

A6

COUNTING AND POSITIONING MODULES, PSA2 - FOR STEPPER MOTOR POSITIONING

PLC SYSTEMS
MULTICONTROL COMPONENTS



PSA2

- Intelligent Positioning Module for Stepper Motors
- Controlling Two Stepper Motors
- Pulse Frequency Max. 20 kHz
- 2 Potential Free Relay Contacts, 8 Transistor Outputs, 10 Digital Inputs
- Fast Trigger Signal Input

See section A8 "Positioning" as well

SLOTS

The PSA2 positioning module can be operated in the following slots of racks MULTI, MIDI and M264.

Rack	Slot	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
MULTI Base Rack		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MULTI Expansion Rack		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
MIDI		○	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○
M264		●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○

● The module can be operated in this slot
○ The module cannot be operated in this slot

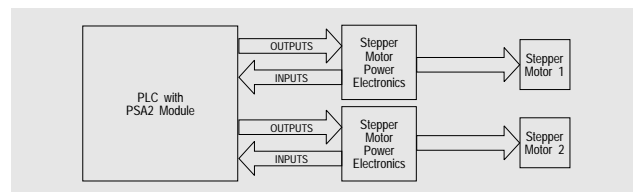
ORDER DATA

ECPSA2-0	Positioning Module for Stepper Motors, For Controlling 2 Stepper Motors, 1 Potential Free Relay Output per Axis, 4 Transistor Outputs for Stepper Motor Control, 5 Digital Inputs for End Switches, Reference Switch, Trigger Switch and Ready Signals, Pulse Frequency Max. 20 kHz
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FUNCTIONALITY

The stepper motor controller module PSA2 is used for positioning applications with stepper motors. Two axes can be controlled with a PSA2 module.

Diagram



The Outputs of the PSA2 Module for Power Electronics are: Pulse, rotation direction, enable and booster (current amplification during the acceleration phase). The Inputs: End switch pos./neg., reference switch, trigger switch and ready signal of the power electronics.

TECHNICAL DATA

PSA2

Axes	2
Controller	8031
Connections	Three 15 pin D-type (F)
Inputs	End Switch Pos. 24 V / 10 mA End Switch Neg. 24 V / 10 mA Reference Switch 24 V / 10 mA Trigger Switch 24 V / 10 mA and 5 V / 7 mA Ready Signal 5 to 24 V / ca. 5 mA
Transistor Outputs	Short Circuit and Overload Protected Pulse 5 to 24 V, Push-Pull Driver, Pull:50 mA Rotational Direction 5 to 24 V, Push Current 3 mA stat./80 mA dyn., (0.2 msec) Enable Signal 5 to 24 V, Push Current 3 mA stat./80 mA dyn., (0.2 msec)
Relay Output	30 V / 1 A, Internal Protection Circuit (Varistor)
Pulse Frequency	25 Hz to 20 kHz (Resolution - 4 Hz)
Acceleration Time	From 25 Hz Start/Stop Frequency To 20 kHz End Frequency From 60 msec to 17 sec.
Operation Modes	Linear Acceleration, Start/Stop Operation
Positioning Functions	Absolute, Relative, Start at Trigger Pulse, Endless Positioning
Resistance to Disturbance	NEMA (1,5 kV) for Inputs, VDE 0843 (Burst Test) 3 kV on all Pins
Documentation	Positioning User's Manual German MAPOSI-0 English MAPOSI-E Hardware Manual MULTICONTROL, MIDICONTROL, M264 French MAHWMULTI-F Italian MAHWMULTI-I Spanish MAHWMULTI-S

CONNECTIONS (3 * 15 PIN MALE D-TYPES)

Inputs	Pin	Axis 0	Pin	Axis 1
	1	End Switch pos.	9	End Switch pos.
	2	End Switch neg.	10	End Switch neg.
	3	Reference Switch	11	Reference Switch
	4	GND for Pin 1 to 3	12	GND for 9 to 11
	5	Trigger Signal 5 V	13	Trigger Signal 5 V
	6	Trigger Signal 24 V	14	Trigger Signal 24 V
	7	GND for 5 and 6	15	GND for 13 and 14
	8			

Outputs Axis 0	Pin	Function	Pin	Function
	1	Pulse	9	
	2		10	
	3	Rotation Direction	11	Relay Contact A
	4		12	Relay Contact B
	5	Enable	13	+ For Transistor Output
	6		14	Ready Signal
	7	Booster	15	GND for Transistor Output
	8			

Outputs Axis 1	Pin	Function	Pin	Function
	1	Pulse	9	
	2		10	
	3	Rotation Direction	11	Relay Contact A
	4		12	Relay Contact B
	5	Enable	13	+ for Transistor Output
	6		14	Ready Signal
	7	Booster	15	GND for Transistor Output
	8			

STANDARD SOFTWARE

A standard function block for operating the PSA2 module is included in the SWSPSPOS01-0 software package (see sections A7 "PLC Programming/Standard Software" and A8 "Positioning" as well).