

# I/A Series<sup>®</sup> Software Data Variable Blocks



The Data Variable blocks allow you to store various types of data values independently within the I/A Series database, for use as needed by the elements of the control strategy.

#### OVERVIEW

- Each data value to be stored is the key parameter (Value) of a separate Data Variable block.
- The types of Data Variable blocks available are BOOL, REAL, LONG, PACK, and STRING, corresponding to the types of their Value parameters.
- You may configure as many Data Variable blocks as necessary, placing them in the END DATA zones of their compounds.

#### **GENERAL FEATURES**

• The Data Variable blocks exist only to store a data value and perform a few related functions. They are not executed by the compound processor.

- Each Data Variable block has a detail display which you may use to view and/or set its parameters.
- Any Value parameter is configurable, and settable by an application or display.
- An application may set the Out-of-Service and/or Bad bits of any Value parameter.

# INDIVIDUAL BLOCK FEATURES BOOL Block

- The data type of the Value parameter is Boolean.
- You may configure state names (True State Name and False State Name) for the two possible boolean states of Value.
- When you change the value of the Value parameter, either True State Name or False State Name is copied into the output State Name.



- The output State Name allows you to display the current state of Value as a string.
- The value of Value may be connected to inputs within the control strategy as required.



## **REAL Block**

- The data type of the Value parameter is real.
- You may configure High and Low Scale Limits for Value.
- If you configure or set Value with a number outside of these limits, it will be clamped at the nearest limit.
- If clamping occurs, the Limited High or Limited Low status bit of Value is set true.
- You may configure the Engineering Units string to provide engineering units text for the display of Value.
- The output Value may be connected to inputs within the control strategy as required. High Scale Limit \_\_\_\_\_\_



# LONG Block

- The data type of the Value parameter is long integer.
- You may configure the Engineering Units string to provide engineering units text for the display of Value.

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• The output Value may be connected to inputs within the control strategy as required.



#### PACK Block

- The data type of the Value parameter is packed long integer.
- Specified individual bits of Value may be set from any display without changing the values of the other bits.
- The output Value may be connected to inputs within the control strategy as required, using Boolean connection extensions if necessary.



## STRING Block

- The Value parameter is a string data type, up to 80 characters in length.
- The output Value is displayed in the block's detail display, and may be shown in user graphics. Change Counter is an integer output which is incremented each time Value is modified by an application or block re-configuration.
- Any application may monitor Change Counter to determine when to update the Value string in its display.



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