# DPAS

"Curve_Square"
A Rockwell Logix v21 Add On Instruction (AOI)

This AOI was developed to simulate the steady-state gain of a Square ($F[x] = x^2$) response, in which the gain is lower near 0% and higher near 100%. The function models the open loop response from the actuator from 0% to 100% to the resulting measurement with the range of response specified for the start of the actuator (in %) and the scale of the measurement will range 0% to 100% as follows:
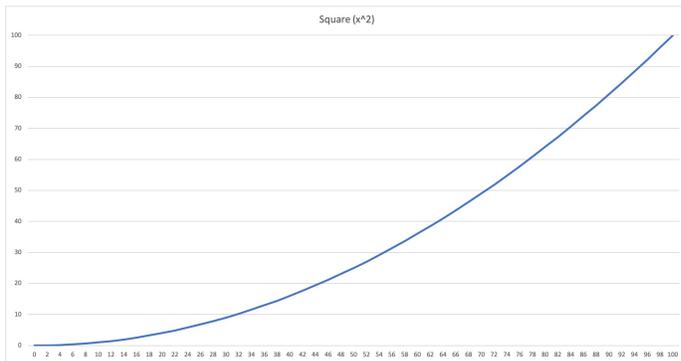

Range of response 0% - 100%
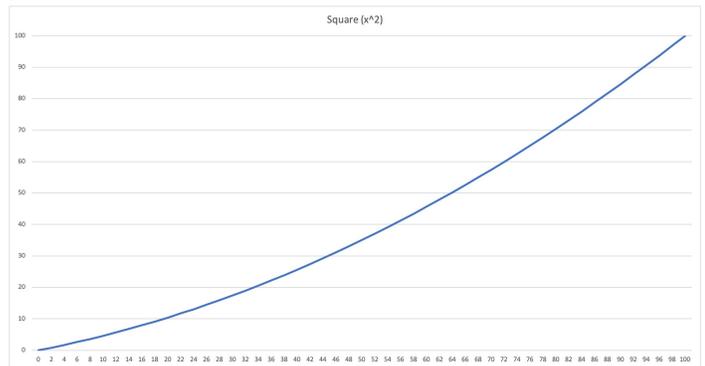
Range of response 25% - 100%

The parameters on the AOI are as follows:

Name	Usage	Data Type	Alias For	Default	Style	Re	Vis	Description	External Acces	Constant
EnableIn	Input	BOOL		1	Decim...	☐	☐	Enable Input - System Defined Parameter	Read Only	☐
EnableOut	Output	BOOL		0	Decim...	☐	☐	Enable Output - System Defined Parameter	Read Only	☐
Input_Start	Input	REAL		0.0	Float	☐	☐	Starting point of input response (%)	Read/Write	☐
Input	Input	REAL		0.0	Float	☑	☑	Input to response (0%-100%)	Read/Write	☐
Output	Output	REAL		0.0	Float	☐	☑	Squared response output (0%-100%)	Read/Write	☐

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In runtime, it appears as:
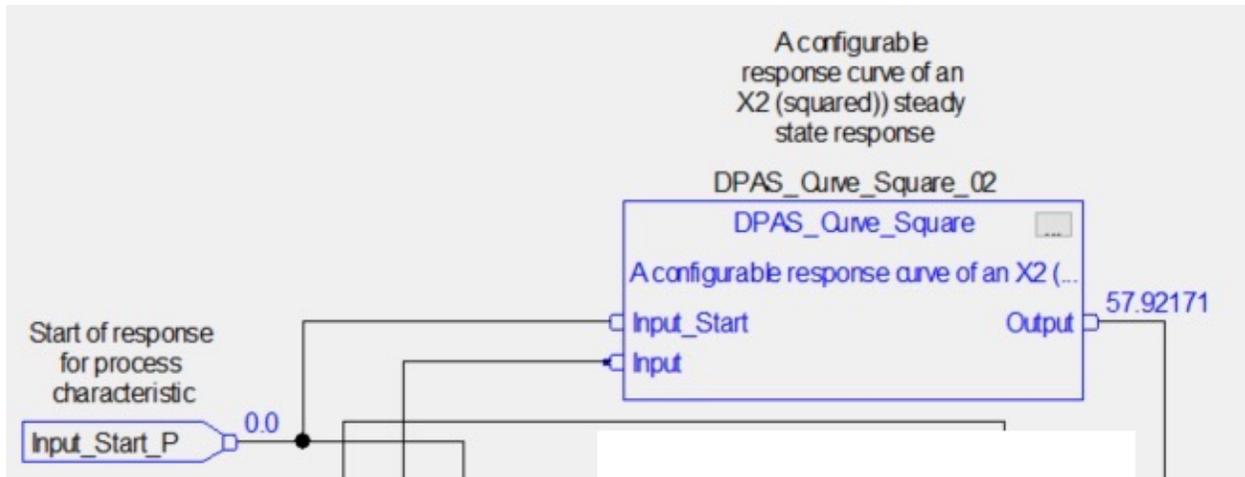
This AOI (DPAS_Curve_Square.L5X) was developed in Logix v21. It can be imported into any later version of Logix.

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

This software is provided as shareware. If you find this valuable and would like to make a voluntary contribution, you can mail a check to DPAS Inc, PO Box 4187, Lago Vista TX 78645 or contribute at https://www.dpas-inc.com/resources.