



Modicon Premium automation platform

Premium motion control modules

Applications	Motion control modules for stepper motor		Motion control modules for servo motors Compatible with: - Lexium 15 servo drives with analog setpoint - Altivar ATV 61/71 variable speed drives	
				
Number of axes	1 axis	2 axes	2 axes	4 axes
Frequency per axis	187 kHz		Counter: 500 kHz with incremental encoder Acquisition: 200 kHz with SSI serial absolute encoder or parallel output	
Counter input	Per axis: Translator inputs \pm 5 V, negative logic (translator loss of step checks)		Per axis: Incremental encoder \pm 5 V, RS 422/RS 485 or Totem pole SSI serial absolute encoder 16 to 25 bits \pm 10...30 V Parallel output absolute encoder 16 to 24 bits \pm 5/10/30 V with Advantys Telefast ABE 7 conversion sub-base (ABE 7CPA11)	
Control outputs	Per axis: RS 422 translator outputs, TTL 5 V compatible (+/- pulses, boost, enable, reset loss of step check)		Per axis: 1 analog output \pm 10 V, 13 bits + sign, servodrive setpoint	
Auxiliary input/output	Per axis: 6 discrete inputs \pm 24 V 1 output \pm 24 V (brake control)		Per axis: 4 discrete I/O \pm 24 V (homing cam, event, recalibration, emergency stop) 1 input/1 output for servodrive control 1 reflex output \pm 24 V	
Counter capacity	24 bits + sign (\pm 16 777 215 points)			
Functions			Servo Control on individual linear axis	
Processing	Open loop control of the position of a moving part on a limited linear axis according to motion control functions supplied by the PLC processor Axis parameter setting, adjustment and debugging using PL7 Junior/Pro and Unity Pro software		Positioning of a moving part on an axis according to motion control functions supplied by the Premium PLC processor Axis parameter setting, adjustment and debugging using PL7 Junior/Pro and Unity Pro software	
Events	User-definable activation of the event-triggered task			
Connection	- 15-way SUB-D connector for translator - 20-way HE 10 connector for auxiliary I/O - Advantys Telefast ABE 7 system (ABE 7H16R20)		- 9 and 15-way SUB-D connectors for encoder input - HE 10 connector for auxiliary inputs - Advantys Telefast ABE 7 system (ABE 7CPA01, - Specific accessories (TSX TAP MAS)	
Type of modules	TSX CFY 11	TSX CFY 21	TSX CAY 21	TSX CAY 41
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Motion control modules for servo motors
Compatible with:
- Lexium 15 servo drives with analog setpoint
- Altivar ATV 61/71 variable speed drives

Motion control modules for servo motors
Compatible with Lexium 15 servo drives equipped with optional card SERCOS



2 axes

4 axes

3 axes

8 axes

16 axes

Counter: 500 kHz with incremental encoder Acquisition: 200 kHz with SSI serial absolute encoder or parallel output

SERCOSring: 4 M bauds

Per axis:

- Incremental encoder \pm 5 V, RS 422/RS 485 or Totem pole,
 - SSI serial absolute encoder 12 to 25 bits
- Parallel output absolute encoder 12 to 24 bits \pm 5/10/30 V with Advantys Telefast ABE 7 conversion sub-base (ABE 7CPA11)

Per SERCOS digital link

Per axis:

1 analog output \pm 10 V, 13 bits + sign, servodrive setpoint

Per SERCOS digital link

Per axis:

- 4 discrete I/O \pm 24 V (homing cam, event, recalibration, emergency stop)
- 1 input/1 output for servodrive control
- 1 reflex output \pm 24 V

Per SERCOS digital link

Servo control on individual infinite axis
Follower axes (dynamic ratio)
Realtime correction of servodrive offset

Flying shear on position or event (1)

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Servo control on individual linear or infinite axis
Linear interpolation on 2 or 3 axes
Realtime correction of servodrive offset

Individual linear or infinite axis
Linear interpolation on 2 to 8 axes
Follower axes (6 slaves) by gearing or camming
Manual mode (JOG and INC) (1)
Special functions, see page 4/50

Positioning of a moving part on an axis according to motion control functions supplied by the Premium PLC processor

Axis parameter setting, adjustment and debugging using PL7 Junior/Pro and Unity Pro software

Axis parameter setting, adjustment and debugging using PL7 Junior/Pro software and Unity Pro software (2)

User-definable activation of the event-triggered task

(direct or via TSX TAP S15●●), speed reference
ABE 7H16R20, ABE 7CPA11),

2 SMA type connectors for plastic (or glass) fiber optic cable

TSX CAY 22

TSX CAY 42

TSX CAY 33

TSX CSY 84
TSX CSY 85 (3)

TSX CSY 164

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(1) Function not available with Premium platform under Unity Pro software.

(2) The Unity Pro software version \leq V 2.0 is not compatible with the TSX CSY 164 module.

(3) TSX CSY 85 with path functions : 2 groups of 3 axes or 3 groups of 2 axes. With linear and circular interpolation with links via polynomial interpolation.