EcoStruxure™

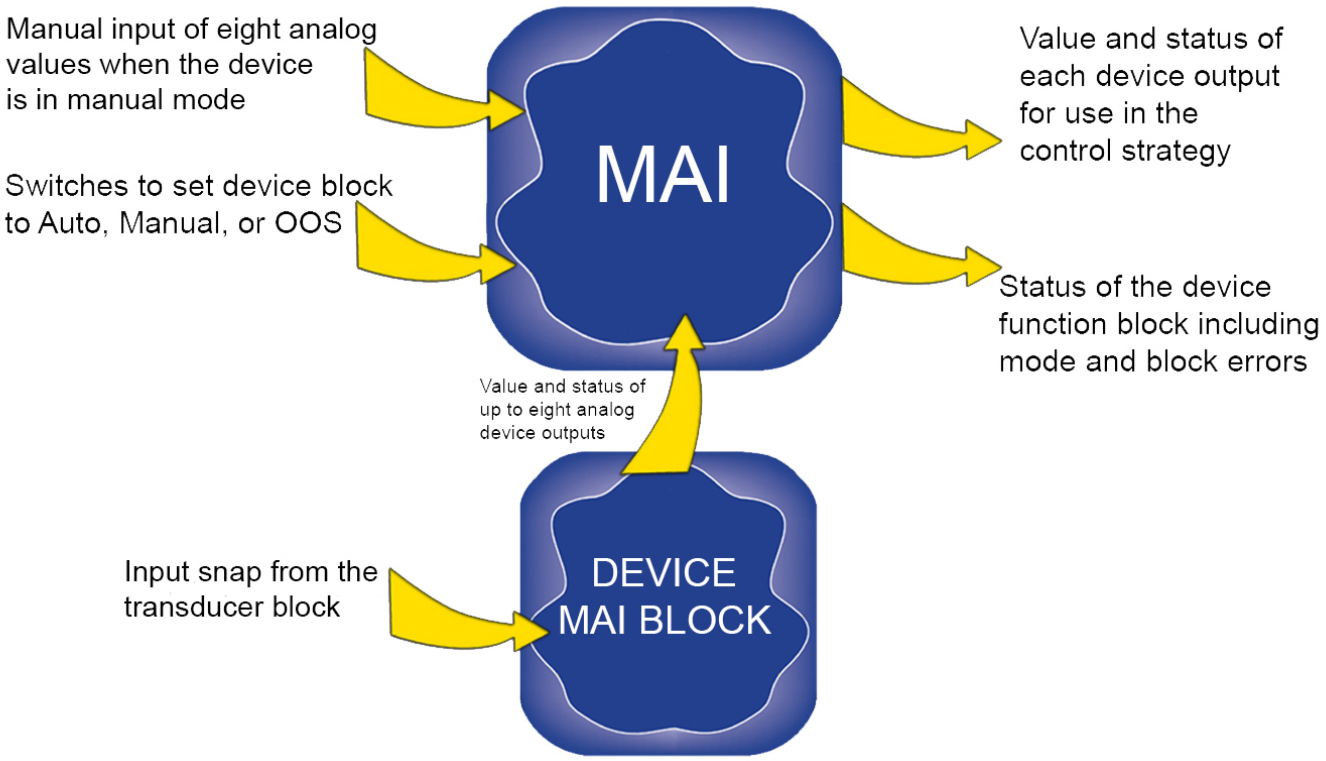
Foxboro™ DCS

Multiple Analog Input (MAI) Block

PSS 41S-3MAI

Product Specification

May 2019



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Legal Information

Overview

The Multiple Analog Input (MAI) block enables the control strategy to read up to eight analog values from a MAI device function block operating in a Foundation fieldbus™ H1 device.

Multiple Analog Input (MAI) provides an interface between the control processor and a remote I/O system or other Foundation fieldbus H1 device that supports multiple analog inputs. The MAI blocked is linked with a multiple analog input function block operating in the H1 device (the device function block).The MAI block is supported on the Field Control Processor 280 (FCP280), Field Control Processor 270 (FCP270), and the Z-module Control Processor (ZCP270) when the H1 device is connected to the control station by a Foundation fieldbus Redundant Interface Module (FBM228).

The MAI block integrates the linked device function block into Foxboro™ DCS . On initialization, user-configured parameters in the MAI block are written to key configurable parameters in the device function block. During normal operation, the MAI block's OUT*n* (where *n* is 1 through 8) and OUTST*n* parameters hold the value and status, respectively, of the device *OUT_*n parameters. When the block is not in simulation mode, the PV*n* parameters reflect the value and status of the device *OUT_* n parameters. When the block is in simulation mode, PV*n* is settable and is used to change the OUT*n* value.

The MAI block also provides access to a variety of operational and diagnostic information via client/server connections with the parameters that are included in Views 1, 2, and 4 of the device block. The values read from these parameters are displayed in the block detail displays and are available for connection to other Foxboro DCS blocks.

Features

The MAI block provides the following features:

- Acquires the status and value of up to eight published outputs (*OUT_1* through *OUT_8*) from a multiple analog input device function block. Access to the device outputs can be individually configured for either a publisher/subscriber connection or a client/server connection.
- Time stamps value and status changes
- Accesses the parameters in the device function block's View 1, View 2, and View 4 using change-driven and periodic client/server connections
- Helps ensure that changes in the device function block's process values and detected error conditions are continuously available for display and connection to the control strategy
- Provides for the configuration of selected device block parameters from Foxboro DCS and management of the device configuration in the control database
- Enables users to set the mode of the device function block to Automatic, Manual or Out of Service (OOS)
- Provides alarm reporting for Bad I/O for each device block output
- Supports simulation of device block output within the control station

Principal Parameters

Inputs

- 8 analog values from the device function block's OUT*n* parameters
- Mode switches to change the device function block mode to Auto, Manual or OOS

Outputs

- Value and status from each of eight analog outputs from the H1 device when the device function block is in Auto mode, or from operator input when the device function block is in manual mode
- Time stamp for each of the eight analog outputs
- Device function block operational status including mode, detected block errors, and alarm conditions

Device Function Block Configuration

- Parameters configured in the MAI block are downloaded to the H1 device to set the block tag and description, transducer channel, permitted and target modes, and strategy description

Support

The MAI block is supported on the FCP270 and ZCP270 when the H1 device is connected to the control station by an FBM228. Refer to following product specifications for details:

- *Field Control Processor 280 (FCP280)* (PSS 41H-1FCP280)
- *Field Control Processor 270 (FCP270* (PSS 21H-1B9)
- *Z-Module Control Processor 270 (ZCP270)* (PSS 21H-1B10)
- *FBM228 FOUNDATION fieldbus Module for Control in the Field Applications* (PSS 41H-2S228)

The MAI block is configured using the Block Configurator in the Foxboro DCS Control Editor as described in *Implementing Foundation Fieldbus in the Foxboro DCS Process Automation System* (B0750DA) or with the Foxboro DCS I/A Series Configuration Component (IACC) software as described in *Implementing Foundation Fieldbus on the I/A Series System* (B0700BA).

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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As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.

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