

AC500-XC

Technical data

AC500-XC CPUs

Type	PM573-ETH-XC	PM582-XC	PM583-ETH-XC
Supply voltage	24 V DC		
Current consumption on 24 V DC			
Min. (module alone)	0.110 A	0.050 A	0.110 A
Max. (all couplers and I/Os)	0.810 A	0.750 A	0.810 A
User program memory - Flash EPROM and RAM	512 kB	512 kB	1024 kB
Integrated user data memory	512 kB thereof 288 kB saved	416 kB thereof 288 kB saved	1024 kB thereof 288 kB saved
User Flashdisk (Data-storage, program access or also external with FTP)	–		
Plug-in memory card	depending on SD-Card used: no SD-HC card allowed, use MC502 accessory		
Web server's data for user RAM disk	1 024 kB	–	4 096 kB
Data buffering	battery		
Real-time clock (with battery back-up)	●		
Cycle time for 1 instruction (minimum)			
Binary	0.06 µs	0.05 µs	
Word	0.09 µs	0.06 µs	
Floating-point	0.7 µs	0.5 µs	
Max. number of centralized inputs/outputs			
Max. number of extension modules on I/O bus	up to max. 10 (S500 allowed)		
Digital	inputs / outputs 320 / 320		
Analog	inputs / outputs 160 / 160		
Max. number of decentralized inputs/outputs			
depends on the used standard Fieldbus (1)			
Program execution			
Cyclical / Time controlled / Multi tasking	● / ● / ●		
User program protection by password	●		
Internal interfaces			
COM1			
RS232 / RS485 configurable	●		
Connection (on terminal bases)	pluggable spring terminal block, use TK502 cable in accessory		
Programming, Modbus RTU, ASCII, CS31 master	●		
COM2			
RS232 / RS485 configurable	●		
Connection (on terminal bases)	D-Sub 9 female, use TK501 cable in accessory		
Programming, Modbus RTU, ASCII	●		
FieldBusPlug			
Serial neutral interface	●		
Connection (on terminal bases)	M12 male, 5 pole		
Functions	programming cable UTF-21-FBP, slave communication depending on FieldBusPlug used (PROFIBUS DP, CANopen, DeviceNet)		
Ethernet			
Ethernet connection (on terminal bases)	RJ45	–	RJ45
Ethernet functions: online Access, ICMP (Ping), DHCP, IP configuration protocol, UDP data exchange, Modbus TCP, HTTP (integrated Web server), IEC60870-5-104 remote control protocol, MQTT, SNTP (Time synchronization), FTP server, SMTP client, Socket programming	●	–	●
Ethernet based Fieldbus			
Ethernet connection (on CPU module)	–		
Downloadable protocols like: PROFINET IO RT Controller / Device (2) EtherCAT Master	–		
CPU Display	LC display and 8 function keys		
Function	RUN / STOP, status, diagnosis		
RUN / STOP, RESET push buttons	–		
LEDs for various status display	–		
Timers / Counters	unlimited / unlimited		
Approvals	See detailed page 248 or www.abb.com/plc		

(1) e.g. CS31 Fieldbus: up to 31 stations with up to 120 DI / 120 DOs or up to 32 AI / 32 AO per station.

(2) Availability on demand

AC500-XC

Technical data

AC500-XC CPUs

Type	PM591-ETH-XC	PM592-ETH-XC	PM595-4ETH-M-XC
Supply voltage	24 V DC		
Current consumption on 24 V DC			
Min. (module alone)	0.150 A		0.400 A
Max. (all couplers and I/Os)	0.850 A		1.2 A
User program memory - Flash EPROM and RAM	4096 kB		16384 kB
Integrated user data memory	5632 kB thereof 1536 kB saved		16384 kB thereof 3072 kB saved
User Flashdisk (Data-storage, program access or also external with FTP)	–	Yes, 4 GB Flash non removable	
Plug-in memory card	depending on SD-Card used: no SD-HC card allowed, use MC502 accessory		
Web server's data for user RAM disk	8 MB		32 MB
Data buffering	battery		no battery needed
Real-time clock (with battery back-up)	•		
Cycle time for 1 instruction (minimum)			
Binary	0.002 µs		0.0006 µs
Word	0.004 µs		0.001 µs
Floating-point	0.004 µs		0.001 µs
Max. number of centralized inputs/outputs			
Max. number of extension modules on I/O bus	up to max. 10 (S500 allowed)		
Digital	inputs / outputs		320 / 320
Analog	inputs / outputs		160 / 160
Max. number of decentralized inputs/outputs			
depends on the used standard Fieldbus (1)			
Program execution			
Cyclical / Time controlled / Multi tasking	• / • / •		
User program protection by password	•		
Internal interfaces			
COM1			
RS232 / RS485 configurable	•		
Connection (on terminal bases)	pluggable spring terminal block, use TK502 cable in accessory		
Programming, Modbus RTU, ASCII, CS31 master	•		
COM2			
RS232 / RS485 configurable	•		
Connection (on terminal bases)	D-sub 9 female, use TK501 cable in accessory		
Programming, Modbus RTU, ASCII	•		
FieldBusPlug			
Serial neutral interface	•		–
Connection (on terminal bases)	M12 male, 5 pole		–
Functions	programming cable UTF-21-FBP, slave communication depending on FieldBusPlug used (PROFIBUS DP, CANopen, DeviceNet)		
Ethernet			
Ethernet connection (on terminal bases)	RJ45	RJ45	2x RJ45
Ethernet functions: online Access, ICMP (Ping), DHCP, IP configuration protocol, UDP data exchange, Modbus TCP, HTTP (integrated Web server), IEC60870-5-104 remote control protocol, MQTT, SNTP (Time synchronization), FTP server, SMTP client, Socket programming	•	•	•
Ethernet based Fieldbus			
Ethernet connection (on CPU module)	–		4 x RJ45 (2x interfaces with 2-port switch)
Downloadable protocols like: PROFINET IO RT Controller / EtherCAT Master or Ethernet e.g. Modbus TCP client/server	–		•
CPU display	LC display and 8 function keys		–
Function	RUN / STOP, status, diagnosis		Status, diagnosis
RUN / STOP, RESET push buttons	–		•
LEDs for various status display	–		•
Timers / Counters	unlimited / unlimited		
Approvals	See detailed page 248 or www.abb.com/plc		

(1) e.g. CS31 Fieldbus: up to 31 stations with up to 120 DIs / 120 DOs or up to 32 AIs / 32 AOs per station.

AC500-XC

Technical data

AC500-XC V3 CPUs

Type	PM5630-2ETH-XC	PM5650-2ETH-XC	PM5670-2ETH-XC	PM5675-2ETH-XC
Supply voltage	24 V DC			
Current consumption on 24 V DC				
Min. typ. (module alone)	0.150 A	0.200 A	0.250 A	0.250 A
Max. typ. (all couplers and I/Os)	0.850 A	0.900 A	0.950 A	0.950 A
User program memory / User Data memory Web server's data – Flash EPROM and DRAM	8 MB	80 MB	160 MB	160 MB
User data memory saved	256 KB	256 KB	1.5 MB	1.5 MB
User Flashdisk (Data-storage, programm access or also external with FTP)				8 GB Flash non removable
Plug-in memory card	Depending on SD-Card used: SD-HC card allowed, use MC502 preferably accessory			
Web server's data for user RAM disk	8 MB	No limitation, included into the global User Program/Data memory		
Data buffering	battery			
Real-time clock (with battery back-up)	●			
Cycle time for 1 instruction (minimum)				
Binary	0.02 µs	0.01 µs	0.002 µs	0.002 µs
Word	0.02 µs	0.01 µs	0.002 µs	0.002 µs
Floating-point	0.12 µs	0.01 µs	0.002 µs	0.002 µs
Communication modules supported				
Max. number of communication modules on TBs	up to 2	Up to 6 depending on available terminal bases (2)		
Type of communication module supported	CM579-PNIO-XC, CM589-PNIO-XC, CM589-PNIO-4-XC, CM582-DP-XC (2), CM592-DP-XC (2), CM597-ETH-XC (2) and CM598-CN-XC (2)			
Max. number of centralized inputs/outputs				
Max. number of extension modules on I/O bus	up to max. 10 (S500 and/or S500-eCo modules allowed)			
Digital inputs/outputs	320/320			
Analog inputs/outputs	160/160			
Max. number of decentralized inputs/outputs	depends on the used standard Fieldbus (1)			
Program execution				
Cyclical / Time controlled / multi tasking	●/●/●			
User program protection by password	●			
Internal interfaces				
COM1				
RS232 / RS485 configurable	●			
Connection (on terminal bases or CPU module)	pluggable spring terminal block, use TK502 cable in accessory			
Modbus RTU Master/Slave, ASCII	●			
CANopen				
Serial interface	CAN serial interface			
Connection (on terminal bases)	Pluggable spring terminal block, 2x 5 poles			
Functions	CANopen Master / Slave (2) communication, CAN 2A/2B, J1939 protocol			

(1) e.g. CANopen Fieldbus: up to 127 stations with up to 320 Digital channels or up to 160 Analog channels per station.

(2) In preparation, availability on demand

(3) Feature is licensed

AC500-XC

Technical data

AC500-XC V3 CPUs

Type	PM5630-2ETH-XC	PM5650-2ETH-XC	PM5670-2ETH-XC	PM5675-2ETH-XC
Ethernet	2x independent Ethernet interfaces for several uses			
Ethernet connection (on terminal bases)	2x RJ45 with 2x separated interfaces and MAC-Address, could be used as 2-port switch with 1x interface			
Ethernet functions:				
Online Access, ICMP (Ping), DHCP	●			
IP configuration protocol	●			
UDP data exchange, Network variables	●			
Modbus TCP Client / Server	●			
IEC60870-5-104 remote control protocol	●			
HTTP / HTTPS (integrated Web server)	●			
SNTP (Time synchronization)	●			
FTP / FTPs server	●			
SMTP client	●			
Socket programming	●			
WebVisu for data visualisation on webserver HTML5	●			
Valid for all CPU before OPC UA MQTT	●			
OPC UA server (Micro Embedded Device Server) with security	●			
Ethernet Switch on ETH1 / ETH2	●			
Ethernet based Fieldbus				
Downloadable protocols (licensed feature):	available on one Ethernet interface, the other interface can be sometimes used as switch			
IEC 61850 server	● (3)	● (3)	● (3)	● (3)
PROFINET IO RT Controller	● (2)(3)	● (2)(3)	● (2)	● (2)
EtherCAT Master	● (2)(3)	● (2)(3)	● (2)	● (2)
EthernetIP Adapter	● (2)(3)	● (2)(3)	● (2)(3)	● (2)(3)
CPU display	LC display and 8 function keys			
Function	RUN / STOP, status, diagnosis			
LEDs for various status display	●			
Timer/Counter	unlimited/unlimited			
Approvals	See detailed page 248 or www.abb.com/plc			

(1) e.g. CANopen Fieldbus: up to 127 stations with up to 320 Digital channels or up to 160 Analog channels per station.

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