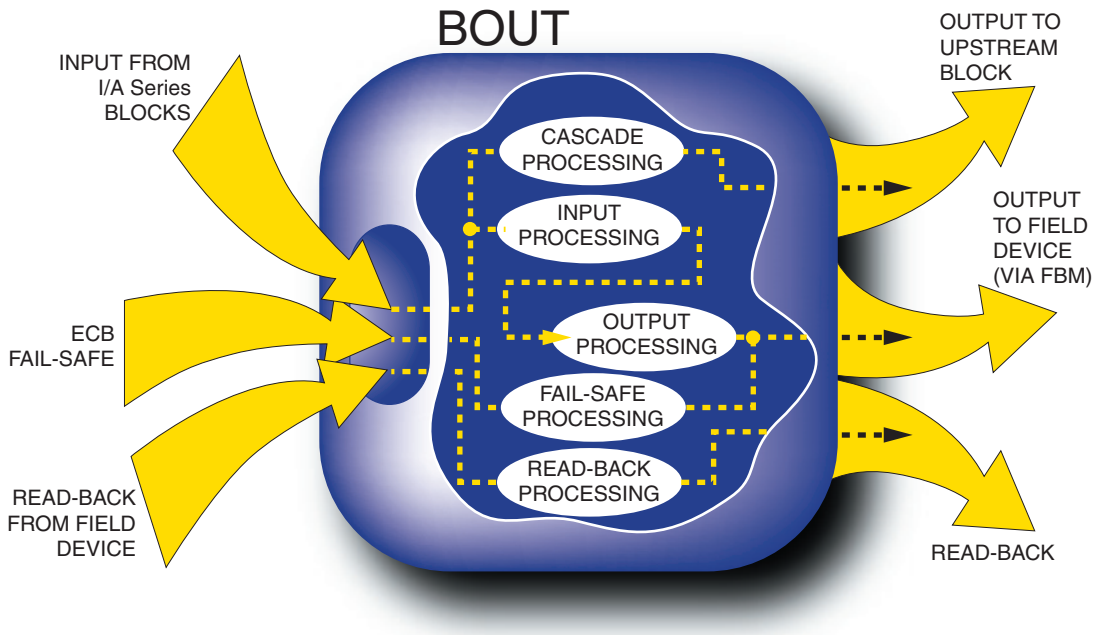
I/A Series® Software

PSS 21S-3N7 B4

Binary Output (BOUT) Block



The Binary Output (BOUT) block is a Distributed Control Interface (DCI) block. (DCI blocks support connectivity of I/A Series control stations to various bus resident devices via a general purpose interface.) The BOUT block sends one binary value to an address in an external device. It also continuously reports, to the I/A Series system, any changes made by the device to the value at this address.

FEATURES

- Separate block inputs for use in Auto and Manual
- Specification of external device destination point as device-specific string
- Output written to device only when output value changes
- Optional periodic outputs added to change-driven outputs
- Output values displayed as read-back values
- Change timer which assures initialization to external device value
- Specific point reserved for Tracking notification from external device
- Open cascade notification to upstream blocks.

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OVERVIEW

In the outbound direction, the BOUT block accepts a binary value from the control strategy, or an operator set, and sends it to the addressed point. In the inbound direction, the block's confirmed output structure allows any change in value in the external device to be read back by the I/A Series system block. Thus, the block logic permits changes to the point value to be made at either end, with the two ends remaining in sync at all times.

When in Auto, the BOUT block accepts a binary input from an upstream control strategy at parameter Input (IN). In Manual, it accepts a binary value from an operator set, generally via an I/A Series Display Manager or FoxView™ display, at parameter Set (SET). It sends this value to the device's address, specified at parameter Point Number (PNT_NO).

Output from the BOUT block is change driven when you configure parameter Secondary Timer (SECTIM) as 0.0. The block only writes to the device when a change occurs in the value of IN (Auto) or SET (Manual). If SECTIM is non-zero, an output is also forced when no change-driven output has occurred for SECTIM seconds.

The "confirmed" structure of the block output Contact Output (COUT) allows the value sent to the external device address to be entered into the "request component" of COUT and allows the value read back from the external device to be reflected in the "confirmed component". The value of COUT as shown in displays, and as made available for connection to the control strategy, is always the confirmed component. This is the value which has reached, and been accepted by, the external device. The value that is sent to the external device as the request component of COUT is displayed at parameter Output Request (COUTQ) to aid in diagnostic testing.

A change timer mechanism is used to allow point changes to be made at either end, with the two ends remaining in sync at all times.

The block uses the parameters Initialization Output (INITCO) and Back Calculated Contact Out (BKCO) to alert upstream blocks to various abnormal situations, and for cascade handling.

To force the I/A Series system control station to Track during initialization procedures within the external device, a specific signal intended for this purpose is made available to the BOUT block at a configured Initialization Point Number (INI_PT) within the external device.

For a CP270 with I/A Series v8.4 or later system software, the BOUT block provides alarming upon detection of a fault in the operational status of the Fieldbus Module or input channel.

For previous processors or CP270s with earlier versions of I/A Series software, the BOUT block does not provide any alarm detection or reporting capability.

CP270 (WITH I/A SERIES V8.4 OR LATER) ADDITIONAL FEATURES

- Bad-input-point alarming of the conditioned measurement output signal. The output includes 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.
- Manual-if-Bad option detects errors in the operational status of the Fieldbus Module or input channel. If found, the block switches its input from the FBM/channel to a user-selected source for safety.
- Detection of fail-safe mode in the FBM, during which the block switches its input to a user-selected source for safety.

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