



इ रि से ट
विद्युत सिगनल प्रयोगशाला
प्रयोग नं: ई एस एल 21

IRISET
ELECTRICAL SIGNALLING LABORATORY
EXPERIMENT NO.: ESL – 21

नाम
Name : _____
अनुक्रमांक
Roll No : _____
पाठ्यक्रम
Course : _____
दिनांक
Date : _____

प्राप्त अंक
Marks Awarded : _____
अनुदेशक का अधाक्षर
Instructor Initial : _____

Siemens Relay Interlocking (Non-Route Setting type)

STUDY OF CONTROL PANEL

Briefing:

Non route setting type relay interlocking (Panel Interlocking) is normally preferred for way side stations as well as small and medium yards up to 50 routes. In this system, for clearing a signal the operator has to first set the route by individually operating all points in the route, overlap and isolation. Then initiate signal clearance by pressing relevant signal and route buttons simultaneously. This operation check the permissibility detects and locks the routes to clear the signal. Once the route is set and route strip indications lit indicates that the relevant points in the route, overlap and isolation are locked and can be released only after the passage of a train or by the emergency cancellation of the route. It is compulsory to have sectional route release in a panel interlocking system of siemens version. For clearing a signal the number of operations to be done is more. Hence, it is obvious that for major yards with maximum movements, non-route setting type relay interlocking is not preferred. In this system of relay interlocking, metal to metal contact relays of siemens K-50 relay mini groups and minor groups are used.

The operating panel used is domino type panel with push button controls. As per IRS specifications S-36, SM's key is compulsory. SM's key once taken out, locks the panel electrically. However, throwing a cleared signal to danger is made feasible from the safety point of view, in this condition.

I. Study the panel and answer the following:-

S.no	Name of the button	Designation	Colour	Location
1.	Overlap Release Button			
2.	Emergency full route cancellation Button			
3.	Calling on signal Button			
4.	Slot Release Button			

5.	Slot Return back Button			
6.	Crank Handle Release Button			
7.	LC gate Release Button			
8.	Siding point Release Button			

II Explain the various operations to be done for the following:-

1. To set a route:
2. To cancel the route of Home signal after setting of Route.
3. To cancel the set route for the mainline starter signal, when the berthing track is clear.
4. What operations are required to cancel the route of a main line starter when cleared for run through and the train has just passed the home signal and stopped. Which counter registers these operations?
5. How to clear the calling on signal when the main signal does not clear due to berthing track failure.

6. Write the sequence of the operations for the following :

(a) To release and take back the control of LC gate

(b) To release and withdraw the control of siding points.

C) To release and withdraw crank handle key slot.

Date:

Signature of the Trainee