

# DPAS

## “CMD\_Select”

### A Rockwell Logix v21 Add On Instruction (AOI)

This AOI was developed to simplify control of a single boolean output from a number of logic sources or sequences. A motor or solenoid valve may be commanded by several different sequences, and if these commands are simultaneous or conflicting there can be uncertain behavior. Complex logic with BAND, BOR, BNOT and such makes for very messy code. This AOI provides a clean and reliable way to ensure the right logic sends the right command to the actuator.

The AOI consists of Select parameters that allow a sequence to take control of the equipment. These parameters have priority with the lower index (such as 1) taking precent over the higher index (such as 2) if both are true. For the selected input, the CMD parameter associated with this index receives the commanded boolean state.

There is also an optional lock capability. This allows the first input to select the equipment to lock it so that a subsequent selection by a sequence with higher priority is locked out and does not get control of the equipment until unlocked

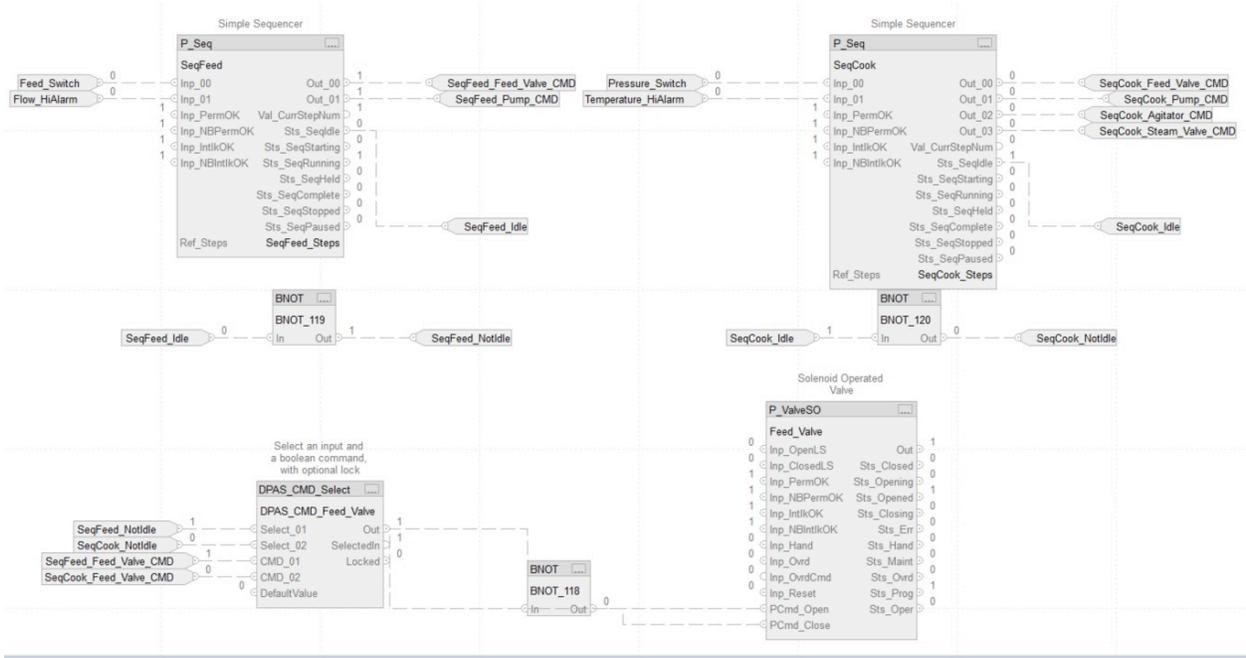
A default configuration is provided to allow the equipment state to be determined when nothing is commanding it.

The parameters on the AOI are as follows:

Name	Usage	Data Type	Alias For	Default	Style	Re	Vis	Description	External Acces	Constant
CMD_01	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Commanded output 1	Read/Write	<input type="checkbox"/>
CMD_02	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Commanded output 2	Read/Write	<input type="checkbox"/>
CMD_03	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Commanded output 3	Read/Write	<input type="checkbox"/>
CMD_04	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Commanded output 4	Read/Write	<input type="checkbox"/>
CMD_05	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Commanded output 5	Read/Write	<input type="checkbox"/>
CMD_06	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Commanded output 6	Read/Write	<input type="checkbox"/>
CMD_07	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Commanded output 7	Read/Write	<input type="checkbox"/>
CMD_08	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Commanded output 8	Read/Write	<input type="checkbox"/>
Locked	Output	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Locked status	Read Only	<input type="checkbox"/>
Out	Output	BOOL		0	Decim...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Commanded output	Read/Write	<input type="checkbox"/>
Select_01	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Select input 1	Read/Write	<input type="checkbox"/>
Select_01_Lock	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 1 lock enable	Read/Write	<input type="checkbox"/>
Select_02	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Select input 2	Read/Write	<input type="checkbox"/>
Select_02_Lock	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 2 lock enable	Read/Write	<input type="checkbox"/>
Select_03	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 3	Read/Write	<input type="checkbox"/>
Select_03_Lock	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 3 lock enable	Read/Write	<input type="checkbox"/>
Select_04	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 4	Read/Write	<input type="checkbox"/>
Select_04_Lock	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 4 lock enable	Read/Write	<input type="checkbox"/>
Select_05	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 5	Read/Write	<input type="checkbox"/>
Select_05_Lock	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 5 lock enable	Read/Write	<input type="checkbox"/>
Select_06	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 6	Read/Write	<input type="checkbox"/>
Select_06_Lock	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 6 lock enable	Read/Write	<input type="checkbox"/>
Select_07	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 7	Read/Write	<input type="checkbox"/>
Select_07_Lock	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 7 lock enable	Read/Write	<input type="checkbox"/>
Select_08	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 8	Read/Write	<input type="checkbox"/>
Select_08_Lock	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Select input 8 lock enable	Read/Write	<input type="checkbox"/>
+ SelectedIn	Output	DINT		0	Decim...	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Selected input	Read/Write	<input type="checkbox"/>
DefaultValue	Input	BOOL		0	Decim...	<input type="checkbox"/>	<input type="checkbox"/>	Output of block when no input selected	Read/Write	<input type="checkbox"/>

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In runtime, it appears as:



This AOI (DPAS\_AOI\_CMD\_Select.L5X) was developed in Logix v21. It can be imported into any later version of Logix.

Provided without warranty; all use and behavior is responsibility of user, no obligation to DPAS.

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