

Technical Circular No.11

Sub:- IPS Installation and Maintenance Practices.

1. Procurement and Storage

- i. IPS should be indented as per standard configurations with standard rating of modules for 4-6 line wayside station without AFTC with signalling load upto 7KVA. It should not be taken for big yards/RRIs and conventional power supply may be used for such stations till suitable IPS with higher capacity are developed.
- ii. Since presently IPS is being procured through stores contract, adequate covered storage space suitable for storing of such electronic equipment should be available. Entry of moisture/water inside modules, if not stored properly, can lead to failure of IPS after commissioning.

2. Installation

- i. Pre-commissioning checklist should be strictly adhered so that installation related deficiencies are removed before commissioning of IPS (RDSO's letter No. STS/E/MSG/IPS dt. 28/01/2005). Some important provisions are given below-
 - (a) The IPS room should be sufficient size for heat dissipation and attending to maintenance. Environment of the room should be suitable for housing electronic equipment. Room should be provided with both natural ventilation and exhaust fan.
 - (b) Low maintenance battery should be installed in a separate room with exhaust fan.
 - (c) 230V AC input feeder should be stable with least fluctuations specially in Non-RE area. Frequent fluctuations specially at the lower end i.e. 150V lead to frequent tripping of SMR's and ultimately result in failure of module.
 - (d) 230V AC input AT/Feeder capacity should be adequate to cater to signalling load. For LC gates, it should be min. 5KVA and for wayside station upto 4/6 lines, it should be min. 10KVA.
 - (e) Size of AC input feeder cable should be as per AT/Feeder capacity. For 5KVA AT/feeder, 2x25 sq.mm. Al cable and for 10KVA AT/Feeder, 2x70 sq.mm. Al cable should be used. Voltage drop in input cable at full load should not be more than 30V.
 - (f) Size of cable from battery to charger should be as per battery capacity as given below-
 - For 120AH-10 sq.mm. copper
 - For 200AH-16 sq.mm. copper
 - For 300AH-25 sq.mm. copper
 - (g) In RE area on single line, provision of one standby DG set and in Non-RE area, provision of two standby DG sets or alternatively one DG set and one set of solar panel of adequate capacity shall be provided.

