

# AC500

## Technical data

### AC500 CPUs

| Type   | PM590-ETH  | PM591-ETH                        | PM591-2ETH                       | PM592-ETH                        | PM595-4ETH-F                                 |
|--|--|----------------------------------|----------------------------------|----------------------------------|--|
| Supply voltage   | 24 V DC  |                                  |                                  |                                  |  |
| Current consumption on 24 V DC   |  |                                  |                                  |                                  |  |
| Min. (module alone)  | 0.150 A  | 0.150 A                          | 0.150 A                          | 0.150 A                          | 0.400 A                                      |
| Max. (all couplers and I/Os)   | 0.850 A  | 0.850 A                          | 0.850 A                          | 0.850 A                          | 1.2 A  |
| User program memory – Flash EPROM and RAM  | 2048 kB  | 4096 kB                          | 4096 kB                          | 4096 kB                          | 16384 kB                                     |
| Integrated user data memory  | 3072 kB thereof<br>1536 kB saved   | 5632 kB thereof<br>1536 kB saved | 5632 kB thereof<br>1536 kB saved | 5632 kB thereof<br>1536 kB saved | 16384 kB thereof<br>3072 kB saved            |
| User Flashdisk (Data-storage, programm 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  |                                  |                                  |                                  |  |
| Real-time clock (with battery back-up)   | ●  |                                  |                                  |                                  |  |
| <b>Cycle time for 1 instruction (minimum)</b>  |  |                                  |                                  |                                  |  |
| Binary   | 0.002 μs   | 0.002 μs                         | 0.002 μs                         | 0.002 μs                         | 0.0006 μs                                    |
| Word   | 0.004 μs   | 0.004 μs                         | 0.004 μs                         | 0.004 μs                         | 0.001 μs                                     |
| Floating-point   | 0.004 μs   | 0.004 μs                         | 0.004 μs                         | 0.004 μs                         | 0.001 μs                                     |
| <b>Max. number of centralized inputs/outputs</b>   |  |                                  |                                  |                                  |  |
| 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  |                                  |                                  |                                  |  |
| <b>Max. number of decentralized inputs/outputs</b>   | depends on the used standard Fieldbus (1)  |                                  |                                  |                                  |  |
| <b>Program execution</b>   |  |                                  |                                  |                                  |  |
| Cyclical / Time controlled / Multi tasking   | ●/●/●  |                                  |                                  |                                  |  |
| User program protection by password  | ●  |                                  |                                  |                                  |  |
| <b>Internal interfaces</b>   |  |                                  |                                  |                                  |  |
| <b>COM1</b>  |  |                                  |                                  |                                  |  |
| RS232 / RS485 configurable   | ●  |                                  |                                  |                                  |  |
| Connection (on terminal bases or CPU module)   | pluggable spring terminal block, use TK502 cable in accessory  |                                  |                                  |                                  |  |
| Programming, Modbus RTU, ASCII, CS31 master  | ●  |                                  |                                  |                                  |  |
| <b>COM2</b>  |  |                                  |                                  |                                  |  |
| RS232 / RS485 configurable   | ●  |                                  |                                  |                                  |  |
| Connection (on terminal bases or CPU module)   | D-Sub 9 female, use TK501 cable in accessory   |                                  |                                  |                                  |  |
| Programming, Modbus RTU, ASCII   | ●  |                                  |                                  |                                  |  |
| <b>FieldBusPlug</b>  |  |                                  |                                  |                                  |  |
| 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) |                                  |                                  |                                  | -  |
| <b>Ethernet</b>  |  |                                  |                                  |                                  |  |
| Ethernet connection (on terminal bases)  | RJ45   | RJ45                             | 2 x RJ45                         | RJ45                             | 2 x RJ45                                     |
| Ethernet functions: Programming, TCP/IP, UDP/IP, Modbus TCP, integrated Web server, IEC60870-5-104 remote control protocol, MQTT, SNTP (simple Network Time Protocol), DHCP, FTP server HTTP, SMTP, PING | ●  | ●                                | ●                                | ●                                | ●  |
| <b>Ethernet based Fieldbus</b>   |  |                                  |                                  |                                  |  |
| Ethernet connection (on CPU module)  | -  |                                  |                                  |                                  | 4 x RJ45 (2 x interfaces with 2-port switch) |
| Downloadable protocols like: PROFINET IO RT Controller / EtherCAT Master or Ethernet like ModbusTCP  | -  |                                  |                                  |                                  | ●  |
| <b>CPU display</b>   | LC display and 8 function keys   |                                  |                                  |                                  |  |
| Function   | RUN / STOP, status, diagnosis  |                                  |                                  |                                  | RUN / STOP, status, diagnosis, RESET         |
| LEDs for various status display  | Run, Stop, Error   |                                  |                                  |                                  | ●  |
| Timer/Counter  | unlimited/unlimited  |                                  |                                  |                                  |  |
| <b>Approvals</b>   | See detailed page 238 or <a href="http://www.abb.com/plc">www.abb.com/plc</a>                                      |                                  |                                  |                                  |  |

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

(2) Availability on demand