

The PCL601MOD is a single-axis Modbus RTU Slave Stepper Motor Controller with Encoder Feedback that can be easily integrated in a system using the Modbus RTU protocol. The device can be quickly and easily interfaced to HMIs (Human Machine Interfaces), PLCs (Programmable Logic Controllers) or any other Modbus RTU master device.

All units are in inche

The full range of features of the PCL601MOD can be controlled and monitored at all times. Whether you require a stored program, or the ability to send real time commands to your system, this versatile controller provides the ultimate motion solution.

The PCL601MOD's programming capabilities allows you to develop motion routines, toggle discrete outputs, monitor inputs, and much more. The controller contains 2KB of non volatile stored programming space and encoder feedback. It achieves communication from a PC or any RS232/RS485 machine controller serial port.

The easy to use SMC60WIN software can be used to directly control motion trajectories, velocity, multi axis communication, and much more. Programming development tasks are simplified by the software's graphical interface, giving you a great tool to achieve quick results.

## **Ideal Applications:**

Automated Machinery or processes that involve food, cosmetic, or medical packaging, labeling, or tamper-evident requirements, cut-to-length applications, electronic assembly, robotics, factory automation, special filming and projection effects, medical diagnostics, inspection and security devices, conveyor and material handling systems, metal fabrication (CNC machinery), pump flow control, XY and rotary tables, equipment upgrades or wherever precise positioning or speed control is required.

## 1011267

DIMENSIONS



Re	al Tim	e Motion Encoder Options and Analog I Registration Inputs Thumbhw	nput and Create and Edit eel Options Program	1
TI	ine	Command	Comments	Send Program to
1	1	Label=PROGRAM TOP	Label	Controller
	2	Acceleration=100000 steps/(sec*sec)	Acceleration / Deceleration	
4.	3	Base speed=5000 steps/sec	Motor Starting Velocity	View Program in Controller
4	4	Max speed=50000 steps/sec	Maximum Motor Velocity	
	5	Direction CCW	Preset Direction	
÷	6	Go relative 10000 steps Move 10000 steps Finish move Waits for Motion to Fin		Upload Program
н.	8	Output register=1	Set an Output 1 ON	from Controller
	9	Wait 1000 msec	Wait Delay 1 second	
÷	10	Output register=0	Turn Output 1 OFF	· · · · · · · · · · · · · · · · · · ·
	11	Goto PROGRAM TOP	Returns to Program Top	Enable Autostart
t.	12	End of program	notanis to riogram rop	
1		End of program		Disable Autostart
				Run
L	1		•	Stop
	Ad	d Change Insert Delete Memo		

Real Time Motion	otions and Analog Input	
Set Accel/Decel     10000       Set Base Speed     500       Set Max Speed     1500       Set Jog Speed     1500       Set Jog Speed     1500       Set Position     0	Home using [Home switch] Home using (Soft Home) Move # of Steps 0 Move to Position 0	Acceletion Base Speed Max Speed Direction Motor Current Step Position Encoder Position Error Code Verify Parameters
Direction CW CCW Motor CON OFF Current	Stop Soft Stop	Inputs 1 2 3 4 5 6

Setup Erogram Edit Help	🍏 🔳 💷 💖	The Unit is NOT Connected
Real Time Motion Encoder Optic Registration		ate and Edit Program
Encoder CON OOFF Auto Correct	Output on CON OOFF the Fly	Index on the CON ODFF Fly
Set Encoder Delay (mS)	Set 1st Output Position Set # of Steps Determine Output	Set Registration Index 0
Ratio Set Encoder Retries	Between Outputs JU   Set # of Output JU   Counts JU	Encoder Delay
Set Encoder Window	Move # of Steps	Motor Ratio Encoder Retries Encoder Window Encoder Postion
	Reset Position to 0 Stop Hard	1st Output Position Steps Between Outputs # of Output Counts Registration Index
		Verify Parameters

Power Requirements:	8-24VDC, 50/60Hz (0.5W Peak Power)		
Nonvolatile Memory:	2KB of stored programming space		
Baud Rate:	38,400 Baud, Fixed		
Communication Protocols:	Modbus RTU	Half-Duplex, no start bit, 8 data bits, even parity, no stop bit	
	AA ASCII:	Half-Duplex, 1 Start bit, 8 data bits, no parity, 1 stop bit	
Serial Interface:	RS232 or RS485 selectable		
Encoder Feedback:	Quadrature, CHA, CHB, 5VDC Signal Compatibility		
Controller Outputs:	8 Programmable Outputs, Open Drain Type, 40V, 100mA +5VDC Output, 50mA		
Controller Inputs:	6 Programmable Inputs Logic 0: 0 - 0.8VDC Logic 1: 3.5 - 24VDC Analog Input: 0 - 5VDC		
Pulse Output Range:	1 - 50KHz, 10µs Negative Going Pulse Width		

Model #	Description
PSAM24V2.7A	24V Power Supply for PCL601
HMI-KCO-4230T	4.3" True Color TFT LCD Human Machine Interface
HMI-KCO-4414TE	7" True Color TFT LCD Human Machine Interface with Ethernet and USB host
TWS7	Seven decade thumbwheel switch for entering distance via external interface. (Accessory)
485SD9TB	RS232 to RS485 converter for multiple axes communication. (Accessory)
AA9MFC-6	Serial port cable, required to communicate to PC. 6ft long. (Accessory)