

ABB TB521-ETH 1SAP112100R0170

Terminal Base Integration Guide

ABB AC500 CPU terminal base for one CPU and two communication modules with Ethernet RJ45

DOCUMENT SCOPE

Independent Apter Power manual compiled only from the cited ABB manufacturer sources. No product photograph is included.

Product / lookup identity	ABB TB521-ETH 1SAP112100R0170
Reference number	1SAP112100R0170
Document basis	Published ABB product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/ABB/tb521-eth-1sap112100r0170>

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CPU, communication, and terminal-base path

ABB TB521-ETH, order number ISAPI12100R0170, is an AC500 CPU terminal base that accepts one processor module and two plug-in communication modules and provides an Ethernet RJ45 connection. It forms the electrical and mechanical base of an AC500 station by connecting the installed CPU and communication modules, distributing the documented 24 V DC supply, and linking the first S500 I/O terminal unit through the I/O-Bus.

01	Power: A 24 V DC supply is connected through the 5-pole removable terminal block. ABB warns that process or supply voltage above 30 V DC can irreparably damage the system.
02	Io Bus: Transfers I/O and diagnostic data between the installed AC500 CPU and S500 expansion modules; the base provides the physical I/O-Bus connection.
03	Com1: With the compatible CPU, COM1 can support RS-232 programming/online access, free protocol, Modbus RTU master or slave, or CS31 master over RS-485.
04	Com2: With the compatible CPU, COM2 can support RS-232 programming/online access, free protocol, or Modbus RTU master or slave; ABB states COM2 is not intended for a CS31 system bus.
05	Ethernet: Connects to the internal Ethernet coupler of a PM5xx-ETH CPU and supports the CPU's TCP/IP programming, UDP function-block communication, and Modbus TCP master/slave functions.

AC500 mounting and connection boundaries

01	Verification Status: VERIFIED_EXACT_MODEL_AND_ORDER_CODE_FROM ABB OFFICIAL AC500 HARDWARE MANUAL
02	Exact Mapping: ABB AC500 Hardware document 2CDC125017M0202 maps order number ISAP 112 100 R0170 to TB521-ETH.
03	Lifecycle Status: unknown for exact R0170. ABB's cited 2007 manual documents the article; the current ABB web product page is for distinct order code R0270. No cited ABB source assigns R0170 an Active, Classic, Limited, or Obsolete phase or formally identifies R0270 as its replacement.

Base and interface readiness checks

01	Verify the full order code ISAP112100R0170; R0270 is a different article and must not be treated as an automatic drop-in replacement without ABB documentation.
02	Use an Ethernet-type PM5xx-ETH CPU; ABB states that the terminal-base network type must match the CPU type.
03	Isolate 24 V DC power and follow ABB's AC500 mounting, disassembly, ESD, grounding, and wiring procedures before inserting or removing the CPU, couplers, terminals, or I/O units.
04	Never exceed 30 V DC at the process or supply terminals; ABB warns this can destroy the system.
05	Observe polarity at the duplicated L+ and M terminals. ABB warns that incorrect duplicated-terminal wiring can short-circuit and damage the supply, fuse, or terminal base.
06	Do not claim 10 I/O expansion modules unless PS501 is version 1.2 or later and the CPU firmware is version 1.2.0 or later; otherwise use the documented standard limit of seven.

Identity and release controls

Verification Status	VERIFIED_EXACT_MODEL_AND_ORDER_CODE_FROM ABB OFFICIAL AC500 HARDWARE MANUAL
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Official ABB sources

ABB AC500 Hardware	https://library.e.abb.com/public/a5f99bfde8bbfbd1c1257c210040dd7a/2CDC125017M0202.pdf
ABB product page – current distinct TB521-ETH article	https://www.abb.com/global/en/products/isap112100r0270
ABB AC500 PLC platform	https://www.abb.com/global/en/areas/motion/plc/programmable-logic-controllers/ac500