

Technical Specification

Alteration in existing Electronic Interlocking (EI) system at NOH, SZN, MALA, SG and PP stations in connection to modified calling ON control circuit and modified point detection circuit, Preparation of Integrated Cable Route Plan of Various S&T Cables Laid in Station and Block of IZN Division

GENERAL:

1. The work shall be carried out according to the drawings approved by the Railway and shall conform to the provisions of the “Signal Engineering Manual” and “Schedule of Dimensions” as modified from time to time unless deviation, if any, are specifically approved by the Engineer. The contractor shall be solely responsible for proper execution of the work as per the said deviation and specifications.
- a. The position of foundations of signal posts, apparatus cases, junction boxes, cable termination boxes, shunting/block section limit boards, warning boards, legend boards and power panel as required, will be indicated conforming to the signaling plan and cable plan by the engineer’s representative at site before commencement of the work at the station.
- b. The excavation of pits for various types of foundations shall be done as per drawings or instructions given by engineer’s representative and during the excavation, the earth of the pit shall be thrown on plain ground away from track and left out earth, if any, shall be thrown outside the railway premises.
- c. Signal posts and warning boards shall be vertical and plumb.
- d. Cable openings in apparatus cases, junction boxes, location huts and in relay rooms should be covered by sand. Top of inside flooring should be plastered with cement for apparatus cases and junction boxes all with contractor's material.
- e. Cables should be properly terminated in the terminal boards/ racks. Cables terminated inside apparatus cases, junction boxes and in relay room should be fixed by the clamp or by any other method indicated by Engineer-in-charge. Name of the circuits carried by different cores shall be displayed by the side of every termination by painting or any other means approved by Engineer-in-charge.
- f. Wires shall be terminated properly on terminals.
- g. Wires should be done in a neat manner and wires neatly bunched and tied unless they are drawn on troughs or cable ladders.
- h. No joints are permitted in the connecting wires.
- i. Provision of insulation, wherever required, should follow standard approved Railway practice for the purpose.
- j. Rod joints for points and detectors should be only smithy-welded and the engineer or his representative will test the welded rods before these are installed.
- k. No work on a working installation, e.g. point, track circuit etc. should be undertaken without permission and presence of authorized representative of Engineer- in-charge.
- l. All materials and equipment to be supplied and used in execution of the work should be to IRS with latest amendments or specification wherever applicable or to ISS, if IRS is not available. In cases of materials for which neither IRS nor ISS is available, detailed specification with the drawings shall be supplied for approval of the Railway. In case the drawing or specifications of a material gets changed or amendment is issued subsequent to the tender opening, the latest amendments or specification for that material shall apply.
- m. The fixing of control panel, cable termination and relay racks at the respective places shall have to be done. Wiring of relay racks and control panels shall be carried out as per circuit

- diagram approved by the Railways. Interconnection arrangements between the racks and control panels are to be made as required.
- n. The equipment are to be wired in Relay Room, Control panel, power supply arrangement, apparatus case, Cable Termination box, battery Box and in other locations.
 - o. Wire termination and rodding require to cross the platform shall be taken in suitable ducts having removable RCC slab covers.
 - p. All drawings shall be read with latest alterations.
 - q. The contractor's Engineer shall sign all the test reports.
 - r. Operating manuals supplied with equipment by the manufacturers shall be handed over by the contractor to Engineer- in-charge.
 - s. Potential free contacts on Tag blocks / Terminals to be provided on CT racks/tag blocks as per instruction of the Engineer-in- charge, for wiring of Data-loggers.
 - t. Contractor shall use good quality resin core solder of 60/40 or 80/20 grade (Tin/Lead ratio), as required of the approved make and as directed by Engineer-In charge.
 - u. Site order register, Technical register and Site Registers etc. shall be provided by contractor for keeping various records of the work being executed by contractor, the instructions given to him vis-à-vis complied and the decision taken/deficiencies pointed out during inspections by various officials.
 - v. Provision of dedicated port with allocation of KAVACH bits required for KAVACH interface should be done as per RB's letter no: 2018/SIG/18/EI/GEN. dated 04.09.2024

2. Specification of Item No: C-5

Supply of ARA terminal Block PBT 6 Way 25 mm

The contractor shall supply ARA terminal block 6 way made of PBT 25mm centre as per RDSO drawing No. S-23756 Alt.3 and as per IRS Specification No. IRS : S-75/2006 (Rev.2) with latest amendment, if any, which shall be procured from RDSO approved firms only.

3. Specification Item no: D-1

Supply of portable WorkStation Note Book

Component	Base M5 Pro
Processor (CPU)	Up to 18-core CPU (12 performance, 6 efficiency cores)
Graphics (GPU)	Up to 40-core GPU (Hardware-accelerated ray tracing & mesh shading)
Unified Memory (RAM)	Configurable to 48GB, 64GB, or massive 128GB
Storage (SSD)	2TB, 4TB, or 8TB SSD
Display	16.2-inch Liquid Retina XDR display; \ (3456 x 2234) native resolution @ 254 ppi
Brightness & Color	1,000 nits sustained full-screen, 1,600 nits peak. Pro Motion for 120Hz refresh rates. True Tone technology.
Ports	3x Thunderbolt 5 (up to 40Gb/s); HDMI 2.1; SDXC card slot; 3.5mm headphone jack; MagSafe 3
Wireless	Wi-Fi 7 (802.11be) + Bluetooth 6.0

Camera & Audio	12MP Centre Stage Camera + Studio-quality 3-mic array + 6-speaker Spatial Audio
Battery & Power	99.6-watt-hour lithium-polymer battery; Up to 24 hours video playback; 140W USB-C Power Adapter
Weight	~2.15 kg (4.7 lbs)

4. Specification of Item No. E-2

Supply and Installation of concrete (RCC) route indicators

