EcoStruxure™

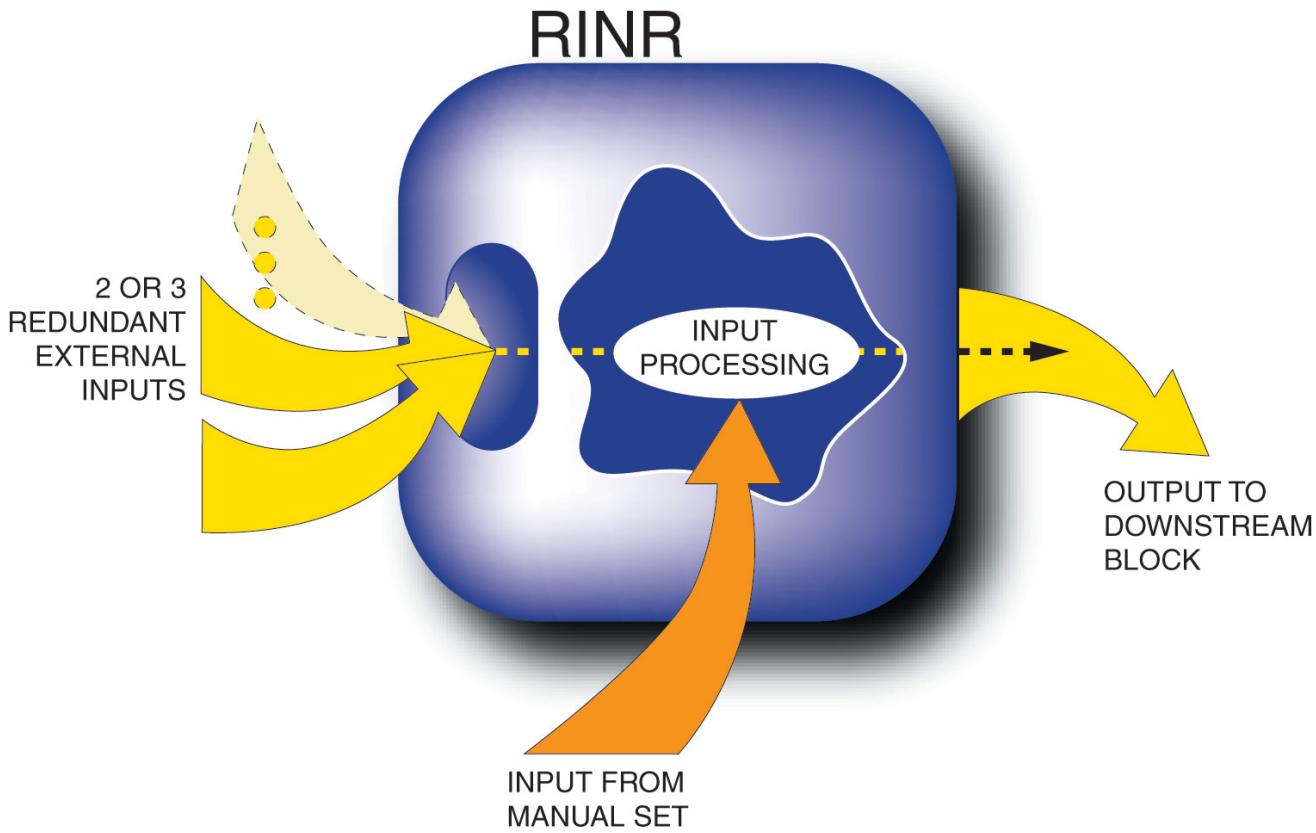
Foxboro™ DCS

Redundant Real Input (RINR) Block

PSS 41S-3RINR

Product Specification

May 2019



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Legal Information

Overview

The Redundant Real Input (RINR) block is a Distributed Control Interface (DCI) block. (DCI blocks support connectivity of EcoStruxure™ Foxboro™ DCS control stations to various bus resident devices via a general purpose interface.) The RINR block receives one binary value from an external device. The source of the value can be specified as either two or three redundant inputs. The redundant inputs can either be from the same device or from different devices. Each of the redundant inputs is independently scaled, limited, and converted into engineering units before the block's selection algorithm is invoked to determine which of the two or three inputs is set into parameter RINP.

The Redundant Real Input (RINR) block receives inputs from 1, 2, or 3 device ECBs. The inputs contain real values read from RI1_PT, RI2_PT, and RI3_PT in the device ECBs specified by IOMID1, IOMID2, and IOMID3 respectively. The ECBOPT parameter determines whether the redundant inputs are from the same device or from different devices.

The ARBOPT parameter enables the block to consider either two or three redundant inputs. The block's selection algorithm then determines which of the two or three input values is presented to the control strategy as the block output RINP. In Auto mode, this value is copied to parameter Real Measurement (MEAS). In Manual mode, it is not copied to MEAS, and you can set the value of MEAS.

The RINR block provides alarming upon detection of a fault in the operational status of the fieldbus module (FBM) or input channel and a range of alarming features (out-of-range and high/low or high-high/low-low absolute alarming of the conditioned measurement output).

Features

- Reads one real input value from two or three redundant inputs
- In Auto mode, copies its output to the Real Measurement (MEAS) parameter
- In Manual mode, enables manual setting of the MEAS parameter

Additional Features

- Bad-input-point detection. The RINR block detects errors in the operational status of the FBM or input channel, and provides a badpoint indicator for optional alarming.
- Bad-input-point alarming, out-of-range alarming, and high/low or high-high/low-low absolute alarming of the conditioned measurement output signal. The outputs include alarm indicator signals and user-defined alarm messages.
- Inhibiting of block alarm messages.
- Indication of the alarm level (1 to 5) and alarm type of the highest-priority active alarm for the block.
- Delayed alarming. A configurable timer delays alarm detection or return-to-normal messages for a specific alarm to reduce the number of alarm messages generated when a block parameter crosses back and forth over an alarm limit.
- Output is clamped within the range defined between the high and low output limits ± output span variance.
- Filtering (first-order lag, Butterworth and two-sample average) applied to the signal before it is set into the RINP output.
- Available raw value read directly from the ECB before any form of signal conditioning, characterization, scaling, clamping or filtering is applied.

- Workstation lock. Set requests to any of the block's parameters (subject to the usual access rules) may be restricted to a specific workstation which locks the block.
- Timestamp for the latest change in the conditioned measurement output is recorded.
- Quality Status output parameter provides a single source for the block's value record status, block status, and alarm status.

WARNING: This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov/.

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