



Product catalog

AC500-eCo and CP600-eCo PLCs, Control Panels, Engineering Suite

Power and productivity
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AC500-eCo

Technical data

AC500-eCo CPUs

Type	PM554-TP	PM554-RP	PM554-RP-AC		PM554-TP-ETH	PM556-TP-ETH
Supply voltage	24 V DC		100-240 V AC		24 V DC	
Current consumption on	24 V DC		100 V AC		24 V DC	
Min. typ. (module alone)	0.06 A	0.08 A	0.02 A	0.012 A	0.07 A	0.07 A
Max. typ. (I/Os)	0.18 A	0.22 A	0.2 A	0.11 A	0.19 A	0.19 A
Program memory	128 kB					512 kB
Integrated data memory	14 kB thereof 2 kB saved					130 kB thereof 2 kB saved
Web server's data for user RAM disk	-				512 kB	1024 kB
Data buffering (of saved data)	flash memory					
Real-time clock (option with battery back-up) (1)	●					
Program execution						
Cyclical	●					
Time controlled	●					
Multi tasking	no, 1 task + 1 interrupt task max.					
Interruption	●					
User program protection by password	●					
Cycle time for 1 instruction (minimum)						
Binary	0.08 µs					
Word	0.1 µs					
Floating	1.2 µs					
Onboard digital inputs						
Channels	8 (including 2 counter inputs)					
Signal voltage	24 V DC					
Onboard digital outputs						
Channels	6 (including 2 PWM outputs)					
Relay / Transistor	Transistor	Relay	Relay	Relay	Transistor	Transistor
Rated voltage	24 V DC	240 V AC	240 V AC	240 V AC	24 V DC	24 V DC
Nominal current per channel	0.5 A	2 A resistive	2 A resistive	2 A resistive	0.5 A	0.5 A
Onboard analog outputs						
Channels	-					
signal ranges	-					
Onboard analog inputs						
Channels	-					
signal ranges	-					
Max. number of centralized inputs/outputs						
Max. number of extension modules on I/O bus	up to max. 10					
Digital	inputs	320 + 8				
	outputs	320 + 6				
Analog	inputs	160				
	outputs	160				
Internal interfaces						
COM1						
RS485	●					
Sub-D connection	●					
Programming, Modbus, ASCII	●					
COM2 (option) (2)						
RS485	●					
Terminal block	●					
Programming, Modbus, ASCII	●					
Ethernet						
RJ45	-				●	
Ethernet functions: Programming, Modbus, TCP/IP, UDP/IP, integrated Web server, DHCP, FTP server, SNMP client	-				●	
SMTP	-					●
RUN/STOP switch	●					
LED display for power, status and error	●					
Approvals	cULus, Class 1 Div 2, CE, EAC, RCM, KCC(3), ABS, BV, DNV, GL, LR, RINA, RMRS, ROHS					

(1) Real-time clock requires optional TA561-RTC or TA562-RS-RTC and CR2032 battery (sold separately)

(2) COM2 requires TA562-RS-RTC or TA562-RS.

(3) Submitted

AC500-eCo

Technical data

AC500-eCo CPUs

Type	PM564-TP	PM564-RP	PM564-RP-AC	PM564-TP-ETH	PM566-TP-ETH	PM564-RP-ETH	PM564-RP-ETH-AC		
Supply voltage	24 V DC		100-240 V AC	24 V DC		100-240 V AC			
Current consumption on	24 V DC		100 V AC	240 V AC	24 V DC		100 V AC	240 V AC	
Min. typ. (module alone)	0.095 A	0.11 A	0.02 A	0.011 A	0.10 A	0.10 A	0.12 A	0.023 A	0.014 A
Max. typ. (I/Os)	0.21 A	0.24 A	0.21 A	0.125 A	0.22 A	0.22 A	0.25 A	0.22 A	0.13 A
Program memory	128 kB				512 kB	128 kB			
Integrated data memory	14 kB thereof 2 kB saved				130 kB thereof 2 kB saved	14 kB thereof 2 kB saved			
Web server's data for user RAM disk					512 kB	1024 kB	512 kB		
Data buffering (of saved data)	flash memory								
Real-time clock (option with battery back-up) (1)	●								
Program execution									
Cyclical	●								
Time controlled	●								
Multi tasking	no, 1 task + 1 interrupt task max.								
Interruption	●								
User program protection by password	●								
Cycle time for 1 instruction (minimum)									
Binary	0.08 µs								
Word	0.1 µs								
Floating	1.2 µs								
Onboard digital inputs									
Channels	6 (including 2 counter inputs)								
Signal voltage	24 V DC								
Onboard digital outputs									
Channels	6 (including 2 PWM outputs)								
Relay / Transistor	Transistor	Relay	Relay	Transistor	Transistor	Relay	Relay		
Rated voltage	24 V DC	240 V AC	240 V AC	24 V DC	24 V DC	240 V AC	240 V AC		
Nominal current per channel	0.5 A	2 A resistive	2 A resistive	0.5 A	0.5 A	2 A resistive	2 A resistive		
Onboard analog inputs									
Channels	2								
signal ranges	0...10 V / can be configured as digital input 24 V DC								
Onboard analog outputs									
Channels	1								
signal ranges	0...10 V / 0...20 mA / 4...20 mA								
Max. number of centralized inputs/outputs									
Max. number of extension modules on I/O bus	up to max. 10								
Digital	inputs	320 + 8							
	outputs	320 + 6							
Analog	inputs	160 + 2							
	outputs	160 + 1							
Internal interfaces									
COM1									
RS485	●								
Sub-D connection	●								
Programming, Modbus, ASCII	●								
COM2 (option) (2)									
RS485	●								
Terminal block	●								
Programming, Modbus, ASCII	●								
Ethernet									
RJ45	-				●				
Ethernet functions: Programming, Modbus TCP/IP, UDP/IP, integrated Web server, DHCP, FTP server, SNMP client	-				●				
SMTP							●		
RUN/STOP switch	●								
LED display for power, status and error	●								
Approvals	cULus, Class 1 Div 2, CE, EAC, RCM, KCC(3), ABS, BV, DNV, GL, LR, RINA, RMRS, ROHS								

(1) Real-time clock requires optional TA561-RTC or TA562-RS-RTC and CR2032 battery (sold separately)

(2) COM2 requires TA562-RS-RTC or TA562-RS.

(3) Submitted

AC500-eCo

Technical data

Digital S500-eCo I/O modules

Type	DI561	DI562	DI571	DI572	DO561	DO562
Supply voltage	-	-	-	-	24 V DC	24 V DC
Current consumption on UP						
Max. typ. (without load current)	-	-	-	-	0,005 A	0,005 A
Number of channels per module						
Digital						
inputs	8	16	8 (AC)	16 (AC)	-	-
outputs	-	-	-	-	8	16
Configurable as Input or Output DC	-	-	-	-	-	-
Relay / Transistor	-	-	-	-	Transistor	Transistor
Additional configuration of channels as:						
Fast Counter	no				not applicable	
Digital inputs						
Input signal voltage	24 V DC		100-240 V AC		-	-
Input time delay	typically 4...8 ms		typically 15 ms / 30 ms		-	-
Input current per channel						
At Input voltage	24 V DC	typically 5 mA	-	-	-	-
	5 V DC	typically 1 mA	-	-	-	-
	15 V DC	> 2,5 mA	-	-	-	-
	30 V DC	< 8 mA	-	-	-	-
	40 V AC	-	< 3 mA	-	-	-
	164 V AC	-	> 6 mA	-	-	-
Output current						
Nominal current per channel	-	-	-	-	0,5 A at UP = 24 V	
Maximum (total current of all channels)	-	-	-	-	4 A	8 A
Residual current at signal state 0	-	-	-	-	< 0,5 mA	
Demagnetization when switching off inductive loads	-	-	-	-	must be provided externally	
Switching frequency						
For resistive load	-	-	-	-	limited by CPU cycle time	
For inductive load	-	-	-	-	max. 0,5 Hz	
For lamp load	-	-	-	-	max. 11 Hz at max. 5 W	
Short circuit / overload proofness	-	-	-	-	no	
Overload indication (I > 0,7 A)	-	-	-	-	no	
Output current limiting	-	-	-	-	no	
Proofness against reverse feeding of 24 V signals	-	-	-	-	no	
Contact rating						
For resistive load, max.	-	-	-	-	-	-
For inductive load, max.	-	-	-	-	-	-
For lamp load	-	-	-	-	-	-
Lifetime (switching cycles)						
Mechanical lifetime	-	-	-	-	-	-
Lifetime under load	-	-	-	-	-	-
Maximum cable length for connected process signals						
Cable	shielded	500 m				
	unshielded	300 m			150 m	
Potential isolation						
Per module	●	●	●	●	●	●
Between the channels	input	-	per group of 8	●	per group of 8	-
	output	-	-	-	-	-
Voltage supply for the module's logic	internal via I/O bus					

AC500-eCo

Technical data

Digital S500-eCo I/O modules

Type	DO571	DO572	DO573
Supply voltage	24 V DC		
Current consumption on UP Max. typ. (without load current)	0,050 A	–	0,050 A
Number of channels per module			
Digital			
inputs	–	–	–
outputs	8	8	16
Configurable as Input or Output DC	–	–	–
Relay / Transistor	Relay	triac (AC)	Relay
Process voltage			
DC	24 V	–	–
Digital inputs			
Input signal voltage	–	–	–
Input time delay	–	–	–
Input current per channel			
At Input voltage	24 V DC	–	–
	5 V DC	–	–
	15 V DC	–	–
	30 V DC	–	–
Output current			
Nominal current per channel	2 A (24 V DC / 120 V AC / 240 V AC, resistive load)	0,3 A at 100...240 V AC	2 A (24 V DC / 120 V AC / 240 V AC, resistive load)
Maximum (total current of all channels)	2 x 8 A	2,4 A / 8 x 0,3 A	max 10 A per group (20 A per module)
Residual current at signal state 0	–	1,1 mA rms at 132 V AC and 1,8 mA rms at 264 V AC	–
Demagnetization when switching off inductive loads	must be performed externally		
Switching frequency			
For resistive load	1 Hz max.	10 Hz max.	1 Hz max.
For inductive load	–	–	–
For lamp load	1 Hz max.	10 Hz max.	1 Hz max.
Short circuit / overload proofness	no		
Overload indication (I > 0,7 A)	no		
Output current limiting	no		
Proofness against reverse feeding of 24 V signals	yes	–	yes
Contact rating			
For resistive load, max.	2 A	0,3 A	2 A
For inductive load, max.	–	–	–
For lamp load	200 W at 230 V AC 30 W at 24 V DC	–	200 W at 230 V AC 30 W at 24 V DC
Lifetime (switching cycles)			
Mechanical lifetime	100 000	–	100 000
Lifetime under load	100 000 at rated load	–	100 000 at rated load
Maximum cable length for connected process signals			
Cable	shielded	500 m	
	unshielded	150 m	
Potential isolation			
Per module	between outputs and logic	●	between outputs and logic
Between the channels	input	–	–
	output	●	–
Voltage supply for the module's logic	internal via I/O bus		per group of 8

AC500-eCo

Technical data

Digital S500-eCo I/O modules

Type	DX561	DX571	DC562
Supply voltage	24 V DC		
Current consumption on UP			
Max. typ. (without load current)	0,005 A	0,050 A	0,010 A
Number of channels per module			
Digital			
inputs	8	8	–
outputs	8	8	–
Configurable as Input or Output DC	–	–	16
Relays / Transistor	Transistor	Relay	Transistor
Process voltage			
DC	24 V	24 V	24 V
Digital inputs			
Input signal voltage	24 V DC	24 V DC	24 V DC
Input time delay	typically 4...8 ms		typically 8 ms
Input current per channel			
At Input voltage	24 V DC	typically 5 mA	typically 5 mA
	5 V DC	< 1 mA	< 1 mA
	15 V DC	> 2,5 mA	> 2,5 mA
	30 V DC	< 6,5 mA	< 6,5 mA
			typically 5 mA
			typically 1 mA
			> 2,5 mA
			< 8 mA
Output current			
Nominal current per channel	0,5 A at UP = 24 V DC	2 A (24 V DC / 120 V AC / 240 V AC, resistive load)	0,5 A at UP = 24 V DC
Maximum (total current of all channels)	4 A	2 x 8 A	8 A
Residual current at signal state 0	< 0,5 mA	–	< 0,5 mA
Demagnetization when switching off inductive loads	must be performed externally		
Switching frequency			
For resistive load	Limited by CPU cycle time	1 Hz max.	
For inductive load	0,5 Hz max.	–	0,5 Hz max.
For lamp load	11 Hz max. at max. 5 W	1 Hz max.	11 Hz max. at max. 5 W
Short circuit / overload proofness	no		
Overload indication (I > 0,7 A)	no		
Output current limiting	no		
Proofness against reverse feeding of 24 V signals	no	yes	no
Contact rating			
For resistive load, max.	–	2 A	–
For inductive load, max.	–	–	–
For lamp load	–	200 W at 230 V AC 30 W at 24 V DC	–
Lifetime (switching cycles)			
Mechanical lifetime	–	100 000	–
Lifetime under load	–	100 000 at rated load	–
Maximum cable length for connected process signals			
Cable	shielded	500 m	
	unshielded	150 m	
Potential isolation			
Per module	●	–	●
Between the channels	input	–	–
	output	–	per group of 4
Voltage supply for the module's logic	internal via I/O bus		

AC500-eCo

Technical data

Analog S500-eCo I/O modules

Type		AI561	AO561	AX561	AI562	AI563
Supply voltage		24 V DC				
Current consumption on UP						
Max. typ. (without load current)		0.100 A	0.100 A	0.140 A	0.040 A	0.100 A
Number of channels per module						
Analog	inputs	4	–	4	2	4
	outputs	–	2	2	–	–
Inputs, individually configurable						
–2.5...+2.5 V	11 bits + sign	●	–	●	–	–
–5...+5 V	11 bits + sign	●	–	●	–	–
–10...+10 V	11 bits + sign	–	–	–	–	–
0...5 V	12 bits	●	–	●	–	–
0...10 V	12 bits	●	–	●	–	–
0...20 mA, 4...20 mA	12 bits	●	–	●	–	–
RTD		–	–	–	2	–
Pt100		–	–	–	●	–
	–50...+400 °C (2/3-wire)	–	–	–	●	–
Pt1000		–	–	–	●	–
	–50...+400 °C (2/3-wire)	–	–	–	●	–
Ni100 / Ni1000		–	–	–	●	–
	–50...+150 °C (2/3-wire)	–	–	–	●	–
Resistor	0...150 Ω/0...300 Ω	–	–	–	●	–
Thermocouple	Types J, K, T, N, S, E, R	–	–	–	–	●
Voltage	–80...+80 mV	–	–	–	–	●
Outputs, individually configurable						
–10...+10 V		–	●	●	–	–
0...20 mA		–	●	●	–	–
4...20 mA		–	●	●	–	–
Potential isolation						
Per module		–	–	–	●	●

AC500-eCo

Technical data

FM562 positioning module

The FM562 module contains Pulse Train Outputs for 2 axes. Profile generator for simple motion control tasks are integrated. The RS422 outputs allow a direct connection to Stepper- or Servo drives. Function blocks in PLCopen® motion control style allow the integration of the module in an application. These function blocks are contained in the library PS552-MC-E.

Type	FM562	
Functionality		
Number of axis	2	
Digital inputs	2 digital inputs per axis Function: for axis enable or limit switch	
Pulse outputs	Modes cw/ccw or pulse/direction Built in profile generators	
Data of the digital inputs		
Signal voltage	24 V DC	
Input current at 24 V DC	typically 5 mA	
Potential isolation	by groups of 2	
Data of pulse outputs		
Signal	RS422 (differential)	
Frequency range	0...250 kHz	
Potential isolation	RS422 outputs of both axis in one group isolated against the inputs, the process voltage and the PLC CPU logic	
Maximum cable length for digital inputs		
Cable	shielded	500 m
	unshielded	300 m
Maximum cable length for pulse outputs		
Cable	shielded	300 m
	unshielded	30 m
Process voltage UP		
Nominal voltage	24 V DC	
Current consumption on UP	typically 0,04 A	
Reverse polarity protection	●	
Potential isolation		
Per module	●	
Voltage supply for the internal logic	From UP / ZP with isolation	