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No. EL/1.2.9.1 /SIE

Dated -29.04.2016

Chief Electrical Engineer,

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6. East Coast Railway, Chandrashekharpur, Bhubaneshwar-751016
7. Southern Railway, Park Town, Chennai-600 003.
8. South Central Railway, Secunderabad-500 371.
9. South Eastern Railway, Garden Reach, Kolkata -700 043.
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13. West Central Railway, Jabalpur-482001.

MODIFICATION SHEET No. RDSO/2016/EL/MS/0452 Rev.'0' dtd-29. 04.2016

1.0 TITLE :

To overcome the failure of K-8 contactor of Battery Charger of M/s. Siemens make 180 KVA Static Converter.

2.0 OBJECT:

There had been frequent failures of K-8 contactor in Battery Charger of 180 KVA Static Converter of M/s.Siemens make. The K-8 contactor is being used in reverse polarity protection of Battery Charger. It was noted that sometimes on line the K-8 contactor is not getting closed either due to mechanical jamming or sometimes coil of the contactor getting stuck due to misbehavior of interlocks. The non closing of contactor drains the battery leading to line failure of locomotive and subsequent blocking of section. In this regards a meeting was conducted with M/s. Siemens regarding K-8 contactor failure with the representative of M/Siemens on

160429 MS 452 Mod on K -8 contactor Sie SIV

07.04.2015 and it was decided that K-8 contactor of battery charger will be bypassed.

3.0 Existing Arrangement:

- (i) The K-8 contactor is mounted at the top in between the Q1 & Q2 MCB at the Electronic compartment where M 1300 card is mounted.

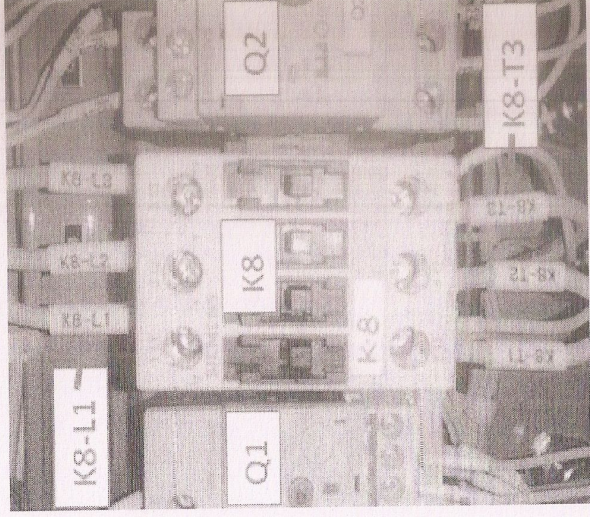


Fig 1: Location of K -8 contactor (to be removed) in 180 KVA Static converter of Siemens make.

The K-8 contactor is used for reverse polarity protection of the out put of Battery Charger. The main purpose of contactor is to protect reverse polarity protection and comes in picture at the time of either commissioning or at the time of removing / re connecting the output wires of the charger. If it is isolate/short there will be no effect of the performance and operation of Static Converter.

The contactor is basically fitted in Nashik made Battery Charger in the panel which was commissioned from Jan 2012 onwards.

4.0 Modified Arrangement:

The procedure of removing K 8 contactor is as follows:

4.1. To ~~by~~ pass the contactor the wire **K8 L-1** wire from the interlock L-1 is to be removed and connect with the wire **K 8 T-3** in the same terminal of T 3 interlock. The wires are to be shorted. (Fig -1 may be referred for placement of **K8 L-1** and **K8 T-3**).

4.2. The micro fuse (glass fuse) from fuse holder **F 7A & F14A** which are mounted at left panel wall below U 4 sensor also to be removed. This is to be done on safety measure as by removing the micro fuse 110 V supply will not energized the Coli. The location of micro fuse is below U 4 sensor .

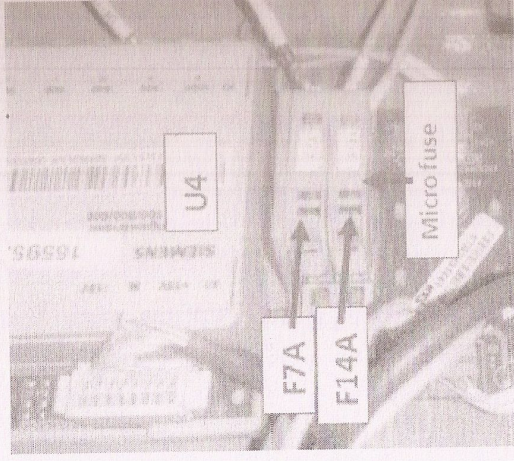


Fig 2: Location of micro fuses (to be removed). 180 KVA Static Converter of Siemens make.

5.0 Modification Work to be carried out:

- 5.1** The wire no **K8 L-1** wire is to be removed from the interlock L-1 and to be connected with the wire **K8 T-3** in the same terminal of T 3 interlock.
- 5.2** The micro fuse (glass fuse) from fuse holder **F7A & F14A** which are mounted at left panel wall below U 4 sensor are also to be removed, so that 110 volt supply cannot energize the coil.

6.0 Application to class of locomotives:

The modification can be implemented in all type of single phase conventional Electric Locomotive having 180 KVA SIV of Siemens with Nashik made battery charger.

7.0 Material required for modification:

NIL

8.0 Material rendered as surplus:

K-8 contactor & Micro fuse -02 nos

9.0 REFERENCES:

- 1 Discussion with M/s Siemens on failures of locomotive due to K-8 contactor.
- 2 The punctuality loss cases of K-8 contactor

10.0 MODIFICATION DRAWING :

Fig 1 & Fig 2 may be referred.

11.0 AGENCY FOR IMPLEMENTATION :

Electric Loco Sheds, POH/MTR Workshops.

Loco sheds to ensure that during commissioning or at the time of removing / re connecting the output wires of the charger are to be connected properly so that the reverse polarity protection remains. .

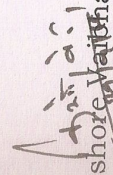
12.0 DISTRIBUTION :

As per standard Mailing List

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