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सत्यमेव जयते

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

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



No. EL/1.2.9.1

Dated 28.01.2005

Chief Electrical Engineer,

- Central Railway, Mumbai CST- 400 001.
- Eastern Railway, Fairlie Place, Kolkata- 700 001
- East Cost Railway, Chandrashekharapur, Bhubaneswar- 751 016.
- Northern Railway, Baroda House, New Delhi-110 001
- North Central Railway, Hasting Road, Allahabad-211 001.
- Southern Railway, Park Town, Chennai-600 003
- South Central Railway, Rail Nilayam, Secunderabad -500 071
- South Eastern Railway, Garden Reach, Kolkata -700 043
- Western Railway, Churchgate, Mumbai-400 020
- West Central Railway, Jabalpur-482001
- South East Central Railway, Bilaspur-495004
- East Central Railway, Hazipur-844101 (Bihar)
- North Western Railway, Jaipur-302006.
- Chittaranjan Locomotive Works, Chittaranjan- 713 331

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MODIFICATION SHEET No. ELRS/MS/0335, REV. '0'

1.0 Title :

Provision of time delay relay in control circuit of ac Static Converter fitted locomotive.

2.0 Object :

- 2.1 The existing Static Converter is having facility of soft start feature by which all auxiliaries will start at a time.
- 2.2 The Drivers have already been instructed to close DJ and then put BLVMT "ON" thereafter the inverter should be put "ON". So, that, the inverter ramps up with full load in service. If BLVMT is put "ON" after BLSI then the tripping occurs due to over loading.
- 2.3 It is observed that maximum number of tripping on line occur due to wrong operation by the drivers, which results time loss and failure on line.

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2.4 In view of the above, RDSO has worked out a small modification in control logic of the auxiliary control circuit of Static Converter fitted locomotives.

2.5 After implementation of the modification, if driver operates the BL switches wrongly then the DJ will not trip, only the Static Converter will trip and re- start after 2 secs, which will avoid tripping of DJ and latching of Inverter.

3.0 Work to be done:

3.1 The control circuit logic is to be modified as per RDSO Sketch No. SKEL-4691.

3.2 The normally open (N/O) interlock of one timer relay (QSVM) is to be added in parallel to the normally close (N/C) interlock of BLVMT.

4.0 Application to the class of Electric Locomotives:

All types of ac Electric Locomotives provided with static converter.

5.0 Material Required :

One timer relay having 2 N/O and 2 N/C interlock, similar to M/s. WOAMA; M/s. Cutler Hammer or M/s. Concored make of time delay relays already approved by RDSO.

6.0 Material rendered surplus: NIL

7.0 Reference :

- i) Discussion in 30th MSG held at Central Railway on 16.01 to 17.01.05
- ii) Test and trial conducted at Kanpur Shed and implemented in a locomotive.

8.0 Modification Drawing : SKEL-4691.

9.0 Agency for implementation:

All Electric Loco Shed holding with Static Converter Unit, POH Workshops and CLW

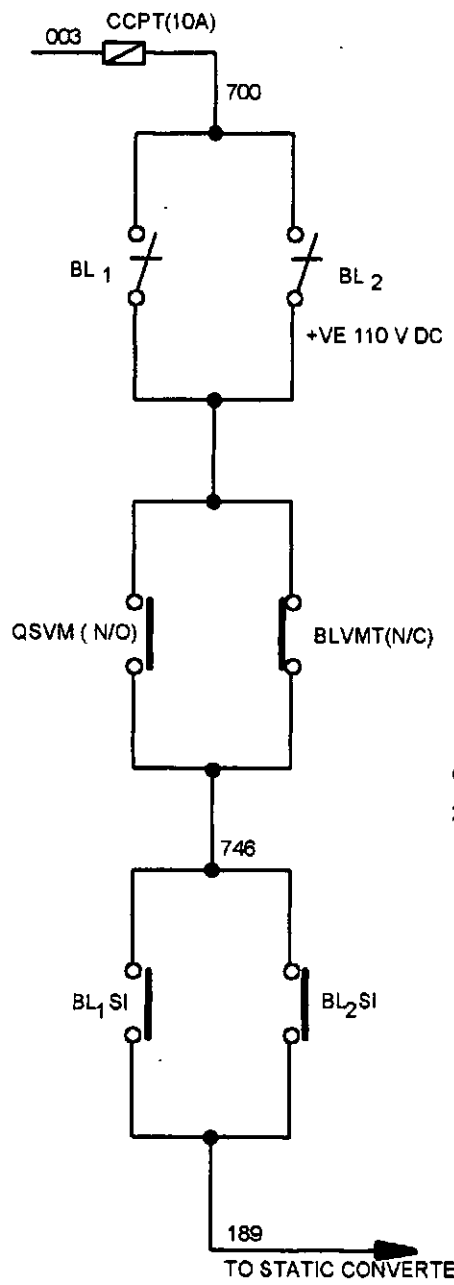
Encl: As above

(S. K. Sinha)
for Director General/Elect.

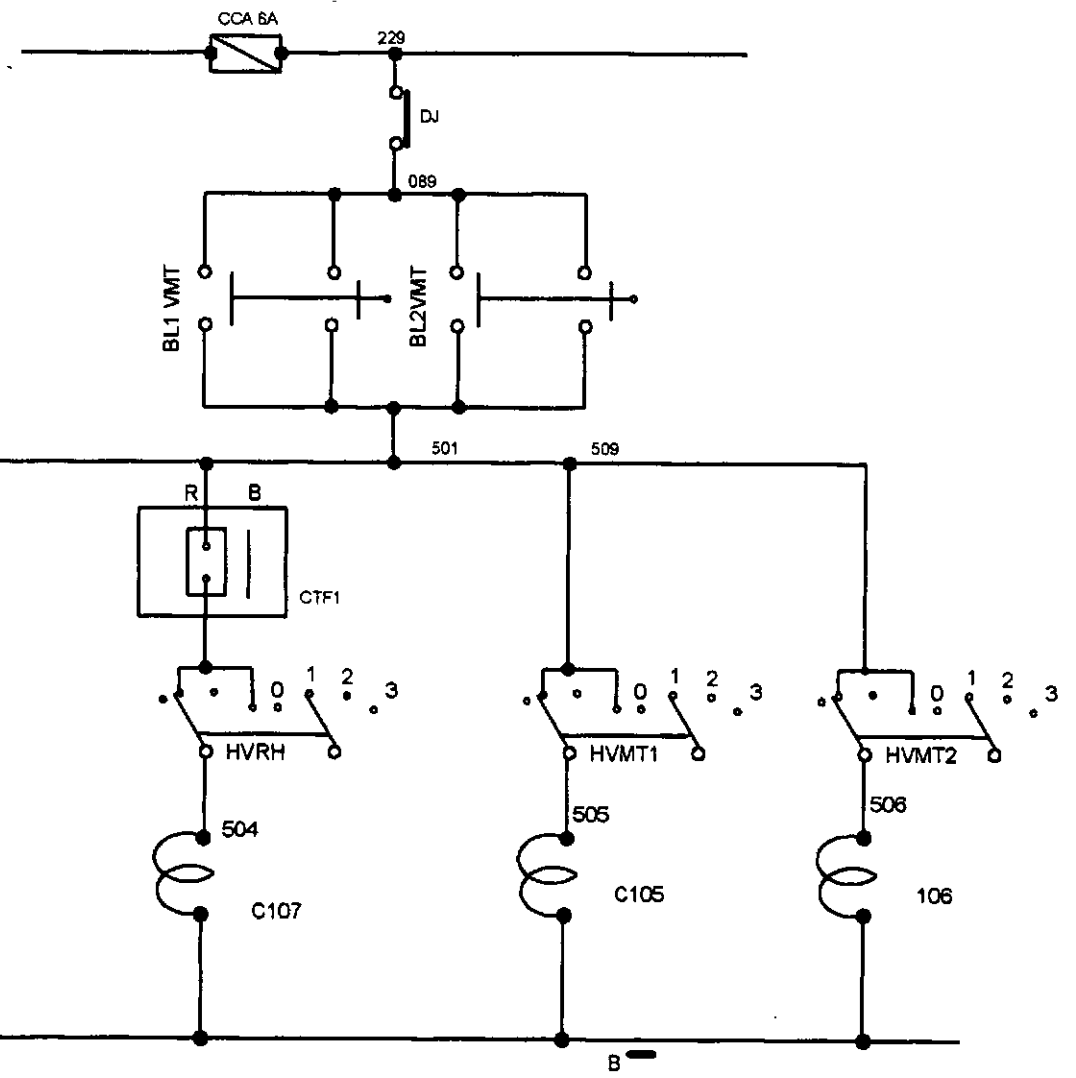
Copy to: As per Standard Mailing List No.EL/M/0019, Ver. '2'.

Encl: As above

(S. K. Sinha)
for Director General/Elect.



QSV
2 Sec.
ON DELAY



REF.No	PARTNo.	DESCRIPTION	DETAIL DRG.NO	NO/LOCO	MATL.	SPEC.
REF.-			SCALE-N.T.S	APPD.BY		
TIME DELAY RELAY FOR CONTROL CIRCUIT					FIRST ISSUED - Jan.2005	
RD SO. ELECT.DTE SKEL- 4691, ALT."O"					SUPERSEDED BY -	

Dt.	17.01.2005
D.	K.P.NIGAM
C.	R.Desgupta
T.	

STATUS	ALT	REF.NO.	DESCRIPTION	APPD.BY	DATE