



Specification for Electrical Requirements of High Voltage Electric Point Machines for Railway Signalling Purposes

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Amendments

Amd. No.	Date	Text Affected
1	Nov 1971	7.1 : Wiring
2	Nov 1971	8 : Polarity of Motor Circuit
3	June 1976	7 add clause 7.2

British Railways Board



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Voltage Electric Point Machines for Railway
Signalling Purposes**

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B.R. SPECIFICATION NO. 902

FOR

ELECTRICAL REQUIREMENTS OF HIGH VOLTAGE ELECTRIC
POINT MACHINES FOR RAILWAY SIGNALLING PURPOSES.

GENERAL.

- 1.1 The object of this Specification is to codify those electrical requirements of point machines driven by a high voltage electric motor which are not defined by B.S.581. It is to be read in conjunction with the latter British Standard.

2. MOTOR.

- 2.1. This is to be suitable for operation from a secondary cell battery floated on a constant potential charger at 130 volts maximum, and for operation by a full wave rectified alternating current supply of up to 120 volts mean value.
- 2.2 Where immunity to the effects of extraneous alternating currents is required a permanent magnet machine is to be used. Where such immunity is not required a 4-wire split field motor is to be used.
- 2.3 So that new machines may be compatible with existing installations where 3-wire control is used, means are to be provided so that the motor circuit can readily be converted on site from 3 to 4-wire control, and vice versa, without recourse to soldering.
- 2.4 The starting current of the motor must be such that a 15 amp. fuse to B.S.714 shall sustain the surge without rupture indefinitely when the point machine is repeatedly operated at a rate of 1 operation in 5 seconds. The fuse shall also not rupture with 5 mid-stroke reversals at 1 second intervals. These requirements shall be met with the maximum load on the machine permitted by B.S.581, and a power supply of 130 volts, with a total resistance of 0.5 ohms. including all leads and the internal resistance of the power supply itself. Note that a power supply with the foregoing characteristics is considered to be the worst ever likely to be encountered from the point of view of starting current surges, and must not be taken as typical of all power supplies.