

PLC AUTOMATION

AC500-XC PLC

The rugged variant of AC500 for extreme indoor and outdoor conditions



AC500-XC extreme conditions

Key features



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• Built-in-protection reduces time and cost

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• Many of the traditional practices are not required, such as:
HVAC for the cabinet, shock absorbers, door sealing, etc...

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• Resistance to:
• High humidity
• Salt mist
• Vibration
• High altitude
• Corrosive gases
• Temperature: from -40 to +70 °C

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• All the benefits of the AC500 range:
ABB Ability™ Automation Builder engineering suite, I/O modules, scalable and flexible, functional safety variants, same high-performance communication, libraries and web services

AC500-XC PLC for extreme environments



XC stands for extreme conditions

Almost any AC500 device is available as an XC variant. While physical dimensions, basic electrical characteristics and software compatibility are identical to the standard variant, there are some special features that make the XC variant more robust:

The reinforced gold-plated connectors withstand vibration, shock and corrosion, and the sealed PCBs have a specific coating that prevents short circuits and corrosion from occurring even in humid or dusty environments.

Resistance to these conditions during storage and operation without additional protective measures makes engineering with AC500-XC much more cost-efficient.

Therefore, AC500-XC is the ideal choice for wind turbines, solar trackers, water and wastewater treatment plants, construction machines, mobile and stationary cranes, marine applications, navigation lights and guidance equipment, infrastructure, tunnels, mining, automatic railway vehicles, outdoor AGVs and many more.



**Cost saving in engineering and operation**

The AC500-XC range with its built-in protection against vibrations, dirt, water, gases and dust eliminates the need for expensive cabinets.

Many accessories become unnecessary:

- Seals at cable entries and on doors
- Shock absorbers
- HVAC in cabinet
- Cooling fins and cut-outs
- EMC protection

Without the need of HVAC in the control cabinet, energy and maintenance costs can be kept to a minimum. Engineering and operation are much more cost-efficient since spending money on special cabinets and cabling practices can be avoided.

The efforts to design, purchase, install and justify expensive enclosures are a thing of the past.



AC500-XC extreme conditions

PLC variant

With extended operating temperature, immunity to vibration and hazardous gases, for use at high altitudes and in humid environments. The AC500-XC PLC is reliable, functionally safe and operational even under rough environmental conditions.



Operation in extremely humid environments

- Increased resistance against 100 % humidity and condensation.



Extended operating temperature

- -40 °C up to +70 °C operating temperature.



Reliable in high altitudes

- Operation in altitudes up to 4000 m above sea level or air pressures up to 620 hPa.



Extended immunity to corrosive gases and salt mist

- G3, 3C2 / 3C3 immunity
- Salt mist EN 60068-2-52 / EN 60068-2-11.



Extended immunity to vibration

- 4 g rms random vibration up to 500 Hz
- 2 g sinusoidal vibration up to 500 Hz.



Extended EMC requirements

- EN 61000-4-5 surge immunity test
- EN 61000-4-4 transient / burst immunity test.



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01 Extreme conditions terminal base

02 Extreme conditions communication module

03 Extreme conditions CPU

04 Extreme conditions S500 terminal unit

05 Extreme conditions S500 I/O module

06 Extreme conditions CPU with integrated connectivity and terminal base

07 Extreme conditions safety CPU, S500-XC I/O module and terminal unit



07





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