

Intelligent Protection for Rotary Valves

The Rotor Interference Sensor (RIS) is an advanced safety system designed to continuously monitor Rotary Valve operation and instantly detect abnormal metal-to-metal contact between the Rotor and the valve Housing or Side Covers. Early detection minimizes equipment damage, reduces downtime, and improves plant reliability.

What RIS Detects

The RIS identifies electrical continuity caused by metal-to-metal contact resulting from:

Thermal expansion of the Rotor, causing contact with the valve Housing or Side Covers due to insufficient operating clearance.

Foreign metallic particles trapped between the Housing, Side Cover and Rotor.

Advanced RIS Features

1. Improved RIS Design

- Ceramic bearings electrically isolate the Rotor from the Housing and Side Covers.
- Sensors contact the stationary outer bearing race, eliminating friction and wear.
- No routine sensor replacement required.
- Easily retrofitted to most installed Rotary Valves of reputed brands.

2. IoT-Enabled Smart Monitoring

The latest RIS Controller incorporates Industrial IoT technology, enabling:

- Continuous monitoring of rotary valve health.
- Real-time relay output for immediate alarm indication.
- Cloud-based storage of operational data.
- Recording of:
 - Resistance
 - Running Time
 - Date
 - Alarm History
 - Temperature
 - Rotor Status
- Remote monitoring through smartphones, tablets, or computers.
- Instant notifications when abnormal conditions occur.

Alarm Functions

The latest RIS can detect up to five different alarms:

- Open Loop Alarm
- Metal-to-Metal Contact Alarm
- Contamination Alarm
- Rotor Status Alarm (Optional)
- Temperature Alarm (Optional)



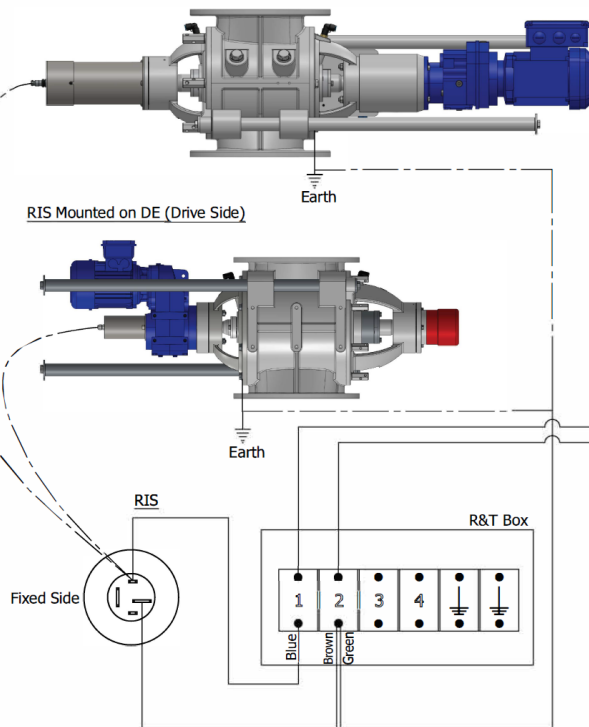
Rotor Interference Sensor

RIS

RIS Ver 2s - Wiring Diagram

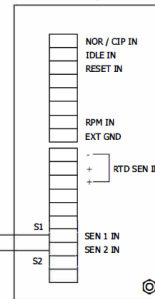
RIS Mounted on NDE (Non Drive Side) Only For Retrofitting Valve

RIS Mounted on DE (Drive Side)

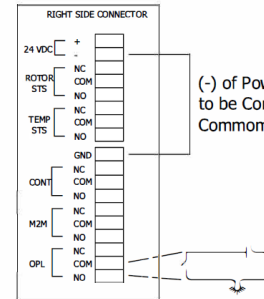


RIS Device Overview

Top



Bottom



(-) of Power Input to be Connected to Common Ground

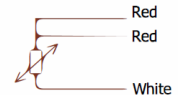
To PLC as Input for Lamp / Hooter
Typical for MTM and Contamination alarm

Optional

PINOUTS

Temperature Sensor (PT 100), 3 Pin Connection

RTD SEN IN | (+) - - } RED
| (+) - - } RED
| (-) - - } WHITE



Note:
Controller Should be mounted less than 20 mtr distance from the Rotary Valve

Airlock

Airlock

Manufactured By

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