VXM *Stepping Motor Controller*

Application Note # AN104

PLC Interfacing and
Advancing Part Stack Example

The VXM can be easily interfaced to Programmable Logic Controllers (PLCs) or other logic devices.

This Application Note demonstrates a method of configuring the VXM's inputs and outputs for PLC interfacing. The program for this example demonstrates incrementing a stack of parts into position.
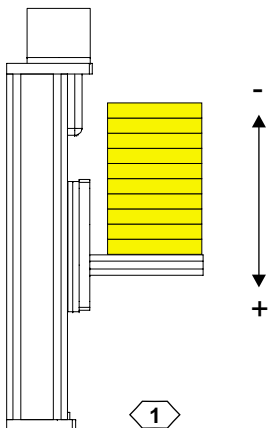
Materials Needed:

1. Auxiliary I/O Breakout Module or DB15HD (VGA) cable

Wiring:

The following inputs/outputs on the VXM I/O can be interfaced to a PLC or other logic:

Pin#
1	0V	Logic reference ground for inputs and outputs
4	Run	Run input to start program 0, (Homes to + limit switch)
5	I1	Input 1 (Advance to next position)
7	I3	Input 3 (Interrupt Wait and go back to zero)
8	I4	Stops/ends program
14	O1	Output 1 (Output signal when in position)
15	O2	Output 2 (Output signal when at home position)

Program:

Program numbers 3,1, and 0 contain the code for this example.
Program 3 moves back to home position. An Input 3 will jump to this program during a wait command. Program 1 does the advancing up to next position with a wait and output at each position, looping 10 times. Program 0 establishes home at the + limit.

The **setI7** command enables Input 3,4 and Run (default.) The **rsm** command saves the program permanently in the VXM.

Example #1	Motors run	RAM used	Function
Advance on Input	1	48	Advance/ Interrupt/ Home on Inputs

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E
PM-3        ;Select and clear program 3
S1M3000     ;Set high speed
IA1M0       ;Move to zero position
U15         ;Output 2 high to signal at home
J1          ;Jump to program 1

PM-1        ;Select and clear program 1
U31         ;Wait and Output
;An Input 3 here will interrupt U31 and jump to pgm 3
U14         ;Output 2 low to signal not at home
S1M1500     ;Set running speed
I1M-400     ;Advance up
L10         ;Repeat 10 times
J3          ;Jump to program 3 to go home

PM-0        ;Select and clear program 0
A1M4        ;Set acceleration to 4
S1M600,I1M0 ;Home to + limit
I1M-100     ;Move off limit
IA1M-0      ;Zero motor position register
U15         ;Output 2 high to signal at home
J1          ;Jump to program 1

setI7       ;Set Inputs to default mode
rsm
```