



सत्यमेव जयते

**INDIAN RAILWAY
STANDARD SPECIFICATION
(TENTATIVE)**

**FOR
'DOUBLE WIRE' ROTARY DETECTOR (VERTICAL TYPE)**

SPECIFICATION No. IRS: S 29-64

Revision 0

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**SIGNAL DIRECTORATE
RESEARCH DESIGNS & STANDARDS ORGANISATION
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<u>Abstract</u> This document specifies the technical requirements of 'Double wire' Rotary Detector (VERTICAL TYPE)		

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AMENDMENTS

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TABLE OF CONTENTS

S.No.	Item	Page Number
0.	FOREWORD	1
1.	SCOPE	1
2.	GENERAL REQUIREMENTS	1
3.	IMPORTANT NOTE	3

GOVERNMENT OF INDIA**MINISTRY OF RAILWAYS**
(RAILWAY BOARD)

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INDIAN RAILWAY STANDARD SPECIFICATION
(Tentative)**For****'DOUBLE' WIRE ROTORY DETECTOR (VERTICAL TYPE)****Serial No. S 29-64****0 FOREWORD**

- 0.1 This Specification is issued under the fixed Serial No. S-29, followed by the year of original adoption as standard or, in the event of revision the year of last revision.

ADOPTED, 1964.

- 0.2 This Specification requires reference to the following Indian Railway Standard Specification, which shall also be complied with to the extent applicable.

IRS S-10 Mechanical Signalling & Interlocking Equipment.

- 0.3 Whenever reference to any Specification appears in this specification, it should be taken as a reference to the latest issue of that specification.
- 0.4 This Specification is intended chiefly to cover the technical provisions and the provisions relating to the supply of materials and so does not include all the necessary provisions of a contract.

1. SCOPE.

- 1.1 This Specification covers the requirements of Double Wire Rotary Detectors (Vertical Type) used in Railway Signalling.

2. GENERAL REQUIREMENTS.

- 2.1 The Double Wire Rotary Detectors shall be of two kinds.

- 2.1.1 Single Rotary Detector.
- 2.1.2 Double Rotary Detector.
Single Rotary Detector shall be used in Single Lever Transmission and Double Rotary Detector in Push-Pull Transmission for coupled signals or coupled detector levers.
- 2.2 Single Rotary Detector shall be provided with only one detecting wheel and Double Rotary Detector shall have two detecting wheels, one 'Normal' and the other 'Reverse'.
- 2.3 The Detectors shall be suitable for working with 500 mm stroke levers.
- 2.4 The Detector is designed to perform the following functions.
- 2.4.1 To detect the correct travel of the switches and / or and to detect the correct position of points when normal or reverse, wherever required.
- 2.4.2 To hold ,when operated , the points and lock in position in the event of breakage in the point transmission (regardless of the operation of the broken wire lock on the point if provided), even though one of the wires of the detector transmission is also broken (irrespective of temperature variation).
- 2.4.3 To limit the movement of the intact wire when the other wire is broken , so as to lead to the tripping of the lever, in addition to serving the purpose outlined in Para 2.4.2
- 2.5 The Detector wheel shall be provided with a groove for housing about 3 adjacent wrappings of wire ropes to Indian Railways Standard Specification. No. S-11. The groove shall have two rims one on either side to serve as guides for the wire rope and prevent it from slipping off.
- 2.6 With the maximum uncompensated length of wires between the detector and the neutral point of the transmission, limited to 210 meters, and a temperature change of up to 61°C the detector , when not detecting , shall not prevent the normal operation of points.
- 2.7 When used in a signal transmission and the wire breaks, the detector, it restricts the movement of the signal's mechanism shall do so in a manner that maintains the signal arm at 'on' or permits it to go back to 'on'.
- 2.8 The base of detector shall be of sufficient width as to prevent the detector slide notch pertaining to one detector from becoming a fouling notch for an adjacent detector.
- 2.9 With the detector wheel in the normal position, the outer edge of the innermost rim shall stand above the top surface of the detector slide by not more than 1.5 mm.
- 2.10 The clearance between the outer vertical surface of the wheel and the nearest inside surface of the stand near the rectangular opening shall not exceed 0.5mm.

- 2.11 The wheel when rotated shall not rub against the surface of the stand.
- 2.12 Detector wheel shall move in one plane. It shall not have an end of more than 0.5 mm. in the stand nor wobble on the pin.

3. IMPORTANT NOTE.

- 3.1. Manufacture Workmanship, Marking, Finish, Painting, Testing and inspection, Packing, Rejection and Warranty shall be in accordance with the requirements under IRS S -10.
