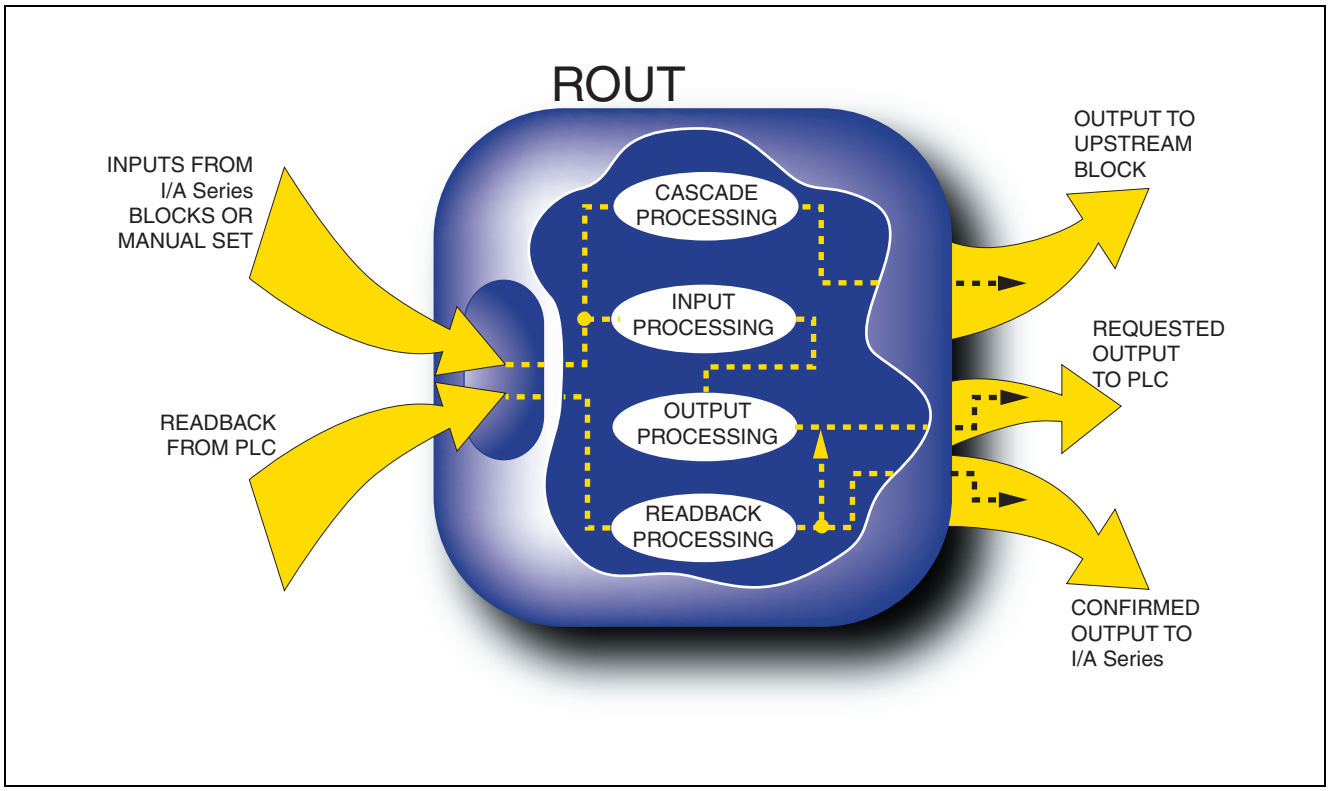
I/A Series® Software
Real Output (ROUT) Block



The Real Output (ROUT) block provides the control strategy with the capability to pass a single analog value to an address in an Allen-Bradley™ Programmable Logic Controller (PLC™).

OVERVIEW

The Real Output (ROUT) block sends a specified real value to the PLC's address. When in Auto mode, the ROUT block accepts a real input from an upstream control strategy. In Manual mode, it accepts a real value from an operator set, generally from an I/A Series Display Manager or FoxView™ display. When the secondary timer is set to 0, output from ROUT is change driven; the block only writes to the device when a change occurs in the value of the input (Auto) or the request component of the output (Manual). If this timer is non-zero, an output is forced when no change-driven output has occurred for a specified number of seconds.

Any new output value is limited by the configured engineering range limits or clamped by the output limits. Then it is converted to raw count by inverse signal conditioning. Readback values from the PLC are first scaled into the I/A Series raw count range. The resulting I/A Series raw count is then converted into engineering units by a proportionality calculation. Finally, it is clamped by the output limits, or limited so as to fall within a specified range.

To aid diagnostic testing, the structure of the block output causes the value read back from the PLC to be reflected in the block output. The value which was sent to the PLC as the request component is provided by another parameter.

ROUT provides a backcalculated output to upstream blocks to aid in cascade handling, and to alert the upstream block to any abnormal situation.

ROUT can force an I/A Series station to Track mode during the initialization procedures in the PLC.

ROUT does not provide any alarm detection or reporting capability.

Features

- Separate sources for inputs in Auto and Manual modes
- Manual/Auto control of the block output signal; can be initiated by a host process or another block
- Specification of PLC destination point as device-specific string
- Output optionally written to device only when output value changes
- Optional periodic outputs added to change-driven outputs
- Displayable output values for both request and readback values
- Inverse signal conditioning applied to limited or clamped output value
- Readback values scaled into I/A Series raw count range before further processing
- A change timer is used to synchronize values at both ends
- Specific point reserved for Tracking notification from PLC
- Open cascade notification to upstream blocks.

Principal Parameters

Input

- 1 real input, derived from control strategy in Auto mode, or set by operator in Manual mode
- Manual/Auto control mode switching

Output

- 1 real output
- 1 real back calculated output.

SUPPORT

ROUT is a PLC block which allows the following I/A Series equipment to interface Allen-Bradley PLCs:

- AW70 processors with control software (see 70 Series Application Workstation Model AW70 [PSS 21H-4U1 B3])
- AW51 Integrators (see 50 Series Application Workstation Model AW51 [PSS 21H-4R1 B3])
- Micro-I/A Station (see Field Automation Subsystem Micro-I/A™ Allen-Bradley PLC5/E Remote I/O Interface [PSS 21H-6C6 B4])
- Allen-Bradley Station (see Allen-Bradley Station [PSS 21H-1F1 B3]).

PLC blocks are supported on I/A Series software version 6.2 or later. Value points for PLC blocks are listed in Micro-I/A FoxBlock™ Integrated Control Software (PSS 21H-6C1 B4).

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MB 021 Printed in U.S.A. 0201

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