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PLC AUTOMATION

IEC 61850 protocol for substation and switchboard automation
AC500 as controller, gateway or IED

IEC 61850 is a standard protocol for state-of-the art, future-proof substation automation, which replaces hard wiring of signals by communication over the network. The AC500 V3 can be programmed to act as an Intelligent Electronic Device (IED), RTU or used in control applications such as e.g. load shedding.

Interoperability between devices made easy
Generic Object-Oriented Substation Event (GOOSE) messages are used for the interoperability of devices with minimal delay, e.g. for fast tripping or interlocking or monitoring applications. With the IEC 61850 library and the comfortable communication the AC500 PLC can be used for the publishing of and subscribing to GOOSE messages.

The AC500 PLC can also act as server for connection-oriented communication according to the Manufacturing Messaging Specification (MMS).

Easy engineering
Automation Builder integrates the IED configuration which supports the import and export of files in the Substation Configuration Language (SCL) and code creation for the AC500. SCL allows transferring configuration information between various IEDs.
The functionality of the devices can be programmed in IEC 61131 languages with Automation Builder.

Integral solution
All-in-one platform 60870-104, 61850, Modbus, combined with OPC DA, OPC UA, MQTT. Automation Builder Engineering with the comfortable IED configuration tool and flexible IEC programming functionality and C-code integration.

Application example 61850
AC500 can precisely control and monitor all levels (switchboard, substation and process) and connect them via 61850 or interface to the outside world (RTU).

AC500 can interface to a large amount of IEDs and map their data in control and monitoring direction to a 60870-5-104 , OPC UA or MQTT communication as required or act on other IEDS e.g with advanced logic in load shedding control applications.
AC500 can also help to modernize and digitalize an existing and aging infrastructure.

Please watch our videos on our ABB PLC YouTube channel:

www.youtube.com/user/abbplc

AC500
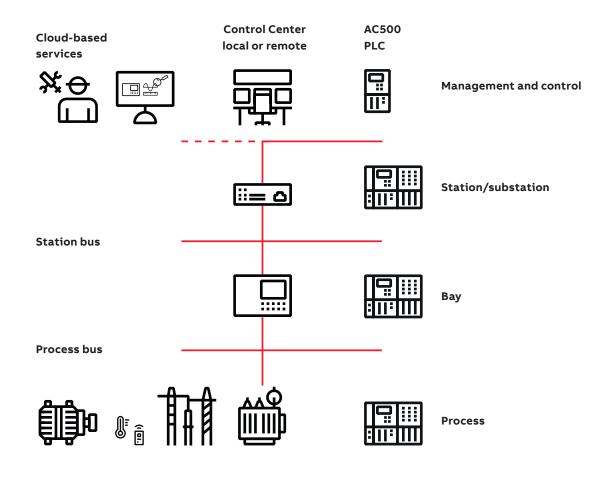# application levels

Cloud-based services	Control Center local or remote	AC500 PLC	
			Management and control
			Station/substation
Station bus			
			Bay
Process bus			
			Process

3ADR010672_1_en_US (Edition 02.2021)