr	Feeder junction boxes to SBC
9.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	25	Blue	ELRS/SPEC/ELC/ 0019, Rev-4	19 Mtr	Feeder junction boxes to SBC
10.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	25	Black	ELRS/SPEC/ELC/ 0019, Rev-4	19 Mtr	Feeder junction boxes to SBC
11.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	16	Red	ELRS/SPEC/ELC/ 0019, Rev-4	9.5 Mtr	9 KVA TXR input (750V AC side)
12.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	16	Yellow	ELRS/SPEC/ELC/ 0019, Rev-4	9.5 Mtr	9 KVA TXR input (750V AC side)

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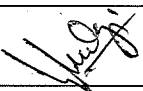
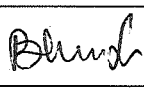
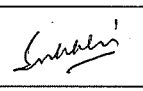
13.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	16	Blue	ELRS/SPEC/ELC/ 0019, Rev-4	9.5 Mtr	9 KVA TXR input (750V AC side)
14.	Thin walled flexible elastomeric cables with copper conductors	above 750 volts upto 1.8KV/ 3.0KV	16	Black	ELRS/SPEC/ELC/ 0019, Rev-4	9.5 Mtr	9 KVA TXR input (750V AC side)
15.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	16	Red	ELRS/SPEC/ELC/ 0019, Rev-4	7 Mtr	9 KVA TXR output (415V AC side)
16.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	16	Yellow	ELRS/SPEC/ELC/ 0019, Rev-4	7 Mtr	9 KVA TXR output (415V AC side)
17.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	16	Blue	ELRS/SPEC/ELC/ 0019, Rev-4	7 Mtr	9 KVA TXR output (415V AC side)
18.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	16	Black	ELRS/SPEC/ELC/ 0019, Rev-4	7 Mtr	9 KVA TXR output (415V AC side)
19.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	16	GNYE	ELRS/SPEC/ELC/ 0019, Rev-4	1.1 Mtr	Earthing
20.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	10	Red	ELRS/SPEC/ELC/ 0019, Rev-4	9.5 Mtr	BCT
21.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	10	Blue	ELRS/SPEC/ELC/ 0019, Rev-4	10.5 Mtr	BCT
22.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	10	White	ELRS/SPEC/ELC/ 0019, Rev-4	27 Mtr	-ve fuse box

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23.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	10	Choco	ELRS/SPEC/ELC/0019, Rev-4	29.5 Mtr	+ve fuse box
24.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	6	Red	ELRS/SPEC/ELC/0019, Rev-4	30.5 Mtr	9 KVA TXR output (190V AC side) & RBC
25.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	6	Yellow	ELRS/SPEC/ELC/0019, Rev-4	30.5 Mtr	9 KVA TXR output (190V AC side) & RBC
26.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	6	Blue	ELRS/SPEC/ELC/0019, Rev-4	30.5 Mtr	9 KVA TXR output (190V AC side) & RBC
27.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	6	Black	ELRS/SPEC/ELC/0019, Rev-4	30.5 Mtr	9 KVA TXR output (190V AC side) & RBC
28.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	6	GNYE	ELRS/SPEC/ELC/0019, Rev-4	6 Mtr	RBC Input
29.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	2.5	White	ELRS/SPEC/ELC/0019, Rev-4	6 Mtr	RBC to HV Panel
30.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	2.5	Choco	ELRS/SPEC/ELC/0019, Rev-4	108 Mtr	Feeder control cables and HV Panel to RBC
31.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	2.5	GNYE	ELRS/SPEC/ELC/0019, Rev-4	2 Mtr	Earthing
32.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Red	ELRS/SPEC/ELC/0019, Rev-4	44 Mtr	Exhaust Fan

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33.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Black	ELRS/SPEC/ELC/0019, Rev-4	44 Mtr	Exhaust Fan
34.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	GNYE	ELRS/SPEC/ELC/0019, Rev-4	44 Mtr	Exhaust Fan
35.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	White	ELRS/SPEC/ELC/0019, Rev-4	8 Mtr	HV panel to VK11
36.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Choco-late	ELRS/SPEC/ELC/0019, Rev-4	8 Mtr	HV panel to VK11
37.	4x1.5 sqmm multicore cable E-beam cable 600/1000V colour Wh, Br, Blk, GNYE	-	4x1.5	Wh, Br, Blk, GNYE	EDTS-132, Rev-'C' AM-3 (DS-3)	21 Mtr	Pump cables
38.	2x1.0 sqmm multicore cables 600/1000V colour Br, Wh	-	2x1.0	Br, Wh	EDTS-132, Rev-'C' AM-3 (DS-3)	21 Mtr	Pump control cables
39.	3x1.0 sqmm multicore cables 600/1000V colour Wh, Br, Blk	-	3x1.0	Wh, Br, Blk	EDTS-132, Rev-'C' AM-3 (DS-4)	89 Mtr *	Speed sensor/disc brake cables
			3x1.0	Wh, Br, Blk	EDTS-132, Rev-'C' AM-3 (DS-4)	55.5 Mtr (3X18.5 Mtr)	NET-1 & 2 + SPARE
40.	Cable marking system	-	-	-	EDML-60, Col-VI (Latest Revision)	1 no.	Heat shrinkable sleeves of M/s TYCO/Phoenix/Panduit make
41.	Copper crimping socket for 70 sq.mm cable	-	-	-	EDTS-200 (Latest Revision)	20 nos.	ITEM-7 (M12)

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42.	Copper crimping socket for 50 sq.mm cable	-	-	-	EDTS-200 (Latest Revision)	2 nos.	ITEM-10 (M10)
43.	Copper crimping socket for 25 sq.mm cable	-	-	-	EDTS-200 (Latest Revision)	8 nos.	ITEM-23 (M16)
44.	Copper crimping socket for 25 sq.mm cable	-	-	-	EDTS-200 (Latest Revision)	4 nos.	ITEM-14 (M8)
45.	Copper crimping socket for 16 sq.mm cable	-	-	-	EDTS-200 (Latest Revision)	16 nos.	ITEM-15 (M10)
46.	Copper crimping socket for 16 sq.mm cable	-	-	-	EDTS-200 (Latest Revision)	10 no.	ITEM-17 (M6)
47.	Copper crimping socket for 10 sq.mm cable	-	-	-	EDTS-201 (Latest Revision)	20 nos.	ITEM-2 (M6)
48.	Copper crimping socket for 6 sq.mm cable	-	-	-	EDTS-201 (Latest Revision)	8 nos.	ITEM-4 (M6)
49.	Copper crimping socket for 6 sq.mm cable	-	-	-	EDTS-201 (Latest Revision)	10 nos.	ITEM-5 (M8)
50.	Copper crimping socket for 2.5 sq.mm cable	-	-	-	EDTS-201 (Latest Revision)	8 nos.	ITEM-10 (M6)

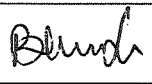
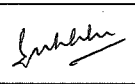
Note:-

* 3x1.0 sq.mm shield multi-core cables of speed sensors have been shown for reference in BOM as these are being supplied by WSP system suppliers. Only cables for Net-1/Net-2 control are to be supplied along-with Harness.

B) CONDUIT SYSTEM FOR CABLE MANAGEMENT & ACCESSORIES FOR UNDER FRAME WIRING:-

Firms supplying these items shall get these tested as per RDSO specification no. RDSO/PE/SPEC/AC/0138-2009 (Rev-1).

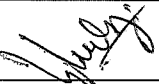
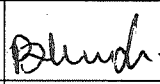
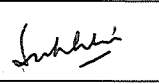
Sr. No.	DESCRIPTION	SPEC. NO.	TABLE	ITEM	QPC
1.	Polyamide flexible corrugated conduit, NW-17	RDSO/PE/SPEC/AC/0138-2009, Rev-1 (Annexure-A)	A-1	3	176 Mtr
2.	Polyamide flexible corrugated conduit, NW-23		A-1	4	53.5 Mtr

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3.	Polyamide flexible corrugated conduit, NW-29		A-1	5	26.5 Mtr
4.	Polyamide flexible corrugated conduit, NW-36		A-1	6	6 Mtr
5.	Polyamide flexible corrugated conduit, NW-48		A-1	7	15.5 Mtr **
6.	Straight PG metal thread End fitting PG-16	RDSO/PE/SPEC/AC/0138-2009, Rev-1 (Annexure-A)	A-2	3	32 nos.
7.	Straight PG metal thread End fitting PG-21		A-2	5	12 nos.
8.	Straight PG metal thread End fitting PG-29		A-2	6	6 nos.
9.	Straight PG metal thread End fitting PG-36		A-2	7	2 nos.
10.	Straight PG metal thread End fitting PG-48		A-2	8	2 nos. **
11.	Hex. lock nut with PG thread brass PG-16	RDSO/PE/SPEC/AC/0138-2009, Rev-1 (Annexure-A)	A-10	4	32 nos.
12.	Hex. lock nut with PG thread brass PG-21		A-10	5	12 nos.
13.	Hex. lock nut with PG thread brass PG-29		A-10	6	6 nos.
14.	Hex. lock nut with PG thread brass PG-36		A-10	7	2 nos.
15.	Hex. lock nut with PG thread brass PG-48		A-10	8	2 nos. **
16.	Tube clamp NW-17	RDSO/PE/SPEC/AC/0138-2009, Rev-1 (Annexure-A)	A-8	3	15 nos.
17.	Tube clamp NW-23		A-8	4	14 nos.
18.	Tube clamp NW-29		A-8	6	11 nos.
19.	Tube clamp NW-36		A-8	7	22 nos.
20.	Tube clamp NW-48		A-8	8	10 nos. **
21.	PG thread plug screws PG-16	RDSO/PE/SPEC/AC/0138-2009, Rev.1 (Annexure-A)	A-18	4	16 nos.
22.	PG thread plug screws PG-21		A-18	5	4 nos.

Note:-

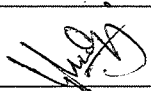
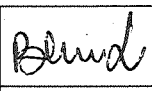
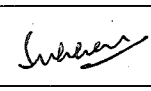
** Marked items shall not be procured as these items are available in RCF depots.

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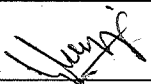
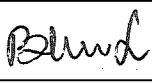
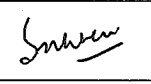
2.1 (b) PREPARATION / BUNCHING OF HARNESS:-

The preparation / bunching of harness shall be done as per under given for Under Frame wiring.

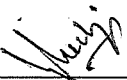
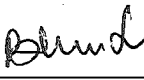
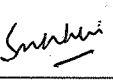
Har. No.	Nos. & size of cable	Spec. no.	Working voltage	Color code	Length in mm	Ferrules marking	Route	Remarks & Flexible conduit size & length	Group Name
1	3 nos., 150 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	R,Y,B	24100	12 01 01 02, 12 01 04 02, 12 01 07 02	10	Feeder-1 From A17X1 to A18X1 (To be supplied loose)	FEEDER CABLES (Feeder-1)
	1 no., 95 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	Blk	24100	12 01 10 02	10		
1A	2 nos., 2.5 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	Ch, Ch	25500	46 01.01, 46 01.02	14	Control cables (NW-17, L=24 Mtrs)	
1B	3 nos., 150 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	R,Y,B	24100	12 01 15 02, 12 01 18 02, 12 01 21 02	21	Feeder-2 From A16X1 to A19X1 (To be supplied loose)	FEEDER CABLES (Feeder-2)
	1 no., 95 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	Blk	24100	12 01 24 02	21		
1C	2 nos., 2.5 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	Ch, Ch	25500	46 01 03, 46 01 04	25	Control cables (NW-17, L=24 Mtrs)	
2	4 nos., 25 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	R,Y,B, Blk	10000	12 01 01 01, 12 01 04 01, 12 01 07 01, 12 01 10 01	13	Loop from Feeder to HV Panel A17X1 to S1 (NW-48, L=8 Mtrs)	FEEDER LOOP CABLES

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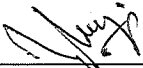
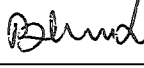
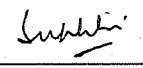
2A	4 nos., 25 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	R,Y,B, Blk	9000	12 01 15 01, 12 01 18 01, 12 01 21 01, 12 01 24 01	23	Loop from Feeder to HV Panel A16X1 to S1 (NW- 48, L=7.5 Mtrs)	FEEDER LOOP CABLES
3	4 nos., 16 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	R,Y,B, Blk	9500	12 01 12.02, 12 01 13.02, 12 01 14.02, 12 01 11.02	30	Input cables S1 (750V side) to S7 (NW- 29, L=8 Mtrs)	9 KVA TRANS-FORMER INPUT/ OUTPUT CABLES
3A	4 nos., 16 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750 volts	R,Y,B, Blk	7000	12 02 06.01, 12 02 07.01, 12 02 08.01, 12 02 09.01	31	Output cables S7 (415V side) to S1 (NW-36, L=6 Mtrs)	
3B	4 nos., 6 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750 volts	R,Y,B, Blk	7000	12 02 16.01, 12 02 17.01, 12 02 18.01, 12 02 19.01	31A	Output cables S7 (190V side) to S1 (To be laid with harness no.3A)	
4	4x1.5 mm ² multi- core cable	EDTS-132, Rev-C, Am- 3 (DS-3)	-	W, Br, Blk, GNYE	10500	33 08 02.02, 33 08 04.02, 33 08 06.02, 33 08 07.01	50	HV Panel (S1) to Pump (S22) (NW-29, L=8.5 Mtrs)	PUMP CABLES & CONTROLLER CABLES
	4x1.5 mm ² multi- core cable	EDTS-132, Rev-C, Am- 3 (DS-3)	-	W, Br, Blk, GNYE	10500	33 08 13.02, 33 08 15.02, 33 08 17.02, 33 08 18.01			
	2x1.0 mm ² multi- core cable	EDTS-132, Rev-C, Am- 3 (DS-3)	-	Br, W	10500	33 08 10.01, 33 08 11.01			

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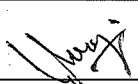
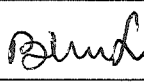
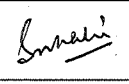
	2x1.0 mm ² multi-core cable	EDTS-132, Rev-C, Am-3 (DS-3)	-	Br, W	10500	34 08 10.01, 33 08 11.01			
5	1 no., 10 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	Ch	2500	35	35	Battery fuse box +ve (S4) to Battery box (S3) (NW-17, L=1 Mtr)	DC CIRCUIT CABLES
5A	1 no., 10 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	W	2500	39	39	Battery fuse box -ve (S5) to Battery (S3) (NW-23, L=1 Mtr)	
5B	1 no., 10 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	Ch	20000	36	36	Battery fuse +ve (S4) to LV Panel (S1A) (NW-17, L=18 Mtrs)	
5C	1 no., 10 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	W	14500	40	40	Battery fuse -ve (S5) to LV Panel (S1A) (NW-17, L=12 Mtrs)	
5D	1 no., 10 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	Ch	7000	42	42	Battery fuse box +ve (S4) to RBC (S1B) (NW-17, L=6 Mtrs)	
5E	1 no., 10 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	W	10000	43	43	Battery fuse box -ve (S5) to RBC (S1B) (NW-17, L=8 Mtrs)	

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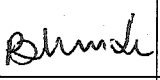
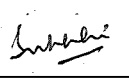
6	3x1.0 mm ² + Shielded multi-core	EDTS-132, Rev-C, Am-3 (DS-4)	-	W, Br, Blk	11000 *	23 03 10.02, 23 03 11.02, 23 03 12.02	81	HV Panel (S1) to connection box VK4 (NW-17, L=9 Mtrs)	SPEED SENSOR CABLES (MECH.)
6A	3x1.0 mm ² + Shielded multi-core	EDTS-132, Rev-C, Am-3 (DS-4)	-	W, Br, Blk	8000 *	23 03 07.02, 23 03 08.02, 23 03 09.02	82	HV Panel (S1) to connection box VK3 (NW-17, L=6 Mtrs)	
6B	3x1.0 mm ² + Shielded multi-core	EDTS-132, Rev-C, Am-3 (DS-4)	-	W, Br, Blk	16000 *	23 03 01.02, 23 03 02.02, 23 03 03.02	76 (89)	HV Panel (S1) to connection box VK1 (NW-23, L=11 Mtrs) (NW-17, L=5 Mtrs to be supplied loose) Route no. 75 & 76 are to be laid in one flexible conduit, NW-23 and to be marked route no. 89.	
6C	3x1.0 mm ² + Shielded multi-core	EDTS-132, Rev-C, Am-3 (DS-4)	-	W, Br, Blk	14000 *	23 03 04.02, 23 03 05.02, 23 03 06.02	75 (89)	HV Panel (S1) to connection box VK2 (To be laid with harness no. 6B)	
7	3x1.0 mm ² + Shielded multi-core	EDTS-132, Rev-C, Am-3 (DS-4)	-	W, Br, Blk	12000 *	23 02 06.01, 23 02 07.01, 23 02 05.06	86	HV PANEL (S1) to through box VK5 (EVS2/EVR 2) (NW-29, L=10 Mtrs)	DISC BRAKE CABLES (MECH.)

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7A	3x1.0 mm ² + Shielded multi-core	EDTS-132, Rev-C, Am-3 (DS-4)	-	W, Br, Blk	12000 *	23 02 01.01, 23 02 02.01, 23 02 05.04		HV Panel (S1) to through box VK5 (EVS1/EV R1) (To be laid with harness no. 7)	
7B	3x1.0 mm ² + Shielded multi-core	EDTS-132, Rev-C, Am-3 (DS-4)	-	W, Br, Blk	8000 *	23 02 14.01, 23 02 15.01, 23 02 05.10	87	HV Panel (S1) to through box VK7 (EVS4/EV R4) (NW-23, L=6 Mtrs)	
7C	3x1.0 mm ² + Shielded multi-core	EDTS-132, Rev-C, Am-3 (DS-4)	-	W, Br, Blk	8000 *	23 02 10.01, 23 02 11.01, 23 02 05.08		HV Panel (S1) to through box VK7 (EVS3/EV R3) (To be laid with harness no. 7B)	
8	2 nos., 1.5 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	Ch, W	8000	-	41	Air Brake Mech. Unit (NW-17, L=6 Mtrs)	AIR BRAKE CABLE
9	2 nos., 2.5 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	Ch, W	6000	52	52	HV Panel (S1) to RBC (S1B) (NW-17, L=4 Mtrs)	RBC
10	5 no., 6 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	R,Y,B, Blk, GNYE	6000	53	53	HV Panel (S1) to RBC (S1B) (NW-23, L=3.5 Mtrs)	

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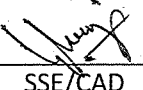
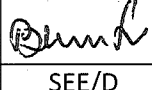
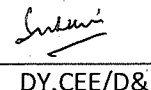
11	4 no., 6 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	R,Y,B, Blk	17500	55	55	HV Panel (S1) to On board LV Panel (S1A) (NW-23, L=15.5 Mtrs)	110V AC SUPPLY TO ON-BOARD PANEL
12A	8 nos., 70 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	GNYE	600	PE	-	Earthing	EARTHING CABLES
12B	4 nos., 70 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Above 750 volts upto 1.8KV/ 3.0KV	GNYE	1250	PE	-	Earthing	
12C	1 no., 50 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	GNYE	500	PE	-	Earthing	
12D	1 no., 16 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	GNYE	500	PE	-	Earthing	
12E	2 nos., 16 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	GNYE	300	PE	-	Earthing	
12F	4 nos., 2.5 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 volts	GNYE	500	PE	-	Earthing	
13	3 nos., 3 X1.0 mm ²	EDTS-132, Rev-C, Am-3 (DS-4)	Upto 750 volts	-	18500	NET	56	Net-1 & 2 Control (NW-23, L=16.5 Mtrs)	NET-1 & 2 +SPARE
14	1 no., 10 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 V	Red	3500	BCT +ve		BCT-1 to BCT-2 (NW-17, L=2.5 Mtrs)	BCT-1 & 2
15	1 no., 10 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 V	Blue	3500	BCT -ve		BCT-1 to BCT-2 (NW-17, L=2.5 Mtrs)	

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16	1 no., 10 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750 V	Red	6000	BCT		BCT-1 to Battery Fuse box +ve (NW- 17, L=5 Mtrs)	
17	1 no., 10 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750 V	Blue	7000	BCT		BCT-1 to Battery Fuse box -ve (NW- 17, L=6 Mtrs)	
18	3 no., 1.5 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750 V	R, Blk, GNYE	25000	Ex. Fan-1		Exhaust Fan-1 (NW-17, L=22 Mtrs)	EXHAUST FAN
19	3 no., 1.5 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750 V	R, Blk, GNYE	19000	Ex. Fan-2		Exhaust Fan-2 (NW-17, L=15 Mtrs)	

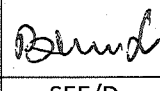
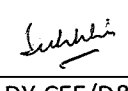
Note:-

1. Harness No. 6, 6A, 6B, 6C, 7, 7A, 7B & 7C are marked (*) above for reference as cable for Speed Sensor & Disc Brake (WSP System) is being supplied by WSP Suppliers. Therefore, Harness supplier shall supply Polyamide Conduit only.
2. Reference for Wiring on under frame & Roof shall be taken as per clause no. 7.0.
3. Bunching for under frame cables shall be done as per clause 2.1(b) duly ferruled, legibly marked and laid in Polyamide Flexible/PVC Rigid conduits as per requirements in the coaches at shop floor.
4. Harnesses shall be prepared from multi-color cables only as specified for under frame and Roof wiring. Zero halogen, fire retardant heat shrinkable sleeves of M/S Tyco/Phoenix/Panduit/Brady makes of appropriate color to be used. The standard length of ferrules should only be used.
5. Multi-core cables shall be as per specification no. EDTS-132, (Latest Revision) to respective data sheets.
6. The marking ferrules for feeder cables shall not be heat shrunk at the time of supply by the harness manufacturer, however to be suitably provided at 750 mm from both ends of the cables such that these ferrules shall not disengage from the cables during laying in the feeder pipes. After laying of the harness in the coach these ferrules shall be heat shrunk in place according to shop requirements.

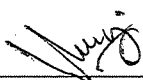
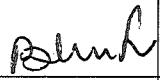
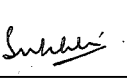
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TYPE-2: 'HARNESS OF ROOF ARRANGEMENT' FOR LHB EOG SCN COACHES:-**2.2 (a) BILL OF MATERIAL FOR ROOF WIRING:-****A) THIN WALLED FLEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-**

Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable colour	Detail drg./ Spec.	QPC	Remarks/ Location
1.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Red	ELRS/SPEC/ELC/0019, Rev-4	247.5 Mtr	Inside coach
2.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Yellow	ELRS/SPEC/ELC/0019, Rev-4	414.1 Mtr	Inside coach
3.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Blue	ELRS/SPEC/ELC/0019, Rev-4	141 Mtr	Inside coach
4.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Black	ELRS/SPEC/ELC/0019, Rev-4	269.8 Mtr	Inside coach
5.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	GNYE	ELRS/SPEC/ELC/0019, Rev-4	121.5 Mtr	Inside coach
6.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	4	Red	ELRS/SPEC/ELC/0019, Rev-4	78.3 Mtr	Inside coach
7.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	4	Yellow	ELRS/SPEC/ELC/0019, Rev-4	57 Mtr	Inside coach
8.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	4	Blue	ELRS/SPEC/ELC/0019, Rev-4	72.2 Mtr	Inside coach
9.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	4	Black	ELRS/SPEC/ELC/0019, Rev-4	24.3 Mtr	Inside coach
10.	PVC Spout type circular box fire retardant, 4-way dia 20mm	-	-	-	IS:3419-76,T-9, FIG-E	50 nos.	Inside coach
11.	Rigid PVC conduit Dia 20mmx4000mm	-	-	-	IS:9537-83,P3, CL.5.1.2	18 nos.	Inside coach
12.	Rigid PVC conduit Dia 20mmx1850mm	-	-	-	IS:9537-83,P3, CL.5.1.2	10 nos.	Inside coach
13.	Rigid PVC conduit Dia 20mmx1700mm	-	-	-	IS:9537-83,P3, CL.5.1.2	10 nos.	Inside coach

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14.	Rigid PVC conduit Dia 20mmx1650mm	-	-	-	IS:9537-83,P3, CL.5.1.2	42 nos.	Inside coach
15.	Rigid PVC conduit Dia 20mmx950mm	-	-	-	IS:9537-83,P3, CL.5.1.2	20 nos.	Inside coach
16.	Rigid PVC conduit Dia 20mmx400mm (Bell mouth at one end)	-	-	-	IS:9537-83,P3, CL.5.1.2	40 nos.	Inside coach
17.	Rigid PVC conduit Dia 20mmx500mm	-	-	-	IS:9537-83,P3, CL.5.1.2	20 nos.	Inside coach
18.	Rigid PVC conduit Dia 20mmx415mm	-	-	-	IS:9537-83,P3, CL.5.1.2	10 nos.	Inside coach
19.	Rigid PVC conduit Dia 20mmx375mm	-	-	-	IS:9537-83,P3, CL.5.1.2	10 nos.	Inside coach
20.	Cable jacket system	-	-	-	EDTS-138 (Latest Revision)	66 Mtr	ITEM-5
21.	Cable jacket system	-	-	-	EDTS-138 (Latest Revision)	50 Mtr	ITEM-7
22.	Cable jacket system	-	-	-	EDTS-138 (Latest Revision)	45 Mtr	ITEM-8
23.	Cable jacket system	-	-	-	EDTS-138 (Latest Revision)	5 Mtr	ITEM-9
24.	Cable jacket system	-	-	-	EDTS-138 (Latest Revision)	5 Mtr	ITEM-11
25.	FRLT cotton insulation tape, RED	-	-	-	ICF/ELEC/921,R ev.00	3 nos.	-
26.	FRLT cotton insulation tape, YELLOW	-	-	-	ICF/ELEC/921,R ev.00	3 nos.	-
27.	FRLT cotton insulation tape, BLUE	-	-	-	ICF/ELEC/921,R ev.00	3 nos.	-
28.	FRLT cotton insulation tape, BLACK	-	-	-	ICF/ELEC/921,R ev.00	3 nos.	-
29.	FRLT cotton insulation tape, GREEN	-	-	-	ICF/ELEC/921,R ev.00	3 nos.	-
30.	FRLT cotton insulation tape, CHOCO.	-	-	-	ICF/ELEC/921,R ev.00	3 nos.	-
31.	FRLT cotton insulation tape, WHITE	-	-	-	ICF/ELEC/921,R ev.00	3 nos.	-
32.	Cable Binder	-	-	-	CC76129,Alt'a' Item-1	100 nos.	M/s EVEREST, NOVAFLX, Panduit & M V Electro – systems

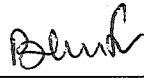
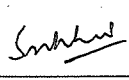
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33.	Cable Binder	-	-	-	CC76129,Alt'a' Item-2	100 nos.	M/s EVEREST, NOVAFLE X, Panduit & M V Electro – systems
34.	Cable Binder	-	-	-	CC76129,Alt'a' Item-3	100 nos.	M/s EVEREST, NOVAFLE X, Panduit & M V Electro – systems
35.	Copper crimping socket for 4 sq. mm cable (for EFT circuit and termination at EFT)	-	-	-	EDTS-201 (Latest Revision), Table-1	12 nos.	ITEM-8 (M6)
36.	Copper crimping socket for 4 sq. mm cable (for EFT circuit and termination at RSW Panel)	-	-	-	EDTS-201 (Latest Revision), Table-1	04 nos.	ITEM-12 (M8)
37.	Copper crimping socket for 1.5 sq. mm cable	-	-	-	EDTS-201 (Latest Revision), Table-1	10 nos.	ITEM-11 (M5)

B) CONDUIT SYSTEM FOR CABLE MANAGEMENT & ACCESSORIES(ROOF WIRING):-

Firms supplying these items shall get these tested as per RDSO specification no. RDSO/PE/SPEC/AC/0138-2009, Rev-1.

Sr. No.	DESCRIPTION	SPEC. NO.	TABLE	ITEM	QPC
1	Polyamide flexible corrugated conduit, NW-17	RDSO/PE/SPEC/AC/0138-2009, Rev-1 (Annexure-A)	A-1	3	10 Mtr
2	Polyamide flexible corrugated conduit, NW-23		A-1	4	10 Mtr
3	Tube clamp NW-17		A-8	3	5 nos.
4	Tube clamp NW-23		A-8	4	5 nos.
5	Straight PG metal thread End fitting PG-21		A-2	5	12 nos.
6	Hex. lock nut with PG thread brass PG-21		A-10	5	12 nos.

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2.2 (b) PREPARATION / BUNCHING OF HARNESS FOR ROOF WIRING:-**Note: -**

1. Reference for Wiring on under frame & Roof shall be taken as per clause no. 7.0.
2. Bunching for Roof cables shall be done as per Annexure-B with duly ferruled legibly marked and laid in polyamide flexible/PVC Rigid conduits as per wiring requirements in the coaches at shop floor. Cable protection system shall be supplied as per BOM of clause 2.2 (B).
3. Identification shall be made with colored, zero halogen fire retardant heat shrinkable sleeves of M/S TYCO/Phoenix/Panduit /MV make.

3.0 TECHNICAL REQUIREMENTS:

3.1 While manufacturing of cable harnesses essential safety requirements for voltage grade segregation, crimping etc. shall be strictly followed as per instructions laid down in under given documents:

- a) General requirements shall be as per RDSO Spec. no. EL/TL/56-92 (Code of practice for train lighting maintenance on Prevention of Fires on 110V DC).
- b) Instructions laid down in Code of practice for wiring End On Generation Train Lighting system working at 750VAC, ELPS/SPEC/EOG-01(MARCH-94) shall be followed.
- c) Work instructions for preparation of Harness to RCF document no. EDW0003 Ver.-02 or the Latest version.
- d) Work instructions for crimping of cable ends and cable terminations to RCF document no. EDW0006 Ver.-01 or the Latest version.
- e) Schedule of Technical Requirements **(STR) no. RCF/EL/0015-2011 (Rev-C)** shall be strictly followed for preparation of ready-made harness.

3.2 Stripping of the cables at the ends shall be done where crimping sockets are not provided for ease of wiring.

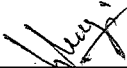
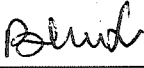
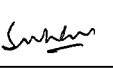
3.3 The complete Roof Wiring Harness shall be made according to the Annexure-B.

3.4 Technical Staff:-

- a) The staff with minimum qualification 'ITI' with **02** years experience or minimum **05** years experience for non ITI's in manufacturing harness of power-wiring/control wiring in panels or other similar works having intricate design.
- b) The Supervisor staff for the skilled worker should be minimum graduate in Electrical/Electronics with **02** years experience in the same field or should be diploma holder in Electrical/Electronics discipline with at least **05** years experience in manufacturing of harness of power wiring control wiring in panels or other similar works. The firm shall deploy supervisors/staff in adequate nos. so as to match the delivery schedules as accepted by them against the contract".

3.5 Proper cutting/crimping tools for various sizes of cables shall be available for the staff for ease of crimping & cutting of cables.

3.6 Marking ferrules shall be of computer generated type for easy identification of the cables with the help of shrinking sleeves (self-extinguishing) of suitable size horizontally printed cable markers of Tyco/Phoenix/Panduit make only.

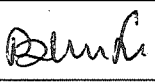
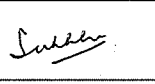
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- 3.7 Test for thin walled flexible elastomeric cables with copper conductors for its basic properties may be conducted on any sample picked up from the supply. The cost for the testing will be borne by the firm. The specific tests to be done are covered in clause 4.9.
- 3.8 The firm shall take prompt action or act promptly within a reasonable time upon a short notice to rectify the defects/deficiency/deficiency noticed/reported by RCF in the cable harness supplied by the firm. Failure to do the needful up to the satisfaction of the RCF, Firm's contract may be rescind immediately or terminated without any further notice or may be levied penalty corresponding to the delay caused in the coach turn out for which the decision of the nominated 'Competent Authority' shall be Final and Binding on the firm".
- 3.9 The firm's premises may be inspected by representative of PCEE/RCF on any day on a short notice to ensure compliance to the various stipulations of the specifications, laid down standards including work instructions for the cable harness manufacturing practices. If anything is not laid or specified therein this specification, the work shall be completed as per the best-established Engineering Practices/Procedures being followed in the Industry. "The firm shall extend all the necessary help to allow visiting all the infrastructure facilities, M&P, Tools, Testing facilities, examination of related quality records/documents etc. during his visit"
- 3.10 All the Rigid Conduits, Flexible Conduits, End Fittings shall be in firm's scope of supply. However Clamps & it's Hardware's etc. will be in RCF scope of supply.
- 3.11 Only those firms shall be considered which have adequate infrastructure to make similar nature wiring/ harness at its manufacturing unit and conforming to STR.
- 3.12 Firm shall fill-up proforma for guaranteed performance as per Annexure-'A' and furnish details along with tender. It is perquisite without which offer shall be considered technically disqualified.
- 3.13 The Cable & Conduit manufacturer shall submit a certificate along with each lot of supply that the same raw material has been used in manufacturing of the present supply as was used on which the type tests were conducted.
- 3.14 Every letter from the firm shall have name and designation of the official signing the letter with the signature.
- 3.15 Procurement of the items specified in the BOM of the specification shall be from RDSO/RCF/ICF approved vendors mentioned in latest version of the vendor directory issued by RDSO/RCF/ICF respectively, however the procurement of cables shall be done from RDSO 'approved vendors' for minimum 80% quantity of NPQ and balance 20% quantity from 'developmental vendors' as mentioned in the latest version of vendor directory issued by RDSO.

Based on the procurement of various sizes of cables from either approved or developmental sources, the cable harness shall be categorized as under:

Category-A: Cable Harness with approved sources of cables (80% min.)

Category-B: Cable Harness with developmental sources of cables (up to 20%)

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Category-B type of cable harnesses may be supplied with cables procured from developmental sources however in no case Category-A type shall be supplied with cables procured from developmental sources.

Firm shall maintain a record according to the above classification and offer to M/s RITES/inspecting official for inspection in format EDF 0001 with the specification.

4.0 TESTS:

- 4.1 Inspecting agency /RITES shall carry out the tests in harness manufacturer's premises as per acceptance and routine tests specified in the tender specification. Check list Proforma consisting of testing details, observations/measurements and acceptability of the measurements should be prepared and testing to be done as per Proforma jointly with the firm's engineer. This should be submitted along with the inspection certificate to RCF.
- 4.2 Cables prescribed in RDSO/RCF specification of cables received by the harness manufacturer shall be inspected by RITES for acceptance and routine tests at cable manufacturer premises and certificate to this effect should be submitted by cable harness manufacturer to RCF.
- 4.3 Cable management system prescribed in RDSO specification RDSO/PE/SPEC/AC/0138-2009, (Latest) shall be inspected by RITES (RA Berlin- in case of imported manufacturer) for acceptance and routine tests and certificate to this effect should be submitted by cable harness manufacturer to RCF.
- 4.4 The format for inspection based upon the tests stipulated in specification shall be as per clause no.-4.10.
- 4.5 Firm's internal testing to be done by qualified person as per para 3.4 (b) of this specification and submitted to RCF.

4.6 TYPE TEST:

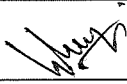
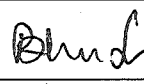
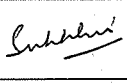
All the type tests mentioned in Clause 4.9 & 4.10 shall be carried out on a prototype unit. The firm manufacturing for the first time shall get the prototype approved from PCEE/RCF.

4.7 ROUTINE TEST:

Routine tests mentioned in clause 4.9 shall be carried out on each unit by the manufacturer at his works to ensure compliance with the specification and the drawings.

4.8 ACCEPTANCE TEST:

- a) Acceptance tests for cables will be done at cable manufacturer's premises as per RDSO specification no. ELRS/SPEC/ELC/0019 (Latest Revision).
- b) Acceptance tests for conduits etc. for cable management system will be done as per RDSO specification no. RDSO/PE/SPEC/AC/0138-2009, (Latest) for supply for Non-RDSO approved sources but RCF approved sources, clause 7.0 is to be followed.

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- c) Acceptance test mentioned in clause 4.9 cable harness manufacturer to be witnessed by inspecting agency nominated by the purchaser at the works of the cable harness manufacturer, on the samples picked up by the inspecting authority. All the acceptance tests shall be carried out at firm's premises at the manufacturer's cost. Inspecting officer will witness the tests. A copy of the internal tests conducted by the firm shall be supplied to inspecting/purchasing authority. Inspecting agency shall maintain record of all the tests conducted for future reference and will check the authenticity and the originality of the bill of material for each item by seeing the invoices invariably to avoid spurious material being safety involved.

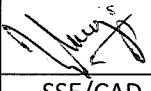
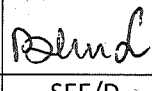
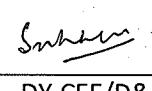
4.9 TABLE FOR TESTS:-

Tests for harnesses at firm's premises:

S.No	Tests	Type Test	Routine Test	Acceptance Test
1.	Visual inspection, including inspection of wiring and electrical operational test. (Visual inspection for proper assembly, compatibility of sub-components & wiring etc.)	YES	YES	YES
2.	Checking of electrical continuity	YES	YES	YES
3.	Checking of cable routing & alignment as per requirements	YES	YES	YES
4.	Test for verification of dielectric properties. (shall withstand (2.0 KV for 1 minute)	YES	YES	-
5.	Test for verification of insulation resistance. (>100 MΩ with 500 V Megger).	YES	YES	-
6.	Compliance to safety related codes of practice as per para 4.0 of this specification.	YES	YES	YES
7.	Originality of the bill of the material with proof of the invoices	YES	YES	YES
8.	Check of crimping joints a) mV drop Test. b) Pull out Test.	YES	YES	-
9.	Test for thin walled flexible elastomeric cables with copper conductors	YES	YES	YES
10.	Test for cable protection system	YES	YES	YES
11.	Test for marking ferrules	YES	YES	YES
12.	Test for copper crimping sockets	YES	YES	YES
13.	Test for FRLT tape	YES	YES	YES
14.	Test for cable alley/ duct	YES	YES	YES

4.10 a): Details of testing:

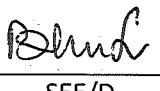
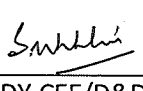
S. No.	Details of testing	Remarks of Rites Inspecting official
1.	Tests for thin walled flexible elastomeric cables with copper conductors to RDSO Specification no. ELRS/SPEC/ELC/0019(Latest)	
a.	Test for thickness of insulation and sheath as per applicable clause of RDSO spec (5% of each cable size to be checked.)	
b.	High voltage test (water immersion test) as per applicable clause of RDSO spec. (on two cable size of cable used)	

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c.	Insulation resistance test as per applicable clause of RDSO spec. (on one cable size different from HV test)	
d.	Tracking resistance as per applicable clause of RDSO spec.(on two size not covered in HV test & IR test)	
e.	Strip ability as per applicable clause of RDSO spec. (10 samples in prototype testing and five samples in acceptance/routine test of different size 1mm to 6mm)	
f.	Wind ability of the finished cable as per applicable clause of RDSO spec. (One sample 1-6 sq. mm & one sample more than 6 sq. mm)	
g.	Slippage test as per applicable clause of the RDSO spec. (two samples for size less than 25mm dia and two samples for dia more than 25mm)	
2.	Cable Protection System- Testing as per RDSO Spec. No. RDSO/PE/SPEC/AC/0138(Latest)	
a.	Make	
b.	Type / Series used for	
i.	Conduit	
	Checking of dimensions	
	Compression test (two sample of each size)	
	Impact test (one sample of each sizes)	
	Flexing test (2 samples of each type of fitting.)	
	Di-electric strength (one sample of each size)	
ii.	End fitting – Tensile test (of different five sizes)	
iii.	Tube clamps – Dimensional check as per – two sample of each size	
iv.	Lock nuts – Dimensional check as per – two sample of each size.	
3.	Marking ferrules	
	Computer generated (verification of make/brand)	Tyco / Phoenix / Panduit /MV/ _____
4.	Copper crimping sockets	
	Visual inspection and checking of dimensions as per cl 5.6 of EDTS200 (five sample of each)	
	Crimping test as per cl 5.7 of EDTS200 (Two sample of size less than 6mm ² and two sample of 6mm ²)	
	Flattening test as per cl 5.8 of EDTS200	
5.	FRLT tape	
	ISI marked Resistance to flame propagation as per clause 6.0 of IS:7809 for 2 samples	
	Electrical strength as per clause 7.1 of IS:7809 for 5 samples IR value	
6.	Cable alley / duct	
	Make/catalogue number used verify make of _____ test certificates.	

4.10 (b): Tests after commissioning of the coach at RCF:

S.No	Tests	Type Test	Routine Test	Acceptance Test	Clause of IS:8623(P-I)-93
1.	Verification of insulation resistance	YES	YES	YES	8.3.4
2.	Checking of electrical continuity of all the circuits.	YES	YES	YES	8.3.3
3.	Verification of dielectric properties	YES	YES	YES	8.2.2

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The accuracy of measuring instruments used for both type and routine tests shall be of class 1.5.

5.0 APPROVALS:

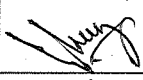
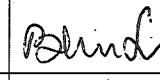
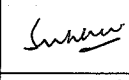
- 5.1 Firms manufacturing for the first time shall get the Prototype Inspection done by the office of the PCEE/RCF.
- 5.2 Firm supplying the Coach Harness for first time shall supply one set of coach harness for validation on coach before bulk supply.

6.0 PACKING AND TRACEABILITY:-

- Packing of harnesses shall be done as per Packing Instructions mentioned in the relevant PO's placed on the firm. Harnesses shall be bunched together and shall be supplied as single unit per coach. Each harness shall be duly bunched individually and legibly marked as per details specified in the specification on it for under frame and Roof arrangement.
- Packing per coach set shall be done as per packing conditions. However either card board packing in single unit or plastic containers (returnable basis) shall be used for supplying the material. The packing shall be legibly marked for the type of coach applicable for.
- All the loose wiring for lavatory area & other locations shall be segregated and bunched separately before packing.
- Performa invoice of all the major items like cable, crimping sockets etc. shall be supplied along with each supply of material.
- Every unit of supply item shall be numbered / marked for identification, traceability and analysis. The following details shall be imprinted on the number plate of each unit
 - Serial Number
 - Year and month of manufacture
 - Name of the item

7.0 ENCLOSURES:

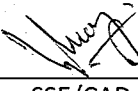
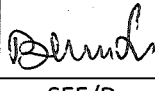
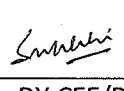
S.No	Drawing/Spec. no.	Description
1.	RDSO Spec. no. EL/TL/56-92	Code of practice for Train Lighting maintenance on Prevention of Fires on 110V D.C
2.	RDSO Spec. no. EL/TL/001	Code of practice for End On Generation for Train Lighting system working at 750VAC
3.	RCF/EL/0015-2011 (Rev. 'C')	Schedule of technical requirements (STR) for ready-made harness.
4.	EDW0003 Ver. – 02.	Work instructions for preparation of Harness
5.	EDW0006 Ver. – 01	Work instructions for crimping of cable ends and cable terminations
6.	Annexure-A	Performa for Performance Guarantee
7.	Annexure-B	Preparation / Bunching of harness for Jumper & Branch wiring for roof
8.	SKED-649, alt 'b'	Drawing of Jumper & Branch wiring of roof for LSCN coach

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ANNEXURE 'A' TO SPEC. NO. EDTS-357, Rev-C

PERFORMA FOR PERFORMANCE GUARANTEE

S. No.	ITEMS DESCRIPTION	COMPLIANCE (YES/NO)
1.	Compliance of STR (if Yes, enclose clause by clause comments)	
2.	Compliance of qualified technical staff (if Yes, enclose the details)	
3.	Compliance of adequate space and condition for manufacturing, assembly (if yes, enclose the details)	
4.	Compliance of in-house testing facilities (if Yes, enclose the details)	
5.	Compliance of other details to improve the quality (if Yes, enclose the details)	

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Annexure-B to EDTS-357, Rev.C
Harness for Jumper wiring for roof of LSCN coach

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Har. No.	Location		Ferrule no.		ferrule marking	Cable size (in	Color code	Length in mm
	From	To	From	To				
POSITIVE JUMPER WIRING (CUBICLE TO PP END DOOR WAY)								
1	CUBICLE	FDB-12	LI+ FDB-12	JB LI+	CUB LI+	4	Y	5500
POSITIVE JUMPER WIRING (PP END DOOR WAY TO CABIN-10)								
2	FDB-12	FDB-11	LI+ FDB-11	FDB-12 LI+	LI+	4	Y	2200
POSITIVE JUMPER WIRING (CUBICLE TO CABIN-10)								
3	CUBICLE	FDB-11	LII+ FDB-11	JB LII+	CUB LII+	4	Y	7500
4	CUBICLE	FDB-11	F+ FDB-11	JB F+	CUB F+	4	R	7500
5	CUBICLE	LS-10	LS-1	LS-1	LS-1	1.5	Y	7500
5A	CUBICLE	LS-10	LS-2	LS-2	LS-2	1.5	Y	7500
5B	CUBICLE	LS-10	LSN	LSN	LSN	1.5	BLK	7500
POSITIVE JUMPER WIRING (CABIN-10 TO CABIN-9)								
6	FDB-11	FDB-10	LI+ FDB-10	FDB-11 LI+	LI+	4	Y	2200
7	FDB-11	FDB-10	LII+ FDB-10	FDB-11 LII+	LII+	4	Y	2200
8	FDB-11	FDB-10	F+ FDB-10	FDB-11 F+	F+	4	R	2200
9	LS-10	LS-9	LS-1	LS-1	LS-1	1.5	Y	2200
10	LS-10	LS-9	LS-2	LS-2	LS-2	1.5	Y	2200
10A	LS-10	LS-9	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-9 TO CABIN-8)								
11	FDB-10	FDB-9	LI+ FDB-9	FDB-10 LI+	LI+	4	Y	2200
12	FDB-10	FDB-9	LII+ FDB-9	FDB-10 LII+	LII+	4	Y	2200
13	FDB-10	FDB-9	F+ FDB-9	FDB-10 F+	F+	4	R	2200
14	LS-9	LS-8	LS-1	LS-1	LS-1	1.5	Y	2200
15	LS-9	LS-8	LS-2	LS-2	LS-2	1.5	Y	2200
15A	LS-9	LS-8	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-8 TO CABIN-7)								
16	FDB-9	FDB-8	LI+ FDB-8	FDB-9 LI+	LI+	4	Y	2200
17	FDB-9	FDB-8	LII+ FDB-8	FDB-9 LII+	LII+	4	Y	2200
18	FDB-9	FDB-8	F+ FDB-8	FDB-9 F+	F+	4	R	2200
19	LS-8	LS-7	LS-1	LS-1	LS-1	1.5	Y	2200
20	LS-8	LS-7	LS-2	LS-2	LS-2	1.5	Y	2200
20A	LS-8	LS-7	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-7 TO CABIN-6)								
21	FDB-8	FDB-7	LI+ FDB-7	FDB-8 LI+	LI+	4	Y	2200
22	FDB-8	FDB-7	LII+ FDB-7	FDB-8 LII+	LII+	4	Y	2200
23	FDB-8	FDB-7	F+ FDB-7	FDB-8 F+	F+	4	R	2200
24	LS-7	LS-6	LS-1	LS-1	LS-1	1.5	Y	2200
25	LS-7	LS-6	LS-2	LS-2	LS-2	1.5	Y	2200
25A	LS-7	LS-6	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-6 TO CABIN-5)								
26	FDB-7	FDB-6	LI+ FDB-6	FDB-7 LI+	LI+	4	Y	2200
27	FDB-7	FDB-6	LII+ FDB-6	FDB-7 LII+	LII+	4	Y	2200
28	FDB-7	FDB-6	F+ FDB-6	FDB-7 F+	F+	4	R	2200
29	LS-6	LS-5	LS-1	LS-1	LS-1	1.5	Y	2200
30	LS-6	LS-5	LS-2	LS-2	LS-2	1.5	Y	2200
30A	LS-6	LS-5	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-5 TO CABIN-4)								
31	FDB-6	FDB-5	LI+ FDB-5	FDB-6 LI+	LI+	4	Y	2200
32	FDB-6	FDB-5	LII+ FDB-5	FDB-6 LII+	LII+	4	Y	2200
33	FDB-6	FDB-5	F+ FDB-5	FDB-6 F+	F+	4	R	2200
34	LS-5	LS-4	LS-1	LS-1	LS-1	1.5	Y	2200
35	LS-5	LS-4	LS-2	LS-2	LS-2	1.5	Y	2200
35A	LS-5	LS-4	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-4 TO CABIN-3)								
36	FDB-5	FDB-4	LI+ FDB-4	FDB-5 LI+	LI+	4	Y	2200
37	FDB-5	FDB-4	LII+ FDB-4	FDB-5 LII+	LII+	4	Y	2200
38	FDB-5	FDB-4	F+ FDB-4	FDB-5 F+	F+	4	R	2200
39	LS-4	LS-3	LS-1	LS-1	LS-1	1.5	Y	2200
40	LS-4	LS-3	LS-2	LS-2	LS-2	1.5	Y	2200

Date: 08-03-2021

SSEX/CAD

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DY.CEE/D&D

JUMPER WIRING

Annexure-B to EDTS-357, Rev.C
Harness for Jumper wiring for roof of LSCN coach

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Har. No.	Location		Ferrule no.		ferrule marking	Cable size (in	Color code	Length in mm
	From	To	From	To				
40A	LS-10	LS-9	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-3 TO CABIN-2)								
41	FDB-4	FDB-3	LI+ FDB-3	FDB-4 LI+	LI+	4	Y	2200
42	FDB-4	FDB-3	LII+ FDB-3	FDB-4 LII+	LII+	4	Y	2200
43	FDB-4	FDB-3	F+ FDB-3	FDB-4 F+	F+	4	R	2200
44	LS-3	LS-2	LS-1	LS-1	LS-1	1.5	Y	2200
45	LS-3	LS-2	LS-2	LS-2	LS-2	1.5	Y	2200
45A	LS-3	LS-2	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-2 TO CABIN-1)								
46	FDB-3	FDB-2	LI+ FDB-2	FDB-3 LI+	LI+	4	Y	2200
47	FDB-3	FDB-2	LII+ FDB-2	FDB-3 LII+	LII+	4	Y	2200
48	FDB-3	FDB-2	F+ FDB-2	FDB-3 F+	F+	4	R	2200
49	LS-2	LS-1	LS-1	LS-1	LS-1	1.5	Y	2200
50	LS-2	LS-1	LS-2	LS-2	LS-2	1.5	Y	2200
50A	LS-2	LS-1	LSN	LSN	LSN	1.5	BLK	2200
POSITIVE JUMPER WIRING (CABIN-1 TO NPP END DOOR WAY)								
51	FDB-2	FDB-1	LI+ FDB-1	FDB-2 LI+	LI+	4	Y	2200
NEGATIVE JUMPER WIRING (CUBICLE TO PP END DOORWAY)								
52	CUBICLE	FDB-24	L- FDB-24	JB L-	L-	4	B	3000
NEGATIVE JUMPER WIRING (PP END DOOR WAY TO CABIN-10)								
53	FDB-24	FDB-23	L- FDB-23	FDB-24 L-	L-	4	B	2200
NEGATIVE JUMPER WIRING (CUBICLE TO CABIN-10)								
54	CUBICLE	FDB-23	F- FDB-23	JB F-	F-	4	BLK	4500
NEGATIVE JUMPER WIRING (CABIN-10 TO CABIN-9)								
55	FDB-23	FDB-22	L- FDB-22	FDB-23 L-	L-	4	B	2200
56	FDB-23	FDB-22	F- FDB-22	FDB-23 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-9 TO CABIN-8)								
57	FDB-22	FDB-21	L- FDB-21	FDB-22 L-	L-	4	B	2200
58	FDB-22	FDB-21	F- FDB-21	FDB-22 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING CABIN-8 TO CABIN-7)								
59	FDB-21	FDB-20	L- FDB-20	FDB-21 L-	L-	4	B	2200
60	FDB-21	FDB-20	F- FDB-20	FDB-21 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-7 TO CABIN-6)								
61	FDB-20	FDB-19	L- FDB-19	FDB-20 L-	L-	4	B	2200
62	FDB-20	FDB-19	F- FDB-19	FDB-20 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-6 TO CABIN-5)								
63	FDB-19	FDB-18	L- FDB-18	FDB-19 L-	L-	4	B	2200
64	FDB-19	FDB-18	F- FDB-18	FDB-19 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-5 TO CABIN-4)								
65	FDB-18	FDB-17	L- FDB-17	FDB-18 L-	L-	4	B	2200
66	FDB-18	FDB-17	F- FDB-17	FDB-18 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-4 TO CABIN-3)								
67	FDB-17	FDB-16	L- FDB-16	FDB-17 L-	L-	4	B	2200
68	FDB-17	FDB-16	F- FDB-16	FDB-17 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-3 TO CABIN-2)								
69	FDB-16	FDB-15	L- FDB-15	FDB-16 L-	L-	4	B	2200
70	FDB-16	FDB-15	F- FDB-15	FDB-16 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-2 TO CABIN-1)								
71	FDB-15	FDB-14	L- FDB-14	FDB-15 L-	L-	4	B	2200
72	FDB-15	FDB-14	F- FDB-14	FDB-15 F-	F-	4	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-1 TO PP END DOOR WAY)								
73	FDB-14	FDB-13	L- FDB-14	FDB-13 L-	L-	4	B	2200
CONNECTION WIRING FOR LIMIT SWITCH								
74	FDB-11	LS-10	LS	LS	LS-I	1.5	Y	800
	FDB-11	LS-10	LS	LS	LS-II	1.5	Y	800
	FDB-11	LS-10	LS	LS	LSN	1.5	BLK	800

Date: 08-03-2021

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DY.CEE/D&D

JUMPER WIRING

Annexure-B to EDTS-357, Rev.C
Harness for Jumper wiring for roof of LSCN coach

97

Har. No.	Location		Ferrule no.		ferrule marking	Cable size (in	Color code	Length in mm
	From	To	From	To				
74A	FDB-10	LS-9	LS	LS	LS-I	1.5	Y	800
	FDB-10	LS-9	LS	LS	LS-II	1.5	Y	800
	FDB-10	LS-9	LS	LS	LSN	1.5	BLK	800
74B	FDB-9	LS-8	LS	LS	LS-I	1.5	Y	800
	FDB-9	LS-8	LS	LS	LS-II	1.5	Y	800
	FDB-9	LS-8	LS	LS	LSN	1.5	BLK	800
74C	FDB-8	LS-7	LS	LS	LS-I	1.5	Y	800
	FDB-8	LS-7	LS	LS	LS-II	1.5	Y	800
	FDB-8	LS-7	LS	LS	LSN	1.5	BLK	800
74D	FDB-7	LS-6	LS	LS	LS-I	1.5	Y	800
	FDB-7	LS-6	LS	LS	LS-II	1.5	Y	800
	FDB-7	LS-6	LS	LS	LSN	1.5	BLK	800
74E	FDB-6	LS-5	LS	LS	LS-I	1.5	Y	800
	FDB-6	LS-5	LS	LS	LS-II	1.5	Y	800
	FDB-6	LS-5	LS	LS	LSN	1.5	BLK	800
74F	FDB-5	LS-4	LS	LS	LS-I	1.5	Y	800
	FDB-5	LS-4	LS	LS	LS-II	1.5	Y	800
	FDB-5	LS-4	LS	LS	LSN	1.5	BLK	800
74G	FDB-4	LS-3	LS	LS	LS-I	1.5	Y	800
	FDB-4	LS-3	LS	LS	LS-II	1.5	Y	800
	FDB-4	LS-3	LS	LS	LSN	1.5	BLK	800
74H	FDB-3	LS-2	LS	LS	LS-I	1.5	Y	800
	FDB-3	LS-2	LS	LS	LS-II	1.5	Y	800
	FDB-3	LS-2	LS	LS	LSN	1.5	BLK	800
75	FDB-2	LS-1	LS	LS	LS-I	1.5	Y	800
	FDB-2	LS-1	LS	LS	LS-II	1.5	Y	800
	FDB-2	LS-1	LS	LS	LSN	1.5	BLK	800
HARNESS NO. 74 TO 75 TO BE SUPPLIED LOOSE.								

Harness for Jumper wiring for roof of LSCN coach

Har. No.	From Location	To Location	Ferrule no.	Cable size (in mm ²)	Color code	Length in mm	Remarks
MOBILE CHARGING SOCKET CIRCUIT (CUBICLE TO CABIN-10)							
76	CUBICLE	MCS-10	MCS-10	1.5	R	8500	
77	CUBICLE	MCS-10	MCS-10	1.5	BLK	8500	
78	CUBICLE	MCS-10	MCS-10	1.5	GNYE	8500	
76A	MCS-10	LOOP	LOOP	1.5	R	1750	LOOSE
77A	MCS-10	LOOP	LOOP	1.5	BLK	1750	LOOSE
78A	MCS-10	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT (CABIN-10 TO CABIN-9)							
79	MCS-10	MCS-9	MCS-9	1.5	R	4500	
80	MCS-10	MCS-9	MCS-9	1.5	BLK	4500	
81	MCS-10	MCS-9	MCS-9	1.5	GNYE	4500	
79A	MCS-9	LOOP	LOOP	1.5	R	1750	LOOSE
80A	MCS-9	LOOP	LOOP	1.5	BLK	1750	LOOSE
81A	MCS-9	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT (CABIN-9 TO CABIN-8)							
82	MCS-9	MCS-8	MCS-8	1.5	R	4500	
83	MCS-9	MCS-8	MCS-8	1.5	BLK	4500	
84	MCS-9	MCS-8	MCS-8	1.5	GNYE	4500	
82A	MCS-8	LOOP	LOOP	1.5	R	1750	LOOSE
83A	MCS-8	LOOP	LOOP	1.5	BLK	1750	LOOSE
84A	MCS-8	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT (CABIN-8 TO CABIN-7)							
85	MCS-8	MCS-7	MCS-7	1.5	R	4500	
86	MCS-8	MCS-7	MCS-7	1.5	BLK	4500	
87	MCS-8	MCS-7	MCS-7	1.5	GNYE	4500	
85A	MCS-7	LOOP	LOOP	1.5	R	1750	LOOSE
86A	MCS-7	LOOP	LOOP	1.5	BLK	1750	LOOSE
87A	MCS-7	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT (CABIN-7 TO CABIN-6)							
88	MCS-7	MCS-6	MCS-6	1.5	R	4500	
89	MCS-7	MCS-6	MCS-6	1.5	BLK	4500	
90	MCS-7	MCS-6	MCS-6	1.5	GNYE	4500	
88A	MCS-6	LOOP	LOOP	1.5	R	1750	LOOSE
89A	MCS-6	LOOP	LOOP	1.5	BLK	1750	LOOSE
90A	MCS-6	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT (CABIN-6 TO CABIN-5)							
91	MCS-6	MCS-5	MCS-5	1.5	R	4500	
92	MCS-6	MCS-5	MCS-5	1.5	BLK	4500	
93	MCS-6	MCS-5	MCS-5	1.5	GNYE	4500	
91A	MCS-5	LOOP	LOOP	1.5	R	1750	LOOSE
92A	MCS-5	LOOP	LOOP	1.5	BLK	1750	LOOSE
93A	MCS-5	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT CABIN-5 TO CABIN-4 (SBC SIDE)							
94	MCS-5	MCS-4	MCS-4	1.5	R	4500	
95	MCS-5	MCS-4	MCS-4	1.5	BLK	4500	
96	MCS-5	MCS-4	MCS-4	1.5	GNYE	4500	
94A	MCS-4	LOOP	LOOP	1.5	R	1750	LOOSE
95A	MCS-4	LOOP	LOOP	1.5	BLK	1750	LOOSE
96A	MCS-4	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT CABIN-4 TO CABIN-3 (SBC SIDE)							
97	MCS-4	MCS-3	MCS-3	1.5	R	4500	
98	MCS-4	MCS-3	MCS-3	1.5	BLK	4500	
99	MCS-4	MCS-3	MCS-3	1.5	GNYE	4500	
97A	MCS-3	LOOP	LOOP	1.5	R	1750	LOOSE
98A	MCS-3	LOOP	LOOP	1.5	BLK	1750	LOOSE

Harness for Jumper wiring for roof of LSCN coach

Har. No.	From Location	To Location	Ferrule no.	Cable size (in mm ²)	Color code	Length in mm	Remarks
99A	MCS-3	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT CABIN-3 TO CABIN-2 (SBC SIDE)							
100	MCS-3	MCS-2	MCS-2	1.5	R	4500	
101	MCS-3	MCS-2	MCS-2	1.5	BLK	4500	
102	MCS-3	MCS-2	MCS-2	1.5	GNYE	4500	
100A	MCS-2	LOOP	LOOP	1.5	R	1750	LOOSE
101A	MCS-2	LOOP	LOOP	1.5	BLK	1750	LOOSE
102A	MCS-2	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT CABIN-2 TO CABIN-1 (SBC SIDE)							
103	MCS-2	MCS-1	MCS-1	1.5	R	4500	
104	MCS-2	MCS-1	MCS-1	1.5	BLK	4500	
105	MCS-2	MCS-1	MCS-1	1.5	GNYE	4500	
103A	MCS-1	LOOP	LOOP	1.5	R	1750	LOOSE
104A	MCS-1	LOOP	LOOP	1.5	BLK	1750	LOOSE
105A	MCS-1	LOOP	LOOP	1.5	GNYE	1750	LOOSE
MOBILE CHARGING SOCKET CIRCUIT SBC TO CABIN-10 (NON-SBC SIDE)							
106	+S1X1	MCS-20	MCS-20	1.5	Y	5500	
107	+S1X1	MCS-20	MCS-20	1.5	BLK	5500	
108	+S1X1	MCS-20	MCS-20	1.5	GNYE	5500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-10 TO CABIN-9 (NON-SBC SIDE)							
109	MCS-20	MCS-19	MCS-19	1.5	Y	4500	
110	MCS-20	MCS-19	MCS-19	1.5	BLK	4500	
111	MCS-20	MCS-19	MCS-19	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-9 TO CABIN-8 (NON-SBC SIDE)							
112	MCS-19	MCS-18	MCS-18	1.5	Y	4500	
113	MCS-19	MCS-18	MCS-18	1.5	BLK	4500	
114	MCS-19	MCS-18	MCS-18	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-8 TO CABIN-7 (NON-SBC SIDE)							
115	MCS-18	MCS-17	MCS-17	1.5	Y	4500	
116	MCS-18	MCS-17	MCS-17	1.5	BLK	4500	
117	MCS-18	MCS-17	MCS-17	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-7 TO CABIN-6 (NON-SBC SIDE)							
118	MCS-17	MCS-16	MCS-16	1.5	Y	4500	
119	MCS-17	MCS-16	MCS-16	1.5	BLK	4500	
120	MCS-17	MCS-16	MCS-16	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-6 TO CABIN-5 (NON-SBC SIDE)							
121	MCS-16	MCS-15	MCS-15	1.5	Y	4500	
122	MCS-16	MCS-15	MCS-15	1.5	BLK	4500	
123	MCS-16	MCS-15	MCS-15	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-5 TO CABIN-4 (NON-SBC SIDE)							
124	MCS-15	MCS-14	MCS-14	1.5	Y	4500	
125	MCS-15	MCS-14	MCS-14	1.5	BLK	4500	
126	MCS-15	MCS-14	MCS-14	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-4 TO CABIN-3 (NON-SBC SIDE)							
127	MCS-14	MCS-13	MCS-13	1.5	Y	4500	
128	MCS-14	MCS-13	MCS-13	1.5	BLK	4500	
129	MCS-14	MCS-13	MCS-13	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-3 TO CABIN-2 (NON-SBC SIDE)							
130	MCS-13	MCS-12	MCS-12	1.5	Y	4500	
131	MCS-13	MCS-12	MCS-12	1.5	BLK	4500	
132	MCS-13	MCS-12	MCS-12	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT CABIN-2 TO CABIN-1 (NON-SBC SIDE)							
133	MCS-12	MCS-11	MCS-11	1.5	Y	4500	
134	MCS-12	MCS-11	MCS-11	1.5	BLK	4500	
135	MCS-12	MCS-11	MCS-11	1.5	GNYE	4500	

Harness for Jumper wiring for roof of LSCN coach

Har. No.	From Location	To Location	Ferrule no.	Cable size (in mm ²)	Color code	Length in mm	Remarks
ACCIDENTAL EMERGENCY LIGHT (CUBICLE TO DOORWAY AREA)							
136	CUBICLE	AEL-4	AEL-4	1.5	Y	5000	LOOSE
137	CUBICLE	AEL-4	AEL-4	1.5	BLK	5000	LOOSE
ACCIDENTAL EMERGENCY LIGHT (AEL-4 TO AEL-3)							
138	AEL-4	AEL-3	AEL-3	1.5	Y	11000	LOOSE
139	AEL-4	AEL-3	AEL-3	1.5	BLK	11000	LOOSE
ACCIDENTAL EMERGENCY LIGHT (AEL-3 TO AEL-2)							
140	AEL-3	AEL-2	AEL-2	1.5	Y	12000	LOOSE
141	AEL-3	AEL-2	AEL-2	1.5	BLK	12000	LOOSE
ACCIDENTAL EMERGENCY LIGHT (AEL-2 TO AEL-1)							
142	AEL-2	AEL-1	AEL-1	1.5	Y	10000	LOOSE
143	AEL-2	AEL-1	AEL-1	1.5	BLK	10000	LOOSE
PACIL/RCL CIRCUIT							
144	SBC	PACIL-1	PACIL-1	1.5	Y	6000	LOOSE
145	SBC	PACIL-1	PACIL-1	1.5	BLK	6000	LOOSE
146	SBC	PACIL-1	PACIL-1	1.5	GNYE	6000	LOOSE
147	SBC	RCL-1	RCL-1	1.5	R	0	LOOSE
148	SBC	RCL-1	RCL-1	1.5	BLK	0	LOOSE
149	SBC	PACIL-2	PACIL-2	1.5	Y	3000	LOOSE
150	SBC	PACIL-2	PACIL-2	1.5	BLK	3000	LOOSE
151	SBC	PACIL-2	PACIL-2	1.5	GNYE	3000	LOOSE
151A	PACIL-1	PACIL-2	PACIL-2	1.5	R	3500	LOOSE
151B	PACIL-1	PACIL-2	PACIL-2	1.5	BLK	3500	LOOSE
152	SBC	RCL-2	RCL-2	1.5	R	0	LOOSE
153	SBC	RCL-2	RCL-2	1.5	BLK	0	LOOSE
154	SBC	EFT-I	SPM-I	4	R	29000	LOOSE
155	SBC	EFT-II	SN-I	4	BLUE	26000	LOOSE
156	SBC	EFT-III	SPM-II	4	R	11000	LOOSE
157	SBC	EFT-IV	SN-II	4	BLUE	8500	LOOSE
158	EFT-I	EFT-II	SPM-I	4	R	6500	LOOSE
159	EFT-II	EFT-I	SN-I	4	BLUE	6500	LOOSE
160	EFT-III	EFT-IV	SPM-II	4	R	6500	LOOSE
161	EFT-IV	EFT-III	SN-II	4	BLUE	6500	LOOSE

Har. No.		From Location	To Location	Ferrule no.	Ferrule marking	Cable size (in mm ²)	Color code	Length in mm	Remarks
162	A	FDB-2	FLSW-1	LI+	FLSW-1	1.5	Y	1800	+VE BRANCH WIRING CABIN-1
	B	FDB-2	FLSW-2	LII+	FLSW-2	1.5	Y	5000	
	C	FDB-2	NLSW-1	LI+	NLSW-1	1.5	Y	5000	
	D	FLSW-1	FL-1	LI+	FL-1	1.5	Y	2800	
	E	FLSW-2	FL-2	LII+	FL-2	1.5	Y	2800	
	F	NLSW-1	NL-1	LI+	NL-1	1.5	Y	3800	
	G	FDB-2	FSW-1	F+	FSW-1	1.5	R	1800	
	H	FDB-2	FSW-2	F+	FSW-2	1.5	R	1800	
	I	FDB-2	FSW-3	F+	FSW-3	1.5	R	5000	
	J	FSW-1	F-1	F+	F-1	1.5	R	3000	
	K	FSW-2	F-2	F+	F-2	1.5	R	3500	
	L	FSW-3	F-3	F+	F-3	1.5	R	3000	
163	A	FDB-3	FLSW-3	LII+	FLSW-3	1.5	Y	1800	+VE BRANCH WIRING CABIN-2
	B	FDB-3	FLSW-4	LI+	FLSW-4	1.5	Y	5000	
	C	FDB-3	NLSW-2	LI+	NLSW-2	1.5	Y	5000	
	D	FLSW-3	FL-3	LII+	FL-3	1.5	Y	2800	
	E	FLSW-4	FL-4	LI+	FL-4	1.5	Y	2800	
	F	NLSW-2	NL-2	LI+	NL-2	1.5	Y	3800	
	G	FDB-3	FSW-4	F+	FSW-4	1.5	R	1800	
	H	FDB-3	FSW-5	F+	FSW-5	1.5	R	1800	
	I	FDB-3	FSW-6	F+	FSW-6	1.5	R	5000	
	J	FSW-4	F-4	F+	F-4	1.5	R	3000	
	K	FSW-5	F-5	F+	F-5	1.5	R	3500	
	L	FSW-6	F-6	F+	F-6	1.5	R	3000	
164	A	FDB-4	FLSW-5	LI+	FLSW-5	1.5	Y	1800	+VE BRANCH WIRING CABIN-3
	B	FDB-4	FLSW-6	LII+	FLSW-6	1.5	Y	5000	
	C	FDB-4	NLSW-3	LI+	NLSW-3	1.5	Y	5000	
	D	FLSW-5	FL-5	LI+	FL-5	1.5	Y	2800	
	E	FLSW-6	FL-6	LII+	FL-6	1.5	Y	2800	
	F	NLSW-3	NL-3	LI+	NL-3	1.5	Y	3800	
	G	FDB-4	FSW-7	F+	FSW-7	1.5	R	1800	
	H	FDB-4	FSW-8	F+	FSW-8	1.5	R	1800	
	I	FDB-4	FSW-9	F+	FSW-9	1.5	R	5000	
	J	FSW-7	F-7	F+	F-7	1.5	R	3000	
	K	FSW-8	F-8	F+	F-8	1.5	R	3500	
	L	FSW-9	F-9	F+	F-9	1.5	R	3000	
165	A	FDB-5	FLSW-7	LII+	FLSW-7	1.5	Y	1800	+VE BRANCH WIRING CABIN-4
	B	FDB-5	FLSW-8	LI+	FLSW-8	1.5	Y	5000	
	C	FDB-5	NLSW-4	LI+	NLSW-4	1.5	Y	5000	
	D	FLSW-7	FL-7	LII+	FL-7	1.5	Y	2800	
	E	FLSW-8	FL-8	LI+	FL-8	1.5	Y	2800	
	F	NLSW-4	NL-4	LI+	NL-4	1.5	Y	3800	
	G	FDB-5	FSW-10	F+	FSW-10	1.5	R	1800	
	H	FDB-5	FSW-11	F+	FSW-11	1.5	R	1800	
	I	FDB-5	FSW-12	F+	FSW-12	1.5	R	5000	
	J	FSW-10	F-10	F+	F-10	1.5	R	3000	
	K	FSW-11	F-11	F+	F-11	1.5	R	3500	
	L	FSW-12	F-12	F+	F-12	1.5	R	3000	
166	A	FDB-6	FLSW-9	LI+	FLSW-9	1.5	Y	1800	+VE BRANCH WIRING CABIN-5
	B	FDB-6	FLSW-10	LII+	FLSW-10	1.5	Y	5000	
	C	FDB-6	NLSW-5	LI+	NLSW-5	1.5	Y	5000	
	D	FLSW-9	FL-9	LI+	FL-9	1.5	Y	2800	
	E	FLSW-10	FL-10	LII+	FL-10	1.5	Y	2800	
	F	NLSW-5	NL-5	LI+	NL-5	1.5	Y	3800	
	G	FDB-6	FSW-13	F+	FSW-13	1.5	R	1800	
	H	FDB-6	FSW-14	F+	FSW-14	1.5	R	1800	
	I	FDB-6	FSW-15	F+	FSW-15	1.5	R	5000	
	J	FSW-13	F-13	F+	F-13	1.5	R	3000	
	K	FSW-14	F-14	F+	F-14	1.5	R	3500	
	L	FSW-15	F-15	F+	F-15	1.5	R	3000	
167	A	FDB-7	FL-11	LII+	FL-11	1.5	Y	1800	+VE BRANCH WIRING CABIN-6
	B	FDB-7	FL-12	LI+	FL-12	1.5	Y	5000	
	C	FDB-7	NLSW-6	LI+	NLSW-6	1.5	Y	5000	
	D	FLSW-11	FL-11	LII+	FL-11	1.5	Y	2800	
	E	FLSW-12	FL-12	LI+	FL-12	1.5	Y	2800	
	F	NLSW-6	NL-6	LI+	NL-6	1.5	Y	3800	
	G	FDB-7	FSW-16	F+	FSW-16	1.5	R	1800	
	H	FDB-7	FSW-17	F+	FSW-17	1.5	R	1800	
	I	FDB-7	FSW-18	F+	FSW-18	1.5	R	5000	
	J	FSW-16	F-16	F+	F-16	1.5	R	3000	
	K	FSW-17	F-17	F+	F-17	1.5	R	3500	
	L	FSW-18	F-18	F+	F-18	1.5	R	3000	
	A	FDB-8	FL-13	LI+	FL-13	1.5	Y	1800	
	B	FDB-8	FL-14	LII+	FL-14	1.5	Y	5000	

168	C	FDB-8	NLSW-7	LI+	NLSW-7	1.5	Y	5000	+VE BRANCH WIRING CABIN-7
	D	FLSW-13	FL-13	LI+	FL-13	1.5	Y	2800	
	E	FLSW-14	FL-14	LII+	FL-14	1.5	Y	2800	
	F	NLSW-7	NL-7	LI+	NL-7	1.5	Y	3800	
	G	FDB-8	FSW-19	F+	FSW-19	1.5	R	1800	
	H	FDB-8	FSW-20	F+	FSW-20	1.5	R	1800	
	I	FDB-8	FSW-21	F+	FSW-21	1.5	R	5000	
	J	FSW-19	F-19	F+	F-19	1.5	R	3000	
169	K	FSW-20	F-20	F+	F-20	1.5	R	3500	+VE BRANCH WIRING CABIN-8
	L	FSW-21	F-21	F+	F-21	1.5	R	3000	
	A	FDB-9	FL-15	LII+	FL-15	1.5	Y	1800	
	B	FDB-9	FL-16	LI+	FL-16	1.5	Y	5000	
	C	FDB-9	NLSW-8	LI+	NLSW-8	1.5	Y	5000	
	D	FLSW-15	FL-15	LII+	FL-15	1.5	Y	2800	
	E	FLSW-16	FL-16	LI+	FL-16	1.5	Y	2800	
	F	NLSW-8	NL-8	LI+	NL-8	1.5	Y	3800	
170	G	FDB-9	FSW-22	F+	FSW-22	1.5	R	1800	+VE BRANCH WIRING CABIN-9
	H	FDB-9	FSW-23	F+	FSW-23	1.5	R	1800	
	I	FDB-9	FSW-24	F+	FSW-24	1.5	R	5000	
	J	FSW-22	F-22	F+	F-22	1.5	R	3000	
	K	FSW-23	F-23	F+	F-23	1.5	R	3500	
	L	FSW-24	F-24	F+	F-24	1.5	R	3000	
	A	FDB-10	FL-17	LI+	FL-17	1.5	Y	1800	
	B	FDB-10	FL-18	LII+	FL-18	1.5	Y	5000	
171	C	FDB-10	NLSW-9	LI+	NLSW-9	1.5	Y	5000	+VE BRANCH WIRING CABIN-10
	D	FLSW-17	FL-17	LI+	FL-17	1.5	Y	2800	
	E	FLSW-18	FL-18	LII+	FL-18	1.5	Y	2800	
	F	NLSW-9	NL-9	LI+	NL-9	1.5	Y	3800	
	G	FDB-10	FSW-25	F+	FSW-25	1.5	Y	1800	
	H	FDB-10	FSW-26	F+	FSW-26	1.5	R	1800	
	I	FDB-10	FSW-27	F+	FSW-27	1.5	R	5000	
	J	FSW-25	F-25	F+	F-25	1.5	R	3000	
172	K	FSW-26	F-26	F+	F-26	1.5	R	3500	+VE BRANCH WIRING CABIN-11
	L	FSW-27	F-27	F+	F-27	1.5	R	3000	
	A	FDB-11	FL-19	LII+	FL-19	1.5	Y	1800	
	B	FDB-11	FL-20	LI+	FL-20	1.5	Y	5000	
	C	FDB-11	NLSW-10	LI+	NLSW-10	1.5	Y	5000	
	D	FLSW-19	FL-19	LII+	FL-19	1.5	Y	2800	
	E	FLSW-20	FL-20	LI+	FL-20	1.5	Y	2800	
	F	NLSW-10	NL-10	LI+	NL-10	1.5	Y	3800	
173	G	FDB-11	FSW-28	F+	FSW-28	1.5	R	1800	+VE BRANCH WIRING CABIN-12
	H	FDB-11	FSW-29	F+	FSW-29	1.5	R	1800	
	I	FDB-11	FSW-30	F+	FSW-30	1.5	R	5000	
	J	FSW-28	F-28	F+	F-28	1.5	R	3000	
	K	FSW-29	F-29	F+	F-29	1.5	R	3500	
	L	FSW-30	F-30	F+	F-30	1.5	R	3000	
	A	FDB-1	DL-2	LI+	DL-2	1.5	Y	3500	
	B	FDB-1	GL-1	LI+	GL-1	1.5	Y	4000	
174	C	FDB-1	LL-1	LI+	LL-1	1.5	Y	3500	+VE BRANCH WIRING Doorway NPP end
	D	FDB-1	LL-2	LI+	LL-2	1.5	Y	6500	
	E	FDB-1	DL-1	LI+	DL-1	1.5	Y	1500	
	A	FDB-12	DL-4	LI+	DL-4	1.5	Y	3500	
	B	FDB-12	GL-2	LI+	GL-2	1.5	Y	4000	
	C	FDB-12	LL-3	LI+	LL-3	1.5	Y	3500	
	D	FDB-12	LL-4	LI+	LL-4	1.5	Y	6500	
	E	FDB-12	DL-3	LI+	DL-3	1.5	Y	1500	
175	A	FDB-14	FL-1	L-	FL-1	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-1
	B	FDB-14	FL-2	L-	FL-2	1.5	BLUE	1500	
	C	FDB-14	NL-1	L-	NL-1	1.5	BLUE	2000	
	D	FDB-14	F-1	F-	F-1	1.5	BLK	3000	
	E	FDB-14	F-2	F-	F-2	1.5	BLK	2500	
	F	FDB-14	F-3	F-	F-3	1.5	BLK	2000	
	A	FDB-15	FL-3	L-	FL-3	1.5	BLUE	3500	
	B	FDB-15	FL-4	L-	FL-4	1.5	BLUE	1500	
176	C	FDB-15	NL-2	L-	NL-2	1.5	BLUE	2000	-VE BRANCH WIRING CABIN-2
	D	FDB-15	F-4	F-	F-4	1.5	BLK	3000	
	E	FDB-15	F-5	F-	F-5	1.5	BLK	2500	
	F	FDB-15	F-6	F-	F-6	1.5	BLK	2000	
	A	FDB-16	FL-5	L-	FL-5	1.5	BLUE	3500	
	B	FDB-16	FL-6	L-	FL-6	1.5	BLUE	1500	
	C	FDB-16	NL-3	L-	NL-3	1.5	BLUE	2000	
	D	FDB-16	F-7	F-	F-7	1.5	BLK	3000	
177	E	FDB-16	F-8	F-	F-8	1.5	BLK	2500	-VE BRANCH WIRING CABIN-3
	F	FDB-16	F-9	F-	F-9	1.5	BLK	2000	

177	A	FDB-17	FL-7	L-	FL-7	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-4
	B	FDB-17	FL-8	L-	FL-8	1.5	BLUE	1500	
	C	FDB-17	NL-4	L-	NL-4	1.5	BLUE	2000	
	D	FDB-17	F-10	F-	F-10	1.5	BLK	3000	
	E	FDB-17	F-11	F-	F-11	1.5	BLK	2500	
	F	FDB-17	F-12	F-	F-12	1.5	BLK	2000	
178	A	FDB-18	FL-9	L-	FL-9	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-5
	B	FDB-18	FL-10	L-	FL-10	1.5	BLUE	1500	
	C	FDB-18	NL-5	L-	NL-5	1.5	BLUE	2000	
	D	FDB-18	F-13	F-	F-13	1.5	BLK	3000	
	E	FDB-18	F-14	F-	F-14	1.5	BLK	2500	
	F	FDB-18	F-15	F-	F-15	1.5	BLK	2000	
179	A	FDB-19	FL-11	L-	FL-11	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-6
	B	FDB-19	FL-12	L-	FL-12	1.5	BLUE	1500	
	C	FDB-19	NL-6	L-	NL-6	1.5	BLUE	2000	
	D	FDB-19	F-16	F-	F-16	1.5	BLK	3000	
	E	FDB-19	F-17	F-	F-17	1.5	BLK	2500	
	F	FDB-19	F-18	F-	F-18	1.5	BLK	2000	
180	A	FDB-20	FL-13	L-	FL-13	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-7
	B	FDB-20	FL-14	L-	FL-14	1.5	BLUE	1500	
	C	FDB-20	NL-7	L-	NL-7	1.5	BLUE	2000	
	D	FDB-20	F-19	F-	F-19	1.5	BLK	3000	
	E	FDB-20	F-20	F-	F-20	1.5	BLK	2500	
	F	FDB-20	F-21	F-	F-21	1.5	BLK	2000	
181	A	FDB-21	FL-15	L-	FL-15	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-8
	B	FDB-21	FL-16	L-	FL-16	1.5	BLUE	1500	
	C	FDB-21	NL-8	L-	NL-8	1.5	BLUE	2000	
	D	FDB-21	F-22	F-	F-22	1.5	BLK	3000	
	E	FDB-21	F-23	F-	F-23	1.5	BLK	2500	
	F	FDB-21	F-24	F-	F-24	1.5	BLK	2000	
182	A	FDB-22	FL-17	L-	FL-17	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-9
	B	FDB-22	FL-18	L-	FL-18	1.5	BLUE	1500	
	C	FDB-22	NL-9	L-	NL-9	1.5	BLUE	2000	
	D	FDB-22	F-25	F-	F-25	1.5	BLK	3000	
	E	FDB-22	F-26	F-	F-26	1.5	BLK	2500	
	F	FDB-22	F-27	F-	F-27	1.5	BLK	2000	
183	A	FDB-23	FL-19	L-	FL-19	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-10
	B	FDB-23	FL-20	L-	FL-20	1.5	BLUE	1500	
	C	FDB-23	NL-10	L-	NL-10	1.5	BLUE	2000	
	D	FDB-23	F-28	F-	F-28	1.5	BLK	3000	
	E	FDB-23	F-29	F-	F-29	1.5	BLK	2500	
	F	FDB-23	F-30	F-	F-30	1.5	BLK	2000	
184	A	FDB-13	DL-2	L-	DL-2	1.5	BLUE	1500	-VE BRANCH WIRING Doorway NPP end
	B	FDB-13	GL-1	L-	GL-1	1.5	BLUE	4000	
	C	FDB-13	LL-1	L-	LL-1	1.5	BLUE	6500	
	D	FDB-13	LL-2	L-	LL-2	1.5	BLUE	3500	
	E	FDB-13	DL-1	L-	DL-1	1.5	BLUE	3500	
185	A	FDB-24	DL-4	L-	DL-4	1.5	BLUE	1500	-VE BRANCH WIRING Doorway PP end
	B	FDB-24	GL-2	L-	GL-2	1.5	BLUE	4000	
	C	FDB-24	LL-3	L-	LL-3	1.5	BLUE	6500	
	D	FDB-24	LL-4	L-	LL-4	1.5	BLUE	3500	
	E	FDB-24	DL-3	L-	DL-3	1.5	BLUE	3500	
186	A	DB-1	PS-1	PS+	PS-1	1.5	Y	3000	
	B	DB-1	PS-2	PS+	PS-2	1.5	Y	3000	
	C	DB-13	PS-1	PS+	PS-1	1.5	Y	5000	
	D	DB-13	PS-2	PS+	PS-2	1.5	Y	5500	
187	A	DB-12	PS-3	PS-	PS-3	1.5	BLUE	5000	
	B	DB-12	PS-4	PS-	PS-4	1.5	BLUE	5000	
	C	DB-24	PS-3	PS-	PS-3	1.5	BLUE	3000	
	D	DB-24	PS-4	PS-	PS-4	1.5	BLUE	4000	

Corrigendum – 1 to Specification no. - EDTS 357, Rev-C

This corrigendum is issued to Specification no. EDTS 357, Rev. 'C' for 'Harness of Under frame and Roof arrangement for LHB EOG Non AC SCN Coaches' to change the Scope of Supply as follows:

Clause 2.0 (a) shall be read as:

2.0 Scope of supply:

- a) Procurement of the item specified in BOM of the specification shall be from RDSO/RCF/ICF approved vendors mentioned in the latest version of the vendor directory issued by RCF/ICF/RDSO respectively, however the procurement of **e-beam Cables & Cable Management System** shall be done from RDSO 'Approved Vendors' for minimum **80%** quantity of total quantity and balance quantity up-to **20%** from 'Developmental Vendors' as mentioned in latest version of the vendor directory issued by RDSO.

Based on the procurement of various sizes of **e-beam Cables & Cable Management System** from either Approved or Developmental Sources, the cable harness shall be categorized as under:

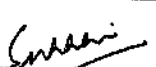
- **Category-A:** Cable Harness with Approved Source of e-beam Cables & Cable Management System (80% min.)
- **Category-B:** Cables Harness with Developmental source of e-beam Cables & Cable Management System (20% min.)

Category-B type of cable harness may be supplied with e-beam cables & cable management system procured from Developmental Sources, however in no case Category-A type shall be supplied with e-beam cables & cable management system procured from Developmental Sources.

Firm shall maintain a record according to the above classification and offer to RITES/Inspecting Official for inspection in format **EDF 0001, Ver. 2.0 (or Latest)** annexed with the specification.

Note:-

The above mentioned criteria is not applicable to Cable Management System of size NW10 & NW70 as the Approved Sources are less than three or only Developmental Sources are there. Therefore, the procurement of size NW10 & NW70 (if applicable) may be done for such sources subject to past performance, capacity, delivery requirements, quality under procurement, nature of item, outstanding order etc. to be treated as Bulk Orders.

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To be maintained by the cables harness manufacturer at his premises and to be signed by
the Inspecting official during inspection against each Purchase Order

Name of Firm :

P.O. No. :

Description :

Specification :

[illegible]

Sr. No.	Date of Inspection	Total ordered quantity	Lot offered	Category-A Qty. (With Cables from Approved sources 80% Min	Category-B Qty. (With Cables from developmental sources (Up to 20%)	Sign of Inspecting Engineer.



This amendment is prepared to incorporate changes in "Readymade harness for Under frame and Roof Arrangement for LHB EOG SCN coaches" due to provision of double inlet centrifugal blower assembly 3-Ø, 190V AC in LHB EOG SCN coaches and shifting of Pump controller from under- slung HV panel to onboard LV panel. Accordingly, cables provided for blower assembly 1-Ø, 110V AC are deleted from under frame BOM and new cables for blower assembly 3-Ø, 190V AC are included in Roof BOM. Further, cables for pump control circuit are added in harness of under-frame arrangement as a bunch from HV panel to LV panel.

1. Clause No. 2.1 (a): BILL OF MATERIAL FOR UNDER-FRAME WIRING:

A) THIN WALLED FLEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-

Following Items are **DELETED** from BOM:

Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable color	Detail drg./ Spec.	QPC	Remarks
32.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Red	ELRS/SPEC/ELC/0019, Rev-4	44 Mtr	Exhaust Fan
33.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Black	ELRS/SPEC/ELC/0019, Rev-4	44 Mtr	Exhaust Fan
34.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	GNYE	ELRS/SPEC/ELC/0019, Rev-4	44 Mtr	Exhaust Fan

Following Items are **REVISED** as under:

Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable color	Detail drg./ Spec.	Existing QPC	Revised QPC	Remarks
36.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Choco-late	ELRS/SPEC/ELC/0019, Rev-4	8 Mtr	47 Mtr	HV Panel to VK11 & HV panel to LV panel (Pump controller circuit)

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38.	2x1.0 sqmm multicore cables 600/1000V colour Br, Wh	-	2x1.0	Br, Wh	EDTS-132, Rev-'C', AM-3 (DS-4)	21 Mtr	60 Mtr	Pump control cables & HV panel to LV panel (Pump controller circuit)
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B) CONDUIT SYSTEM FOR CABLE MANAGEMENT & ACCESSORIES FOR UNDER FRAME WIRING:-

Following Item is **REVISED** as under:

Sr. No.	DESCRIPTION	SPEC. NO.	TABLE	ITEM	EXISTING QPC	REVISED QPC
1.	Polyamide flexible corrugated conduit, NW-17	RDSO/PE/SPEC/AC/0138- 2009, Rev-1 (Annexure-A)	A-1	3	176 Mtr	156 Mtr
6.	Straight PG metal thread End fitting PG-16		A-2	3	32 nos.	33 nos.
11.	Hex. lock nut with PG thread brass PG-16		A-10	4	32 nos.	33 nos.

2. Clause No. 2.1 (b): PREPARATION / BUNCHING OF HARNESS:-

Following cable harness bunches are **DELETED**.

Har. No.	Nos. & size of cable	Spec. no.	Working voltage	Color code	Length in mm	Ferrules marking	Route	Remarks and Flexible conduit size and length	Group
18	3 nos., 1.5 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750 V	R, Blk, GNYE	25000	Ex. Fan-1		Exhaust Fan-1 (NW-17, L=22 Mtrs)	EXHAUST FAN
19	3 nos., 1.5 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750 V	R, Blk, GNYE	19000	Ex. Fan-2		Exhaust Fan-2 (NW-17, L=15 Mtrs)	

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Following cable harness bunches are **REVISED**.

Har. No.	Nos. & size of cable	Spec. no.	Working voltage	Color code	Length in mm	Ferrules marking	Route	Remarks & Flexible conduit size & length	Group Name
4	4x1.5 mm ² multi-core cable	EDTS-132, Rev-C, Am-3 (DS-3)	-	W, Br, Blk, GNYE	10500	33 08 02.02, 33 08 04.02, 33 08 06.02, 33 08 07.01	50	HV Panel (S1) to Pump (S22) (NW-29, L=8.5 Mtrs)	PUMP CABLES & CONTROLLER CABLES
	4x1.5 mm ² multi-core cable	EDTS-132, Rev-C, Am-3 (DS-3)	-	W, Br, Blk, GNYE	10500	33 08 13.02, 33 08 15.02, 33 08 17.02, 33 08 18.01			
	2x1.0 mm ² multi-core cable	EDTS-132, Rev-C, Am-3 (DS-4)	-	Br, W	10500	33 08 10.01, 33 08 11.01			
	2x1.0 mm ² multi-core cable	EDTS-132, Rev-C, Am-3 (DS-4)	-	Br, W	10500	34 08 19.01, 33 08 20.01			

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Following cable harness bunches are **ADDED**.

Har. No.	Nos. & size of cable	Spec. no.	Working voltage	Color code	Length in mm	Ferrules marking	Route	Remarks and Flexible conduit size and length	Group
20	1 nos., 1.5 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 V	Ch	19500	33 08 24	-	HV panel to LV panel (Pump controller circuit) (NW-17, L=17 Mtrs)	PUMP CONTROLLER CIRCUIT
	1 nos., 1.5 mm ²	ELRS/SPEC/ELC/0019, Rev-4	Upto 750 V	Ch	19500	33 08 25	-		
	2x1.0 mm ² multi-core cable	EDTS-132, Rev-C, Am-3 (DS-4)	-	Br, W	19500	33 08 10.01A, 33 08 11.01A	-		
	2x1.0 mm ² multi-core cable	EDTS-132, Rev-C, Am-3 (DS-4)	-	Br, W	19500	33 08 19.01A, 33 08 20.01A	-		

3. Clause No. 2.2 (a): **BILL OF MATERIAL FOR ROOF WIRING:**

A) **THIN WALLED FLEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-**

Following Items are **REVISED** as under:

Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable colour	Detail drg./ Spec.	Existing QPC	Revised QPC	Remarks/ Location
1.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Red	ELRS/SPEC/ELC/0019, Rev-4	247.5 Mtr	277.5 Mtr	Inside coach
2.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Yellow	ELRS/SPEC/ELC/0019, Rev-4	414.1 Mtr	444.1 Mtr	Inside coach

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3.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	Blue	ELRS/SPEC/ ELC/0019, Rev-4	141 Mtr	171 Mtr	Inside coach
5.	Thin walled flexible elastomeric cables with copper conductors	Upto 750 volts	1.5	GNYE	ELRS/SPEC/ ELC/0019, Rev-4	121.5 Mtr	151.5 Mtr	Inside coach

4. ANNEXURE-B:

Harness for Branch wiring for roof of LSCN coach

The following cable harness bunches are **ADDED**.

Har. No.		From	To	Ferrule no.	Ferrule marking	Cable size (in mm ²)	Color code	Length in mm	Remarks
		Location	Location						
188	A	CUBICLE(LV)	EX. FAN-1	EX. FAN-1 (R)	EX. FAN-1 (R)	1.5	R	24000	LOOSE SUPPLY
	B	CUBICLE(LV)	EX. FAN-1	EX. FAN-1 (Y)	EX. FAN-1 (Y)	1.5	Y	24000	LOOSE SUPPLY
	C	CUBICLE(LV)	EX. FAN-1	EX. FAN-1 (B)	EX. FAN-1 (B)	1.5	B	24000	LOOSE SUPPLY
	D	CUBICLE(LV)	EX. FAN-1	EX. FAN-1 (PE)	EX. FAN-1 (PE)	1.5	GNYE	24000	LOOSE SUPPLY
189	A	CUBICLE(LV)	EX. FAN-2	EX. FAN-2 (R)	EX. FAN-2 (R)	1.5	R	6000	LOOSE SUPPLY
	B	CUBICLE(LV)	EX. FAN-2	EX. FAN-2 (Y)	EX. FAN-2 (Y)	1.5	Y	6000	LOOSE SUPPLY
	C	CUBICLE(LV)	EX. FAN-2	EX. FAN-2 (B)	EX. FAN-2 (B)	1.5	B	6000	LOOSE SUPPLY
	D	CUBICLE(LV)	EX. FAN-2	EX. FAN-2 (PE)	EX. FAN-2 (PE)	1.5	GNYE	6000	LOOSE SUPPLY

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This amendment is issued to specification for 'Harness of Under-Frame and Roof Arrangement' for LHB EOG SCN Coaches to spec. no. EDTS-357, Rev 'C', Corr-1, Am-1 for redistribution of load in Mobile Charging Circuit, Change in Exhaust fan harness length and modification in "-VE" side circuit of limit switch/AEL. Accordingly, the relevant clauses where ever mentioned in the specification have been modified. The Amendment in the specification is as under:-

1. Clause No.- 2.1 (a) BILL OF MATERIAL FOR UNDERFRAME WIRING:

A) THIN WALLED FLEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-

Following Item is **UPDATED** as under:-

Sr. No.	Description	Existing Working voltage	Revised Working voltage	Cable size (in mm ²)	Cable color	Detail drg./ Spec.	QPC	Remarks
6.	Thin walled flex. elast. cables with Cu. Conductors.	above 750 volts upto 1.8KV/ 3.0KV	Upto 750 volts	50	GNYE	ELRS/SPEC/ ELC/0019, Rev-4	0.5 Mtr	For Earthing

Following Item's **QPC REVISED** as under:-

Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable color	Detail drg./ Spec.	Existing QPC	Revised QPC	Remarks
28.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	6	GNYE	ELRS/SPEC/ ELC/0019, Rev-4	6 Mtr	23.5 Mtr	RBC Input & HV to LV Panel
32.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	RED	ELRS/SPEC/ ELC/0019, Rev-4	0 Mtr (in Am-1)	21 Mtr	Pump Cable
34.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	GNYE	ELRS/SPEC/ ELC/0019, Rev-4	0 Mtr (in Am-1)	21 Mtr	Pump Cable
37.	4X1.5 sq.mm multi-core cable e-beam cable 600/1000V color Wh, Br, Blk, GNYE	-	4x1.5	Wh,Br, Blk, GNYE	EDTS-132, Rev-C, Am-3 (DS-3)	21 Mtr	0 mtr	Pump Multicore cable deleted
44.	Copper crimping socket for 25 sq.mm cable	-	-	-	EDTS-200 (Latest Revision)	4 nos.	8 nos.	Item-14 (M8)
45.	Copper crimping socket for 16 sq.mm cable	-	-	-	EDTS-200 (Latest Revision)	16 nos.	20 nos.	Item-15 (M10)

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New Items **ADDED** are as follows:-

Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable color	Detail drg./ Spec.	QPC	Remarks
51.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	YELLOW	ELRS/SPEC/ELC/0019, Rev-4	21 Mtr	Pump Cable
52.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	BLUE	ELRS/SPEC/ELC/0019, Rev-4	21 Mtr	Pump Cable

B) CONDUIT SYSTEM FOR CABLE MANAGEMENT & ACCESSORIES FOR UNDER FRAME WIRING:-

Following Items are **REVISED** as under:

S.No.	DESCRIPTION	SPEC. NO.	TABLE	ITEM	QPC	
					Existing	Revised
5.	Polyamide flexible corrugated conduit, NW-48	RDSO/PE/SPEC/AC/0138-2009, Rev-1 (Annexure-A)	A-1	7	15.5 Mtr **	15.5 Mtr **
10.	Straight PG metal thread End fitting PG-48		A-2	8	02 nos.**	02 nos.
15.	Hex. lock nut with PG thread brass PG-48		A-10	8	02 nos.**	02 nos.
20.	Tube clamp NW-48		A-8	8	10 nos.**	10 nos.

Note "*** Marked items shall not be procured as these items are available in RCF depots"

2. Clause No.-2.1(b): PREPARATION / BUNCHING OF HARNESS:-

The preparation/bunching of harness shall be done as per under given for Under Frame wiring.

The Cable Harnesses are **MODIFIED** as under:

a) Harness No. 4 may be **read** as follows:-

Har No.	Nos. & size of cable	Spec. no.	Working voltage	Color code	Length in mm	Ferrules marking	Route	Remarks & Flex. conduit size & length	Group name
4	1.5 mm ² , 4 Nos. e-beam cable	ELRS/SPEC/ELC/0019; Rev-4	Upto 750V	R,Y,B, GNYE	10500	33 08 02.02, 33 08 04.02, 33 08 06.02, 33 08 07.01	50	HV Panel (S1) to Pump (S22) (NW-29, L=8.5 mtrs)	

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1.5 mm ² , 4 Nos. e-beam cable	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750V	R,Y,B, GNYE	10500	33 08 13.02, 33 08 15.02, 33 08 17.02, 33 08 18.01	50	HV Panel (S1) to Pump (S22) (NW-29, L=8.5 mtrs)	PUMP CABLES & CONTROLLER CABLES
2x1.0 mm ² multi- core cable	EDTS-132, Rev-C, Am- 3 (DS-3)	600/ 1000V	Br., Wh.	10500	33 08 10.01, 33 08 11.01			
2x1.0 mm ² multi- core cable	EDTS-132, Rev-C, Am- 3 (DS-3)	600/ 1000V	Br., Wh.	10500	33 08 10.01, 33 08 11.01			

b) Remarks of Harness No. 5B **Modified** as follows:-

Har No.	Nos. & size of cable	Spec. no.	Working voltage	Color code	Length in mm	Ferrules marking	Route	Remarks & Flex. conduit size and length	Group name
5B	1 no., 10 mm ²	ELRS/SPEC/ ELC/0019, Rev-4	Upto 750V	Ch.	20000	36	36	RBC (+ve) to LV Panel (S1A) (NW-17, L=18 mtrs)	DC Circuit Cables

c) Number of Cables of Harness No. 11 **Modified** as follows:-

Har No.	Nos. & size of cable		Spec. no.	Working voltage	Color code	Length (in mm)	Ferrules marking	Route	Remarks & Flex. conduit size and length	Group name
	Existing	Revised								
11	4 nos., 6 mm ²	5 nos., 6 mm ²	ELRS/ SPEC/ ELC/ 0019, Rev-4	Upto 750V	R,Y,B, Blk, GNYE	17500	55	55	HV Panel (S1) to On board LV Panel (S1A) (NW-23, L=15.5 Mtrs)	110 V AC SUPPLY TO ON BOARD

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3. Clause No. - 2.2 (a): BILL OF MATERIAL FOR ROOF WIRING:

A) THIN WALLED FLEXIBLE ELASTOMERIC CABLES WITH COPPER CONDUCTORS & ACCESSORIES:-

Following Item's **QPC REVISED** as under:-

Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable color	Detail drg./ Spec.	Existing QPC	Revised QPC	Remarks
1.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	Red	ELRS/SPEC/ELC/0019, Rev-4	277.5 Mtr	295 Mtr	Inside coach
2.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	Yellow	ELRS/SPEC/ELC/0019, Rev-4	444.1 Mtr	486.1 Mtr	Inside coach
3.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	Blue	ELRS/SPEC/ELC/0019, Rev-4	171 Mtr	234.5 Mtr	Inside coach
4.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	Black	ELRS/SPEC/ELC/0019, Rev-4	269.8 Mtr	288 Mtr	Inside coach
5.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	1.5	GNYE	ELRS/SPEC/ELC/0019, Rev-4	151.5 Mtr	129 Mtr	Inside coach
6.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	4	Red	ELRS/SPEC/ELC/0019, Rev-4	78.3 Mtr	80.3 Mtr	Inside coach
8.	Thin walled flexible elast. cables with copper conductors	Upto 750 volts	4	Blue	ELRS/SPEC/ELC/0019, Rev-4	72.2 Mtr	74.7 Mtr	Inside coach
10	PVC Spout type circular box fire retardant, 4-way dia. 20mm	-	-	-	IS:3419-76, T-9, FIG-E	50 Nos.	100 Nos.	Inside Coach
13.	Rigid PVC conduit Dia 20mmx 1700mm	-	-	-	IS:9537-83, P3, CL.5.1.2	10 nos.	0 nos.	Inside coach
15.	Rigid PVC conduit Dia 20mmx950mm	-	-	-	IS:9537-83, P3, CL.5.1.2	20 nos.	0 nos.	Inside coach
17.	Rigid PVC conduit Dia 20mmx500mm	-	-	-	IS:9537-83, P3, CL.5.1.2	20 nos.	40 nos.	Inside coach
18.	Rigid PVC conduit Dia 20mmx415mm	-	-	-	IS:9537-83, P3, CL.5.1.2	10 nos.	20 nos.	Inside coach

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19.	Rigid PVC conduit Dia 20mmx375mm	-	-	-	IS:9537-83, P3, CL.5.1.2	10 nos.	0 nos.	Inside coach
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Following Item is **ADDED** as under:-

Sr. No.	Description	Working voltage	Cable size (in mm ²)	Cable color	Detail drg./ Spec.	QPC	Remarks
38.	Rigid PVC conduit Dia. 20mmx480mm	-	-	-	IS:9537-83,P3, CL.5.1.2	20 nos.	Inside coach
39.	Rigid PVC conduit Dia. 20mmx360mm	-	-	-	IS:9537-83,P3, CL.5.1.2	40 nos.	Inside coach
40.	Flexible Flame-retardant high performance polyolefin heat shrinkable tubing	-	-	-	EDML-176, Latest	01 Set	Loose Supply

B) CONDUIT SYSTEM FOR CABLE MANAGEMENT & ACCESSORIES (ROOF WIRING):-

Firms supplying these items shall get these tested as per RDSO specification no. RDSO/PE/SPEC/AC/0138-2009 (Latest).

Following Item's **QPC REVISED** as under:-

S No.	DESCRIPTION	SPEC. NO.	TABLE	ITEM	QPC	
					Existing	Revised
1.	Polyamide flexible corrugated conduit, NW-17	RDSO/PE/SPEC/AC/0138-2009, Rev-1 (Annexure-A)	A-1	3	10 Mtr	25 Mtr

4. Clause No. 4.9, Table for Tests:

Following test is hereby added:

Test for Harnesses at firm's premises:

S.No.	Tests	Type Test	Routine Test	Acceptance Test
15.	Test for Rigid PVC Conduits to IS:9537 (Part-3)	YES	YES	YES

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5. **Clause No. 4.10 (a) Details of Testing:**

Following Acceptance Test for PVC Conduit to IS: 9537 (Part-3) is hereby added.

7.	Acceptance test for PVC conduit to IS:9537	
S.No.	Details of Testing	Remarks of Rites Inspecting official
a.	Checking of dimensions as clause 7 of IS.	
b.	Bending test (at room temperature) as per clause 9.2 of IS spec.	
c.	Compression test as per cl. 9.3 of IS spec (5 sample in prototype and 2 samples in acceptance /routine)	
d.	Collapse test as per cl. 9.5 of IS spec (One sample)	
e.	Resistance to burning as per cl. 11 of IS spec. (2 samples)	
f.	Electrical characteristics as per cl. 12 of IS spec.	

6. **Clause No. 6.0: Packing and Traceability**

Reference Clause No. 6.0 (i) for Packing Instructions stands deleted.

7. **Clause No. - 7.0: ENCLOSURES : Drg. No. modified as under:-**

S. No.	Description	Drawing no.	
		Existing	Modified
8.	Drawing of Jumper & Branch Wiring of roof for LGS coach	SKED-649, alt 'b'	SKED-649, alt 'c'

Annexure-B to EDTS-357, Rev-C, Corr-1, AM-2

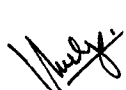
Annexure-B i.e. "Preparation/Bunching of Harness for Jumper/Branch wiring for roof of LSCN coach" has been modified with respect to phase segregation of +VE & -VE for 110V DC circuit and Distribution of load in MCS Circuit. Exhaust Fan circuit harness length has been modified for Exhaust Fan-1. Accordingly, **Annexure-B shall be read as under (Annexure-B Enclosed).**

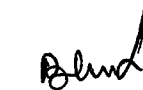
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Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Jumper wiring for roof of LSCN Coach

Har. No.	Location		Ferrule no.				ferrule marking	Cable size (in	Color code	Length in mm
	From	To	From		To					
POSITIVE JUMPER WIRING (CUBICLE TO PP END DOOR WAY)										
1	CUBICLE	FDB-12	LI+	FDB-12	JB	LI+	CUB LI+	4	Y	5500
POSITIVE JUMPER WIRING (PP END DOOR WAY TO CABIN-10)										
2	FDB-12	FDB-11	LI+	FDB-11	FDB-12	LI+	LI+	4	Y	2200
POSITIVE JUMPER WIRING (CUBICLE TO CABIN-10)										
3	CUBICLE	FDB-11	LII+	FDB-11	JB	LII+	CUB LII+	4	Y	7500
4	CUBICLE	FDB-11	F+	FDB-11	JB	F+	CUB F+	4	R	7500
5	CUBICLE	FDB-11	LS-I		LS-I		LS-I +	1.5	Y	7500
5A	PACIL-I	FDB-11	LS-II		LS-II		LS-II +	1.5	Y	7500
POSITIVE JUMPER WIRING (CABIN-10 TO CABIN-9)										
6	FDB-11	FDB-10	LI+	FDB-10	FDB-11	LI+	LI+	4	Y	2200
7	FDB-11	FDB-10	LII+	FDB-10	FDB-11	LII+	LII+	4	Y	2200
8	FDB-11	FDB-10	F+	FDB-10	FDB-11	F+	F+	4	R	2200
9	FDB-11	FDB-10	LS-I		LS-I		LS-I +	1.5	Y	2200
10	FDB-11	FDB-10	LS-II		LS-II		LS-II +	1.5	Y	2200
POSITIVE JUMPER WIRING (CABIN-9 TO CABIN-8)										
11	FDB-10	FDB-9	LI+	FDB-9	FDB-10	LI+	LI+	4	Y	2200
12	FDB-10	FDB-9	LII+	FDB-9	FDB-10	LII+	LII+	4	Y	2200
13	FDB-10	FDB-9	F+	FDB-9	FDB-10	F+	F+	4	R	2200
14	FDB-10	FDB-9	LS-I		LS-I		LS-I +	1.5	Y	2200
15	FDB-10	FDB-9	LS-II		LS-II		LS-II +	1.5	Y	2200
POSITIVE JUMPER WIRING (CABIN-8 TO CABIN-7)										
16	FDB-9	FDB-8	LI+	FDB-8	FDB-9	LI+	LI+	4	Y	2200
17	FDB-9	FDB-8	LII+	FDB-8	FDB-9	LII+	LII+	4	Y	2200
18	FDB-9	FDB-8	F+	FDB-8	FDB-9	F+	F+	4	R	2200
19	FDB-9	FDB-8	LS-I		LS-I		LS-I +	1.5	Y	2200
20	FDB-9	FDB-8	LS-II		LS-II		LS-II +	1.5	Y	2200
POSITIVE JUMPER WIRING (CABIN-7 TO CABIN-6)										
21	FDB-8	FDB-7	LI+	FDB-7	FDB-8	LI+	LI+	4	Y	2200
22	FDB-8	FDB-7	LII+	FDB-7	FDB-8	LII+	LII+	4	Y	2200
23	FDB-8	FDB-7	F+	FDB-7	FDB-8	F+	F+	4	R	2200
24	FDB-8	FDB-7	LS-I		LS-I		LS-I +	1.5	Y	2200
25	FDB-8	FDB-7	LS-II		LS-II		LS-II +	1.5	Y	2200
POSITIVE JUMPER WIRING (CABIN-6 TO CABIN-5)										
26	FDB-7	FDB-6	LI+	FDB-6	FDB-7	LI+	LI+	4	Y	2200
27	FDB-7	FDB-6	LII+	FDB-6	FDB-7	LII+	LII+	4	Y	2200
28	FDB-7	FDB-6	F+	FDB-6	FDB-7	F+	F+	4	R	2200
29	FDB-7	FDB-6	LS-I		LS-I		LS-I +	1.5	Y	2200
30	FDB-7	FDB-6	LS-II		LS-II		LS-II +	1.5	Y	2200
POSITIVE JUMPER WIRING (CABIN-5 TO CABIN-4)										
31	FDB-6	FDB-5	LI+	FDB-5	FDB-6	LI+	LI+	4	Y	2200
32	FDB-6	FDB-5	LII+	FDB-5	FDB-6	LII+	LII+	4	Y	2200
33	FDB-6	FDB-5	F+	FDB-5	FDB-6	F+	F+	4	R	2200
34	FDB-6	FDB-5	LS-I		LS-I		LS-I +	1.5	Y	2200
35	FDB-6	FDB-5	LS-II		LS-II		LS-II +	1.5	Y	2200
POSITIVE JUMPER WIRING (CABIN-4 TO CABIN-3)										
36	FDB-5	FDB-4	LI+	FDB-4	FDB-5	LI+	LI+	4	Y	2200
37	FDB-5	FDB-4	LII+	FDB-4	FDB-5	LII+	LII+	4	Y	2200
38	FDB-5	FDB-4	F+	FDB-4	FDB-5	F+	F+	4	R	2200
39	FDB-5	FDB-4	LS-I		LS-I		LS-I +	1.5	Y	2200
40	FDB-5	FDB-4	LS-II		LS-II		LS-II +	1.5	Y	2200

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JUMPER WIRING

Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Jumper wiring for roof of LSCN Coach

Har. No.	Location		Ferrule no.		Ferrule marking	Cable size (in	Color code	Length in mm
	From	To	From	To				
POSITIVE JUMPER WIRING (CABIN-3 TO CABIN-2)								
41	FDB-4	FDB-3	LI+ FDB-3	FDB-4 LI+	LI+	4	Y	2200
42	FDB-4	FDB-3	LII+ FDB-3	FDB-4 LII+	LII+	4	Y	2200
43	FDB-4	FDB-3	F+ FDB-3	FDB-4 F+	F+	4	R	2200
44	FDB-4	FDB-3	LS-I	LS-I	LS-I +	1.5	Y	2200
45	FDB-4	FDB-3	LS-II	LS-II	LS-II +	1.5	Y	2200
POSITIVE JUMPER WIRING (CABIN-2 TO CABIN-1)								
46	FDB-3	FDB-2	LI+ FDB-2	FDB-3 LI+	LI+	4	Y	2200
47	FDB-3	FDB-2	LII+ FDB-2	FDB-3 LII+	LII+	4	Y	2200
48	FDB-3	FDB-2	F+ FDB-2	FDB-3 F+	F+	4	R	2200
49	FDB-3	FDB-3	LS-I	LS-I	LS-I +	1.5	Y	2200
50	FDB-3	FDB-3	LS-II	LS-II	LS-II +	1.5	Y	2200
POSITIVE JUMPER WIRING (CABIN-1 TO NPP END DOOR WAY)								
51	FDB-2	FDB-1	LI+ FDB-1	FDB-2 LI+	LI+	4	Y	2200
NEGATIVE JUMPER WIRING (CUBICLE TO PP END DOORWAY)								
52	CUBICLE	FDB-24	L- FDB-24	JB L-	L-	4	B	3000
NEGATIVE JUMPER WIRING (PP END DOOR WAY TO CABIN-10)								
53	FDB-24	FDB-23	L- FDB-23	FDB-24 L-	L-	4	B	2200
NEGATIVE JUMPER WIRING (CUBICLE TO CABIN-10)								
54	CUBICLE	FDB-23	F- FDB-23	JB F-	F-	4	BLK	4500
54A	CUBICLE	FDB-23	LSN FDB-23	JB LSN	LSN	1.5	BLK	4500
NEGATIVE JUMPER WIRING (CABIN-10 TO CABIN-9)								
55	FDB-23	FDB-22	L- FDB-22	FDB-23 L-	L-	4	B	2200
56	FDB-23	FDB-22	F- FDB-22	FDB-23 F-	F-	4	BLK	2200
56A	FDB-23	FDB-22	LSN FDB-22	FDB-23 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-9 TO CABIN-8)								
57	FDB-22	FDB-21	L- FDB-21	FDB-22 L-	L-	4	B	2200
58	FDB-22	FDB-21	F- FDB-21	FDB-22 F-	F-	4	BLK	2200
58A	FDB-22	FDB-21	LSN FDB-21	FDB-22 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING CABIN-8 TO CABIN-7)								
59	FDB-21	FDB-20	L- FDB-20	FDB-21 L-	L-	4	B	2200
60	FDB-21	FDB-20	F- FDB-20	FDB-21 F-	F-	4	BLK	2200
60A	FDB-21	FDB-20	LSN FDB-20	FDB-21 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-7 TO CABIN-6)								
61	FDB-20	FDB-19	L- FDB-19	FDB-20 L-	L-	4	B	2200
62	FDB-20	FDB-19	F- FDB-19	FDB-20 F-	F-	4	BLK	2200
62A	FDB-20	FDB-19	LSN FDB-19	FDB-20 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-6 TO CABIN-5)								
63	FDB-19	FDB-18	L- FDB-18	FDB-19 L-	L-	4	B	2200
64	FDB-19	FDB-18	F- FDB-18	FDB-19 F-	F-	4	BLK	2200
64A	FDB-19	FDB-18	LSN FDB-18	FDB-19 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-5 TO CABIN-4)								
65	FDB-18	FDB-17	L- FDB-17	FDB-18 L-	L-	4	B	2200
66	FDB-18	FDB-17	F- FDB-17	FDB-18 F-	F-	4	BLK	2200
66A	FDB-18	FDB-17	LSN FDB-17	FDB-18 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-4 TO CABIN-3)								
67	FDB-17	FDB-16	L- FDB-16	FDB-17 L-	L-	4	B	2200
68	FDB-17	FDB-16	F- FDB-16	FDB-17 F-	F-	4	BLK	2200
68A	FDB-17	FDB-16	LSN FDB-16	FDB-17 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-3 TO CABIN-2)								
69	FDB-16	FDB-15	L- FDB-15	FDB-16 L-	L-	4	B	2200
70	FDB-16	FDB-15	F- FDB-15	FDB-16 F-	F-	4	BLK	2200
70A	FDB-16	FDB-15	LSN FDB-15	FDB-16 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-2 TO CABIN-1)								
71	FDB-15	FDB-14	L- FDB-14	FDB-15 L-	L-	4	B	2200
72	FDB-15	FDB-14	F- FDB-14	FDB-15 F-	F-	4	BLK	2200
72A	FDB-15	FDB-14	LSN FDB-14	FDB-15 LSN	LSN	1.5	BLK	2200
NEGATIVE JUMPER WIRING (CABIN-1 TO PP END DOOR WAY)								
73	FDB-14	FDB-13	L- FDB-14	FDB-13 L-	L-	4	B	2200

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JUMPER WIRING

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Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Jumper wiring for roof of LSCN Coach

CONNECTION WIRING FOR LIMIT SWITCH								
Har. No.	Location		Ferrule no.		Ferrule marking	Cable size (in	Color code	Length in mm
	From	To	From	To				
74	FDB-11	LS-10	LS	LS	LS-I +	1.5	Y	800
	FDB-11	LS-10	LS	LS	LS-II +	1.5	Y	800
74A	FDB-10	LS-9	LS	LS	LS-I +	1.5	Y	800
	FDB-10	LS-9	LS	LS	LS-II +	1.5	Y	800
74B	FDB-9	LS-8	LS	LS	LS-I +	1.5	Y	800
	FDB-9	LS-8	LS	LS	LS-II +	1.5	Y	800
74C	FDB-8	LS-7	LS	LS	LS-I +	1.5	Y	800
	FDB-8	LS-7	LS	LS	LS-II +	1.5	Y	800
74D	FDB-7	LS-6	LS	LS	LS-I +	1.5	Y	800
	FDB-7	LS-6	LS	LS	LS-II +	1.5	Y	800
74E	FDB-6	LS-5	LS	LS	LS-I +	1.5	Y	800
	FDB-6	LS-5	LS	LS	LS-II +	1.5	Y	800
74F	FDB-5	LS-4	LS	LS	LS-I +	1.5	Y	800
	FDB-5	LS-4	LS	LS	LS-II +	1.5	Y	800
74G	FDB-4	LS-3	LS	LS	LS-I +	1.5	Y	800
	FDB-4	LS-3	LS	LS	LS-II	1.5	Y	800
74H	FDB-3	LS-2	LS	LS	LS-I +	1.5	Y	800
	FDB-3	LS-2	LS	LS	LS-II +	1.5	Y	800
74I	FDB-2	LS-1	LS	LS	LS-I +	1.5	Y	800
	FDB-2	LS-1	LS	LS	LS-II +	1.5	Y	800
HARNESS NO. 74 TO 74I TO BE SUPPLIED LOOSE.								
Har. No.	From	To	Ferrule no.		Cable size (in mm ²)	Color code	Length in mm	Remarks
	Location	Location	From	To				
MOBILE CHARGING SOCKET CIRCUIT (CABIN-10) : NON-LV PANEL SIDE								
75	CUBICLE	MCS-28	MCS-28 (R)	CUBICLE (R)	1.5	R	8500	BUNCHING (BLK & GNYE TO BE LOOPED)
	CUBICLE	MCS-29	MCS-29 (Y)	CUBICLE (Y)	1.5	Y	8500	
	CUBICLE	MCS-30	MCS-30 (B)	CUBICLE (B)	1.5	B	8500	
	CUBICLE	MCS-28	MCS-28 (N)	CUBICLE (N)	1.5	BLK	8500	
	CUBICLE	MCS-28	MCS-28 (PE)	CUBICLE (PE)	1.5	GNYE	8500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-9) : NON-LV PANEL SIDE								
76	MCS-28	MCS-25	MCS-25 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-29	MCS-26	MCS-26 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-30	MCS-27	MCS-27 (B)	MCS (B)	1.5	B	4500	
	MCS-28	MCS-25	MCS-25 (N)	MCS (N)	1.5	BLK	4500	
	MCS-28	MCS-25	MCS-25 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-8) : NON-LV PANEL SIDE								
77	MCS-25	MCS-22	MCS-22 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-26	MCS-23	MCS-23 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-27	MCS-24	MCS-24 (B)	MCS (B)	1.5	B	4500	
	MCS-25	MCS-22	MCS-22 (N)	MCS (N)	1.5	BLK	4500	
	MCS-25	MCS-22	MCS-22 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-7) : NON-LV PANEL SIDE								
78	MCS-22	MCS-19	MCS-19 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-23	MCS-20	MCS-20 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-24	MCS-21	MCS-21 (B)	MCS (B)	1.5	B	4500	
	MCS-22	MCS-19	MCS-19 (N)	MCS (N)	1.5	BLK	4500	
	MCS-22	MCS-19	MCS-19 (PE)	MCS (PE)	1.5	GNYE	4500	

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Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Jumper wiring for roof of LSCN Coach

MOBILE CHARGING SOCKET CIRCUIT (CABIN-6) : NON-LV PANEL SIDE								
79	MCS-19	MCS-16	MCS-16 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-20	MCS-17	MCS-17 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-21	MCS-18	MCS-18 (B)	MCS (B)	1.5	B	4500	
	MCS-19	MCS-16	MCS-16 (N)	MCS (N)	1.5	BLK	4500	
	MCS-19	MCS-16	MCS-16 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-5) : NON-LV PANEL SIDE								
80	MCS-16	MCS-13	MCS-13 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-17	MCS-14	MCS-14 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-18	MCS-15	MCS-15 (B)	MCS (B)	1.5	B	4500	
	MCS-16	MCS-13	MCS-13 (N)	MCS (N)	1.5	BLK	4500	
	MCS-16	MCS-13	MCS-13 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-4) : NON-LV PANEL SIDE								
81	MCS-13	MCS-10	MCS-10 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-14	MCS-11	MCS-11 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-15	MCS-12	MCS-12 (B)	MCS (B)	1.5	B	4500	
	MCS-13	MCS-10	MCS-10 (N)	MCS (N)	1.5	BLK	4500	
	MCS-13	MCS-10	MCS-10 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-3) : NON-LV PANEL SIDE								
82	MCS-10	MCS-7	MCS-7 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-11	MCS-8	MCS-8 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-12	MCS-9	MCS-9 (B)	MCS (B)	1.5	B	4500	
	MCS-10	MCS-7	MCS-7 (N)	MCS (N)	1.5	BLK	4500	
	MCS-10	MCS-7	MCS-7 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-2) : NON-LV PANEL SIDE								
83	MCS-7	MCS-4	MCS-4 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-8	MCS-5	MCS-5 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-9	MCS-6	MCS-6 (B)	MCS (B)	1.5	B	4500	
	MCS-7	MCS-4	MCS-4 (N)	MCS (N)	1.5	BLK	4500	
	MCS-7	MCS-4	MCS-4 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-1) : NON-LV PANEL SIDE								
84	MCS-4	MCS-1	MCS-1 (R)	MCS (R)	1.5	R	4500	BUNCHING (BLK & GNYE TO BE LOOPED)
	MCS-5	MCS-2	MCS-2 (Y)	MCS (Y)	1.5	Y	4500	
	MCS-6	MCS-3	MCS-3 (B)	MCS (B)	1.5	B	4500	
	MCS-4	MCS-1	MCS-1 (N)	MCS (N)	1.5	BLK	4500	
	MCS-4	MCS-1	MCS-1 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-10) : LV PANEL SIDE								
85	CUBICLE	MCS-40	MCS-40 (R)	CUBICLE (R)	1.5	R	6500	BUNCHING
	CUBICLE	MCS-40	MCS-40 (N)	CUBICLE (N)	1.5	BLK	6500	
	CUBICLE	MCS-40	MCS-40 (PE)	CUBICLE (PE)	1.5	GNYE	6500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-9) : NON-LV PANEL SIDE								
86	CUBICLE	MCS-39	MCS-39 (Y)	CUBICLE(Y)	1.5	Y	8500	BUNCHING
	MCS-40	MCS-39	MCS-39 (N)	MCS (N)	1.5	BLK	4500	
	MCS-40	MCS-39	MCS-39 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-8) : NON-LV PANEL SIDE								
87	CUBICLE	MCS-38	MCS-38 (B)	CUBICLE(B)	1.5	B	10500	BUNCHING
	MCS-39	MCS-38	MCS-38 (N)	MCS (N)	1.5	BLK	4500	
	MCS-39	MCS-38	MCS-38 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-7) : NON-LV PANEL SIDE								
88	MCS-40	MCS-37	MCS-37 (R)	MCS (R)	1.5	R	8500	BUNCHING
	MCS-38	MCS-37	MCS-37 (N)	MCS (N)	1.5	BLK	4500	
	MCS-38	MCS-37	MCS-37 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-6) : NON-LV PANEL SIDE								
89	MCS-39	MCS-36	MCS-36 (Y)	MCS (Y)	1.5	Y	8500	BUNCHING
	MCS-37	MCS-36	MCS-36 (N)	MCS (N)	1.5	BLK	4500	
	MCS-37	MCS-36	MCS-36 (PE)	MCS (PE)	1.5	GNYE	4500	

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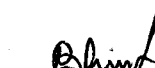
JUMPER WIRING

Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Jumper wiring for roof of LSCN Coach

MOBILE CHARGING SOCKET CIRCUIT (CABIN-5) : NON-LV PANEL SIDE								
90	MCS-38	MCS-35	MCS-35 (B)	MCS (B)	1.5	B	8500	BUNCHING
	MCS-36	MCS-35	MCS-35 (N)	MCS (N)	1.5	BLK	4500	
	MCS-36	MCS-35	MCS-35 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-4) : NON-LV PANEL SIDE								
91	MCS-37	MCS-34	MCS-34 (R)	MCS (R)	1.5	R	8500	BUNCHING
	MCS-35	MCS-34	MCS-34 (N)	MCS (N)	1.5	BLK	4500	
	MCS-35	MCS-34	MCS-34 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-3) : NON-LV PANEL SIDE								
92	MCS-36	MCS-33	MCS-33 (Y)	MCS (Y)	1.5	Y	8500	BUNCHING
	MCS-34	MCS-33	MCS-33 (N)	MCS (N)	1.5	BLK	4500	
	MCS-34	MCS-33	MCS-33 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-2) : NON-LV PANEL SIDE								
93	MCS-35	MCS-32	MCS-32 (B)	MCS (B)	1.5	B	8500	BUNCHING
	MCS-33	MCS-32	MCS-32 (N)	MCS (N)	1.5	BLK	4500	
	MCS-33	MCS-32	MCS-32 (PE)	MCS (PE)	1.5	GNYE	4500	
MOBILE CHARGING SOCKET CIRCUIT (CABIN-1) : NON-LV PANEL SIDE								
94	MCS-34	MCS-31	MCS-31 (R)	MCS (R)	1.5	R	8500	BUNCHING
	MCS-32	MCS-31	MCS-31 (N)	MCS (N)	1.5	BLK	4500	
	MCS-32	MCS-31	MCS-31 (PE)	MCS (PE)	1.5	GNYE	4500	
ACCIDENTAL EMERGENCY LIGHT (CUBICLE TO DOORWAY AREA: AEL-4)								
Har. No.	From	To	Ferrule No.	Cable size (in mm ²)	Color code	Length in mm	Remarks	
95	CUBICLE	AEL-4	AEL-4 (+VE)	1.5	Y	5000	LOOSE	
95A	CUBICLE	AEL-4	AEL-4 (-VE)	1.5	BLK	8000	LOOSE	
ACCIDENTAL EMERGENCY LIGHT (AEL-4 TO AEL-3)								
96	AEL-4	AEL-3	AEL-3 (+VE)	1.5	Y	11000	LOOSE	
96A	AEL-4	AEL-3	AEL-3 (-VE)	1.5	BLK	10500	LOOSE	
ACCIDENTAL EMERGENCY LIGHT (AEL-3 TO AEL-2)								
97	AEL-3	AEL-2	AEL-2 (+VE)	1.5	Y	12000	LOOSE	
97A	AEL-3	AEL-2	AEL-2 (-VE)	1.5	BLK	11000	LOOSE	
ACCIDENTAL EMERGENCY LIGHT (AEL-2 TO AEL-1)								
98	AEL-2	AEL-1	AEL-1 (+VE)	1.5	Y	10000	LOOSE	
98A	AEL-2	AEL-1	AEL-1 (-VE)	1.5	BLK	9500	LOOSE	
PACIL CIRCUIT								
99	CUBICLE	PACIL-II	PACIL -VE	1.5	BLK	6000	LOOSE	
100	PACIL-I	PACIL-II	PACIL +VE	1.5	Y	3500	LOOSE	
100A	PACIL-I	PACIL-II	PACIL -VE	1.5	BLK	3500	LOOSE	
EFT CIRCUIT								
101	SBC	EFT-I	SPM-I	4	R	29000	LOOSE	
102	SBC	EFT-II	SN-I	4	BLUE	26000	LOOSE	
103	SBC	EFT-III	SPM-II	4	R	11000	LOOSE	
104	SBC	EFT-IV	SN-II	4	BLUE	8500	LOOSE	
105	EFT-I	EFT-II	SPM-I	4	R	6500	LOOSE	
106	EFT-II	EFT-I	SN-I	4	BLUE	6500	LOOSE	
107	EFT-III	EFT-IV	SPM-II	4	R	6500	LOOSE	
108	EFT-IV	EFT-III	SN-II	4	BLUE	6500	LOOSE	

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JUMPER WIRING

Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Branch wiring for roof of LSCN Coach

Har. No.		From	To	Ferrule no.	Ferrule marking	Cable size (in mm ²)	Color Code	Length (in mm)	Remarks
		Location	Location						
109	A	FDB-2	FLSW-1	LI+	FLSW-1	1.5	Y	1800	+VE BRANCH WIRING CABIN-1
	B	FDB-2	FLSW-2	LII+	FLSW-2	1.5	Y	5000	
	C	FDB-2	NLSW-1	LI+	NLSW-1	1.5	Y	5000	
	D	FLSW-1	FL-1	LI+	FL-1	1.5	Y	2800	
	E	FLSW-2	FL-2	LII+	FL-2	1.5	Y	2800	
	F	NLSW-1	NL-1	LI+	NL-1	1.5	Y	3800	
	G	FDB-2	FSW-1	F+	FSW-1	1.5	R	1800	
	H	FDB-2	FSW-2	F+	FSW-2	1.5	R	1800	
	I	FDB-2	FSW-3	F+	FSW-3	1.5	R	5000	
	J	FSW-1	F-1	F+	F-1	1.5	R	3000	
	K	FSW-2	F-2	F+	F-2	1.5	R	3500	
	L	FSW-3	F-3	F+	F-3	1.5	R	3000	
110	A	FDB-3	FLSW-3	LII+	FLSW-3	1.5	Y	1800	+VE BRANCH WIRING CABIN-2
	B	FDB-3	FLSW-4	LI+	FLSW-4	1.5	Y	5000	
	C	FDB-3	NLSW-2	LI+	NLSW-2	1.5	Y	5000	
	D	FLSW-3	FL-3	LII+	FL-3	1.5	Y	2800	
	E	FLSW-4	FL-4	LI+	FL-4	1.5	Y	2800	
	F	NLSW-2	NL-2	LI+	NL-2	1.5	Y	3800	
	G	FDB-3	FSW-4	F+	FSW-4	1.5	R	1800	
	H	FDB-3	FSW-5	F+	FSW-5	1.5	R	1800	
	I	FDB-3	FSW-6	F+	FSW-6	1.5	R	5000	
	J	FSW-4	F-4	F+	F-4	1.5	R	3000	
	K	FSW-5	F-5	F+	F-5	1.5	R	3500	
	L	FSW-6	F-6	F+	F-6	1.5	R	3000	
111	A	FDB-4	FLSW-5	LI+	FLSW-5	1.5	Y	1800	+VE BRANCH WIRING CABIN-3
	B	FDB-4	FLSW-6	LII+	FLSW-6	1.5	Y	5000	
	C	FDB-4	NLSW-3	LI+	NLSW-3	1.5	Y	5000	
	D	FLSW-5	FL-5	LI+	FL-5	1.5	Y	2800	
	E	FLSW-6	FL-6	LII+	FL-6	1.5	Y	2800	
	F	NLSW-3	NL-3	LI+	NL-3	1.5	Y	3800	
	G	FDB-4	FSW-7	F+	FSW-7	1.5	R	1800	
	H	FDB-4	FSW-8	F+	FSW-8	1.5	R	1800	
	I	FDB-4	FSW-9	F+	FSW-9	1.5	R	5000	
	J	FSW-7	F-7	F+	F-7	1.5	R	3000	
	K	FSW-8	F-8	F+	F-8	1.5	R	3500	
	L	FSW-9	F-9	F+	F-9	1.5	R	3000	
112	A	FDB-5	FLSW-7	LII+	FLSW-7	1.5	Y	1800	+VE BRANCH WIRING CABIN-4
	B	FDB-5	FLSW-8	LI+	FLSW-8	1.5	Y	5000	
	C	FDB-5	NLSW-4	LI+	NLSW-4	1.5	Y	5000	
	D	FLSW-7	FL-7	LII+	FL-7	1.5	Y	2800	

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BRANCH WIRING

Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Branch wiring for roof of LSCN Coach

	E	FLSW-8	FL-8	LI+	FL-8	1.5	Y	2800	
	F	NLSW-4	NL-4	LI+	NL-4	1.5	Y	3800	
	G	FDB-5	FSW-10	F+	FSW-10	1.5	R	1800	
	H	FDB-5	FSW-11	F+	FSW-11	1.5	R	1800	
	I	FDB-5	FSW-12	F+	FSW-12	1.5	R	5000	
	J	FSW-10	F-10	F+	F-10	1.5	R	3000	
	K	FSW-11	F-11	F+	F-11	1.5	R	3500	
	L	FSW-12	F-12	F+	F-12	1.5	R	3000	
113	A	FDB-6	FLSW-9	LI+	FLSW-9	1.5	Y	1800	+VE BRANCH WIRING CABIN-5
	B	FDB-6	FLSW-10	LII+	FLSW-10	1.5	Y	5000	
	C	FDB-6	NLSW-5	LI+	NLSW-5	1.5	Y	5000	
	D	FLSW-9	FL-9	LI+	FL-9	1.5	Y	2800	
	E	FLSW-10	FL-10	LII+	FL-10	1.5	Y	2800	
	F	NLSW-5	NL-5	LI+	NL-5	1.5	Y	3800	
	G	FDB-6	FSW-13	F+	FSW-13	1.5	R	1800	
	H	FDB-6	FSW-14	F+	FSW-14	1.5	R	1800	
	I	FDB-6	FSW-15	F+	FSW-15	1.5	R	5000	
	J	FSW-13	F-13	F+	F-13	1.5	R	3000	
	K	FSW-14	F-14	F+	F-14	1.5	R	3500	
	L	FSW-15	F-15	F+	F-15	1.5	R	3000	
114	A	FDB-7	FL-11	LII+	FL-11	1.5	Y	1800	+VE BRANCH WIRING CABIN-6
	B	FDB-7	FL-12	LI+	FL-12	1.5	Y	5000	
	C	FDB-7	NLSW-6	LI+	NLSW-6	1.5	Y	5000	
	D	FLSW-11	FL-11	LII+	FL-11	1.5	Y	2800	
	E	FLSW-12	FL-12	LI+	FL-12	1.5	Y	2800	
	F	NLSW-6	NL-6	LI+	NL-6	1.5	Y	3800	
	G	FDB-7	FSW-16	F+	FSW-16	1.5	R	1800	
	H	FDB-7	FSW-17	F+	FSW-17	1.5	R	1800	
	I	FDB-7	FSW-18	F+	FSW-18	1.5	R	5000	
	J	FSW-16	F-16	F+	F-16	1.5	R	3000	
	K	FSW-17	F-17	F+	F-17	1.5	R	3500	
	L	FSW-18	F-18	F+	F-18	1.5	R	3000	
115	A	FDB-8	FL-13	LI+	FL-13	1.5	Y	1800	+VE BRANCH WIRING CABIN-7
	B	FDB-8	FL-14	LII+	FL-14	1.5	Y	5000	
	C	FDB-8	NLSW-7	LI+	NLSW-7	1.5	Y	5000	
	D	FLSW-13	FL-13	LI+	FL-13	1.5	Y	2800	
	E	FLSW-14	FL-14	LII+	FL-14	1.5	Y	2800	
	F	NLSW-7	NL-7	LI+	NL-7	1.5	Y	3800	
	G	FDB-8	FSW-19	F+	FSW-19	1.5	R	1800	
	H	FDB-8	FSW-20	F+	FSW-20	1.5	R	1800	
	I	FDB-8	FSW-21	F+	FSW-21	1.5	R	5000	
	J	FSW-19	F-19	F+	F-19	1.5	R	3000	

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BRANCH WIRING

Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Branch wiring for roof of LSCN Coach

	K	FSW-20	F-20	F+	F-20	1.5	R	3500	
	L	FSW-21	F-21	F+	F-21	1.5	R	3000	
116	A	FDB-9	FL-15	LII+	FL-15	1.5	Y	1800	+VE BRANCH WIRING CABIN-8
	B	FDB-9	FL-16	LI+	FL-16	1.5	Y	5000	
	C	FDB-9	NLSW-8	LI+	NLSW-8	1.5	Y	5000	
	D	FLSW-15	FL-15	LII+	FL-15	1.5	Y	2800	
	E	FLSW-16	FL-16	LI+	FL-16	1.5	Y	2800	
	F	NLSW-8	NL-8	LI+	NL-8	1.5	Y	3800	
	G	FDB-9	FSW-22	F+	FSW-22	1.5	R	1800	
	H	FDB-9	FSW-23	F+	FSW-23	1.5	R	1800	
	I	FDB-9	FSW-24	F+	FSW-24	1.5	R	5000	
	J	FSW-22	F-22	F+	F-22	1.5	R	3000	
	K	FSW-23	F-23	F+	F-23	1.5	R	3500	
	L	FSW-24	F-24	F+	F-24	1.5	R	3000	
117	A	FDB-10	FL-17	LI+	FL-17	1.5	Y	1800	+VE BRANCH WIRING CABIN-9
	B	FDB-10	FL-18	LII+	FL-18	1.5	Y	5000	
	C	FDB-10	NLSW-9	LI+	NLSW-9	1.5	Y	5000	
	D	FLSW-17	FL-17	LI+	FL-17	1.5	Y	2800	
	E	FLSW-18	FL-18	LII+	FL-18	1.5	Y	2800	
	F	NLSW-9	NL-9	LI+	NL-9	1.5	Y	3800	
	G	FDB-10	FSW-25	F+	FSW-25	1.5	R	1800	
	H	FDB-10	FSW-26	F+	FSW-26	1.5	R	1800	
	I	FDB-10	FSW-27	F+	FSW-27	1.5	R	5000	
	J	FSW-25	F-25	F+	F-25	1.5	R	3000	
	K	FSW-26	F-26	F+	F-26	1.5	R	3500	
	L	FSW-27	F-27	F+	F-27	1.5	R	3000	
118	A	FDB-11	FL-19	LII+	FL-19	1.5	Y	1800	+VE BRANCH WIRING CABIN-10
	B	FDB-11	FL-20	LI+	FL-20	1.5	Y	5000	
	C	FDB-11	NLSW-10	LI+	NLSW-10	1.5	Y	5000	
	D	FLSW-19	FL-19	LII+	FL-19	1.5	Y	2800	
	E	FLSW-20	FL-20	LI+	FL-20	1.5	Y	2800	
	F	NLSW-10	NL-10	LI+	NL-10	1.5	Y	3800	
	G	FDB-11	FSW-28	F+	FSW-28	1.5	R	1800	
	H	FDB-11	FSW-29	F+	FSW-29	1.5	R	1800	
	I	FDB-11	FSW-30	F+	FSW-30	1.5	R	5000	
	J	FSW-28	F-28	F+	F-28	1.5	R	3000	
	K	FSW-29	F-29	F+	F-29	1.5	R	3500	
	L	FSW-30	F-30	F+	F-30	1.5	R	3000	
119	A	FDB-1	DL-2	LI+	DL-2	1.5	Y	3500	+VE BRANCH WIRING Doorway NPP end
	B	FDB-1	GL-1	LI+	GL-1	1.5	Y	4000	
	C	FDB-1	LL-1	LI+	LL-1	1.5	Y	3500	

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BRANCH WIRING

Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Branch wiring for roof of LSCN Coach

	D	FDB-1	LL-2	LI+	LL-2	1.5	Y	6500	
	E	FDB-1	DL-1	LI+	DL-1	1.5	Y	1500	
120	A	FDB-12	DL-4	LI+	DL-4	1.5	Y	3500	+VE BRANCH WIRING Doorway PP end
	B	FDB-12	GL-2	LI+	GL-2	1.5	Y	4000	
	C	FDB-12	LL-3	LI+	LL-3	1.5	Y	3500	
	D	FDB-12	LL-4	LI+	LL-4	1.5	Y	6500	
	E	FDB-12	DL-3	LI+	DL-3	1.5	Y	1500	
121	A	FDB-14	FL-1	L-	FL-1	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-1
	B	FDB-14	FL-2	L-	FL-2	1.5	BLUE	1500	
	C	FDB-14	NL-1	L-	NL-1	1.5	BLUE	2000	
	D	FDB-14	F-1	F-	F-1	1.5	BLK	3000	
	E	FDB-14	F-2	F-	F-2	1.5	BLK	2500	
	F	FDB-14	F-3	F-	F-3	1.5	BLK	2000	
	G	FDB-14	LS-1	LSN	LS-1	1.5	BLK	4500	
122	A	FDB-15	FL-3	L-	FL-3	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-2
	B	FDB-15	FL-4	L-	FL-4	1.5	BLUE	1500	
	C	FDB-15	NL-2	L-	NL-2	1.5	BLUE	2000	
	D	FDB-15	F-4	F-	F-4	1.5	BLK	3000	
	E	FDB-15	F-5	F-	F-5	1.5	BLK	2500	
	F	FDB-15	F-6	F-	F-6	1.5	BLK	2000	
	G	FDB-15	LS-2	LSN	LS-2	1.5	BLK	4500	
123	A	FDB-16	FL-5	L-	FL-5	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-3
	B	FDB-16	FL-6	L-	FL-6	1.5	BLUE	1500	
	C	FDB-16	NL-3	L-	NL-3	1.5	BLUE	2000	
	D	FDB-16	F-7	F-	F-7	1.5	BLK	3000	
	E	FDB-16	F-8	F-	F-8	1.5	BLK	2500	
	F	FDB-16	F-9	F-	F-9	1.5	BLK	2000	
	G	FDB-16	LS-3	LSN	LS-3	1.5	BLK	4500	
124	A	FDB-17	FL-7	L-	FL-7	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-4
	B	FDB-17	FL-8	L-	FL-8	1.5	BLUE	1500	
	C	FDB-17	NL-4	L-	NL-4	1.5	BLUE	2000	
	D	FDB-17	F-10	F-	F-10	1.5	BLK	3000	
	E	FDB-17	F-11	F-	F-11	1.5	BLK	2500	
	F	FDB-17	F-12	F-	F-12	1.5	BLK	2000	
	G	FDB-17	LS-4	LSN	LS-4	1.5	BLK	4500	
125	A	FDB-18	FL-9	L-	FL-9	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-5
	B	FDB-18	FL-10	L-	FL-10	1.5	BLUE	1500	
	C	FDB-18	NL-5	L-	NL-5	1.5	BLUE	2000	
	D	FDB-18	F-13	F-	F-13	1.5	BLK	3000	

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BRANCH WIRING

Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Branch wiring for roof of LSCN Coach

	E	FDB-18	F-14	F-	F-14	1.5	BLK	2500	
	F	FDB-18	F-15	F-	F-15	1.5	BLK	2000	
	G	FDB-18	LS-5	LSN	LS-5	1.5	BLK	4500	
126	A	FDB-19	FL-11	L-	FL-11	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-6
	B	FDB-19	FL-12	L-	FL-12	1.5	BLUE	1500	
	C	FDB-19	NL-6	L-	NL-6	1.5	BLUE	2000	
	D	FDB-19	F-16	F-	F-16	1.5	BLK	3000	
	E	FDB-19	F-17	F-	F-17	1.5	BLK	2500	
	F	FDB-19	F-18	F-	F-18	1.5	BLK	2000	
	G	FDB-19	LS-6	LSN	LS-6	1.5	BLK	4500	
127	A	FDB-20	FL-13	L-	FL-13	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-7
	B	FDB-20	FL-14	L-	FL-14	1.5	BLUE	1500	
	C	FDB-20	NL-7	L-	NL-7	1.5	BLUE	2000	
	D	FDB-20	F-19	F-	F-19	1.5	BLK	3000	
	E	FDB-20	F-20	F-	F-20	1.5	BLK	2500	
	F	FDB-20	F-21	F-	F-21	1.5	BLK	2000	
	G	FDB-20	LS-7	LSN	LS-7	1.5	BLK	4500	
128	A	FDB-21	FL-15	L-	FL-15	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-8
	B	FDB-21	FL-16	L-	FL-16	1.5	BLUE	1500	
	C	FDB-21	NL-8	L-	NL-8	1.5	BLUE	2000	
	D	FDB-21	F-22	F-	F-22	1.5	BLK	3000	
	E	FDB-21	F-23	F-	F-23	1.5	BLK	2500	
	F	FDB-21	F-24	F-	F-24	1.5	BLK	2000	
	G	FDB-21	LS-8	LSN	LS-8	1.5	BLK	4500	
129	A	FDB-22	FL-17	L-	FL-17	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-9
	B	FDB-22	FL-18	L-	FL-18	1.5	BLUE	1500	
	C	FDB-22	NL-9	L-	NL-9	1.5	BLUE	2000	
	D	FDB-22	F-25	F-	F-25	1.5	BLK	3000	
	E	FDB-22	F-26	F-	F-26	1.5	BLK	2500	
	F	FDB-22	F-27	F-	F-27	1.5	BLK	2000	
	G	FDB-22	LS-9	LSN	LS-9	1.5	BLK	4500	
130	A	FDB-23	FL-19	L-	FL-19	1.5	BLUE	3500	-VE BRANCH WIRING CABIN-10
	B	FDB-23	FL-20	L-	FL-20	1.5	BLUE	1500	
	C	FDB-23	NL-10	L-	NL-10	1.5	BLUE	2000	
	D	FDB-23	F-28	F-	F-28	1.5	BLK	3000	
	E	FDB-23	F-29	F-	F-29	1.5	BLK	2500	
	F	FDB-23	F-30	F-	F-30	1.5	BLK	2000	
	G	FDB-23	LS-10	LSN	LS-10	1.5	BLK	4500	

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BRANCH WIRING

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Annexure-B to EDTS-357, Rev-C, AM-1 & 2, Corr-1: Harness for Branch wiring for roof of LSCN Coach

131	A	FDB-13	DL-2	L-	DL-2	1.5	BLUE	1500	-VE BRANCH WIRING Doorway NPP end
	B	FDB-13	GL-1	L-	GL-1	1.5	BLUE	4000	
	C	FDB-13	LL-1	L-	LL-1	1.5	BLUE	6500	
	D	FDB-13	LL-2	L-	LL-2	1.5	BLUE	3500	
	E	FDB-13	DL-1	L-	DL-1	1.5	BLUE	3500	
132	A	FDB-24	DL-4	L-	DL-4	1.5	BLUE	1500	-VE BRANCH WIRING Doorway PP end
	B	FDB-24	GL-2	L-	GL-2	1.5	BLUE	4000	
	C	FDB-24	LL-3	L-	LL-3	1.5	BLUE	6500	
	D	FDB-24	LL-4	L-	LL-4	1.5	BLUE	3500	
	E	FDB-24	DL-3	L-	DL-3	1.5	BLUE	3500	
PNEUMATIC PRESSURISED SYSTEM FOR LAVATORY									
133	A	FDB-1	PS-1	PS +	PS-1	1.5	Y	3000	+VE CIRCUIT (LOOSE SUPPLY)
	B	FDB-1	PS-2	PS +	PS-2	1.5	Y	3000	
	C	FDB-13	PS-1	PS +	PS-1	1.5	Y	5000	
	D	FDB-13	PS-2	PS +	PS-2	1.5	Y	5500	
134	A	FDB-12	PS-1	PS -	PS-1	1.5	B	5000	-VE CIRCUIT (LOOSE SUPPLY)
	B	FDB-12	PS-2	PS -	PS-2	1.5	B	5000	
	C	FDB-24	PS-1	PS -	PS-1	1.5	B	3000	
	D	FDB-24	PS-2	PS -	PS-2	1.5	B	4000	
LAVATORY EXHAUST FAN CIRCUIT									
Har. No.		From	To	Electrical Circuit	Cable size (in mm ²)	Color code	Length in mm	Remarks	
135	A	CUBICLE	EX. FAN-1	EX. FAN-1 (R)	1.5	R	27000	EXHAUST FAN-1 (LOOSE SUPPLY)	
	B	CUBICLE	EX. FAN-1	EX. FAN-1 (Y)	1.5	Y	27000		
	C	CUBICLE	EX. FAN-1	EX. FAN-1 (B)	1.5	B	27000		
	D	CUBICLE	EX. FAN-1	EX. FAN-1 (PE)	1.5	GNYE	27000		
136	A	CUBICLE	EX. FAN-2	EX. FAN-2 (R)	1.5	R	6000	EXHAUST FAN-2 (LOOSE SUPPLY)	
	B	CUBICLE	EX. FAN-2	EX. FAN-2 (Y)	1.5	Y	6000		
	C	CUBICLE	EX. FAN-2	EX. FAN-2 (B)	1.5	B	6000		
	D	CUBICLE	EX. FAN-2	EX. FAN-2 (PE)	1.5	GNYE	6000		

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BRANCH WIRING

ANNEXURE-B (EDTS-357)

(+VE SIDE JUMPERS)
LIGHT, FAN & LIMIT SWITCH

FDB-11		FDB-12	(H.N.-02)
FDB-23		FDB-24	(H.N.-51)
CABIN-9		CABIN-10	(H.NO.6-10A)
CABIN-8		CABIN-9	(H.NO.11-15A)
CABIN-7		CABIN-8	(H.NO.16-20A)
CABIN-6		CABIN-7	(H.NO.21-25A)
CABIN-5		CABIN-6	(H.NO.26-30A)
CABIN-4		CABIN-5	(H.NO.31-35A)
CABIN-3		CABIN-4	(H.NO.36-40A)
CABIN-2		CABIN-3	(H.NO.41-45A)
CABIN-1		CABIN-2	(H.NO.46-50A)

L = 1650MM

(-VE SIDE JUMPERS)
LIGHT, FAN & LIMIT SWITCH

FDB-13		FDB-14	(H.N.-73)
FDB-1		FDB-2	(H.N.-53)
CABIN-9		CABIN-10	(H.NO.55-56)
CABIN-8		CABIN-9	(H.NO.57-58)
CABIN-7		CABIN-8	(H.NO.59-60)
CABIN-6		CABIN-7	(H.NO.61-62)
CABIN-5		CABIN-6	(H.NO.63-64)
CABIN-4		CABIN-5	(H.NO.65-66)
CABIN-3		CABIN-4	(H.NO.67-68)
CABIN-2		CABIN-3	(H.NO.69-70)
CABIN-1		CABIN-2	(H.NO.71-72)

L = 1650MM

NOTE:- 1. ALL DIMENSIONS IN MM.

DETAIL DRGS STARTING WITH "LI" ARE INTERNAL REFERENCE LISTS ONLY AND ARE NOT FOR ISSUE

ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID.

FOR UNTOLERANCED DIMENSIONS REFER MDG0008

DATE OF FIRST ISSUE 21/11/2012

WELD LENGTH	ITEM	DESCRIPTION & DIMENSIONS	OPASSLY	DETAIL DRG	MATL. & SPEC.	REMARKS
NIL	M	GROUP	ELECTRICAL	SUPERSEDES:		
WEIGHT	FILE	\\D\elec\sdhu\SKED-649c1.prt				
NIL	KG	JUMPER & BRANCH WIRING OF ROOF FOR LSCN COACH				
S.AREA						
NIL	M ²					
LENGTH / DIA						
NIL	M	RAIL COACH FACTORY, KAPURTHALA			REF.DRG.No.	
WIDTH / THICK		रेल कोच फैक्टरी कपूरथला			PL NO.	
NIL	M				DRG.NO.	SKED-649
HEIGHT		SEE/D&D			ALT.	c
NIL	M				SIZE/A2	SHEET 1/2
		SEE/D&D	DY.CEE/D&D			

ANNEXURE-B (EDTS-357)

MOBILE CHARGING SOCKET (PHASE & NEUTRAL SIDE JUMPERS)

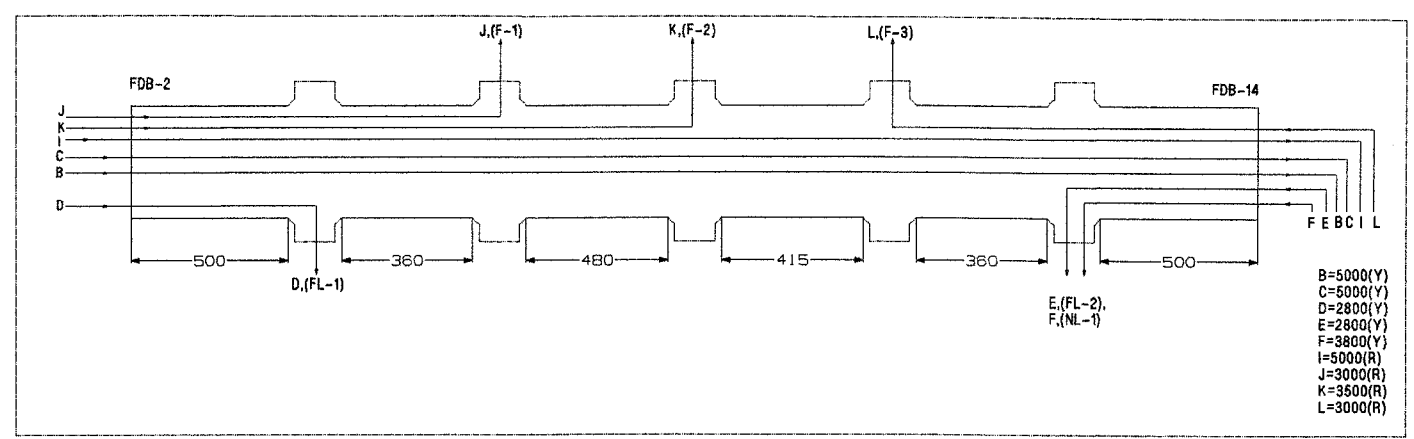
CUBICLE		MCS-28,29,30, (H.NO. -75)
MCS-28,29,30		MCS-25,26,27, (H.NO. -76)
MCS-25,26,27		MCS-22,23,24, (H.NO. -77)
MCS-22,23,24		MCS-19,20,21, (H.NO. -78)
MCS-19,20,21		MCS-16,17,18, (H.NO. -95)
MCS-16,17,18		MCS-13,14,15, (H.NO. -80)
MCS-13,14,15		MCS-10,11,12, (H.NO. -81)
MCS-10,11,12		MCS-7,8,9, (H.NO. -82)
MCS-7,8,9		MCS-4,5,6, (H.NO. -83)
MCS-4,5,6		MCS-1,2,3, (H.NO. -84)

1650MM

CUBICLE		MCS-40, (H.NO-85)
MCS-40		MCS-39, (H.NO-86)
MCS-39		MCS-38, (H.NO-87)
MCS-38		MCS-37, (H.NO-88)
MCS-37		MCS-36, (H.NO-89)
MCS-36		MCS-35, (H.NO-90)
MCS-35		MCS-34, (H.NO-91)
MCS-34		MCS-33, (H.NO-92)
MCS-33		MCS-32, (H.NO-93)
MCS-32		MCS-31, (H.NO-94)

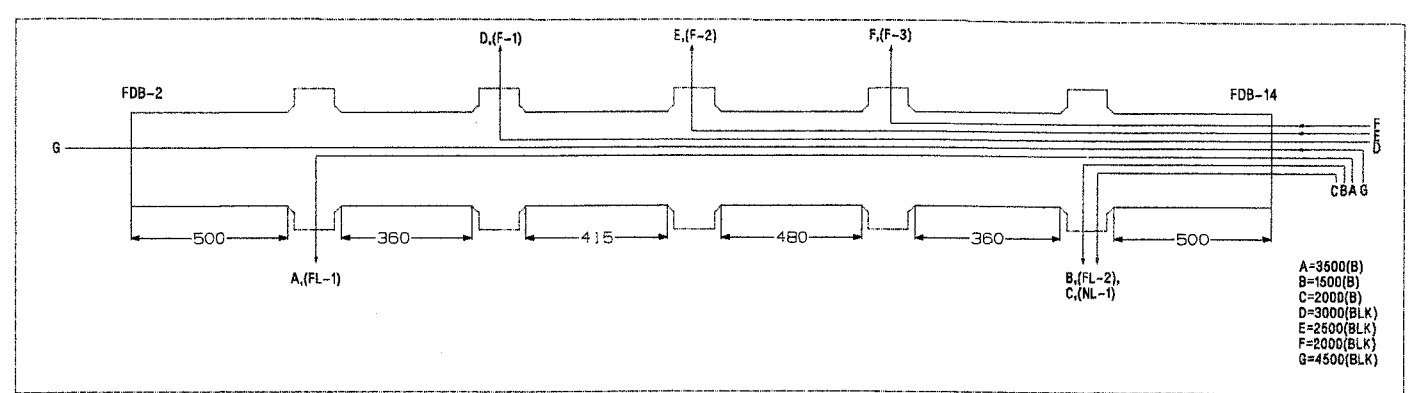
L = 1650MM

BRANCH WIRING FOR LIGHT & FAN CIRCUIT (+VE)

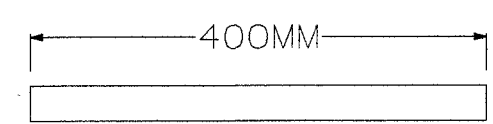


10 SETS (CABIN-1 TO CABIN-10)

BRANCH WIRING FOR LIGHT & FAN CIRCUIT & LIMIT SWITCH (-VE)



10 SETS (CABN-6 TO CABIN-10)



40 NO. FOR SWITCH DROPS
(BELL MOUTH AT ONE END)

5.H.NO.1,3,4 & 5 BE SUPPLIED LOOSE.
4.H.NO.52,54 & 54A TO BE SUPPLIED LOOSE.
2.H.NO.74 TO 741 & 95 TO 98A (LOOSE SUPPLY FOR BRANCH WIRING).
1. Ø 20 MM RIGID PVC CONDUIT SHALL ONLY BE USED.

NOTE-

DETAIL DRGS STARTING WITH "LI" ARE INTERNAL REFERENCE LISTS ONLY AND ARE NOT FOR ISSUE
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FOR UNTOLERANCED DIMENSIONS REFER MDG0008 DATE OF FIRST ISSUE 21/11/2012

WELD LENGTH		ITEM	DESCRIPTION & DIMENSIONS		OPASSLY	DETAIL DRG		MATL. & SPEC.		REMARKS			
NIL		M	GROUP	ELECTRICAL		SUPERSEDES:							
WEIGHT		FILE	\\D\elec\sahu\SKED-649c2.prt										
NIL		KG	JUMPER & BRANCH WIRING OF ROOF FOR LSCN COACH					SCALE		SSE/ED			
S. AREA										CHD			
NIL		M ²								DRN		A2	
LENGTH / DIA										REF.DRG.No.			
NIL		M	RAIL COACH FACTORY, KAPURTHALA										
WIDTH / THICK			रेल कोच फेक्टरी कपूरथला					PL NO.					
NIL		M						IRS					
HEIGHT			SEE/D&D					DRG.NO.		SKED-649			
NIL		M						DY.CEE/D&D		ALT.		C	SIZE A2 SHEET