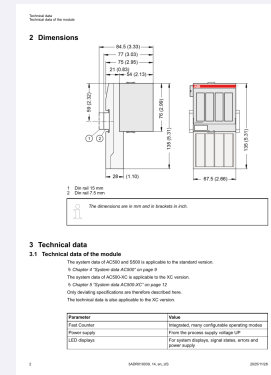


FIELD INSTALLATION QUICK GUIDE

Installation Instructions

ABB DA501

Mixed Digital Analog Module



PRODUCT	DA501
FAMILY	AC500 / S500 I/O
FUNCTION	Mixed Digital Analog Module
STATUS	Verify exact configuration

Prepared by Amikon Limited from ABB 3ADR010039 rev.14, 2025-11-28, DA501 original instructions. This guide does not replace the complete manufacturer manual, site procedure, hazardous-area drawing, or approval document.

01 CONFIRM THE ORDERED CONFIGURATION

Channel allocation	16 digital inputs, 8 configurable digital I/O, 4 analog inputs and 2 analog outputs
Required terminal unit	TU515 or TU516
Process supply rating	24 V DC; -15% / +20% system tolerance; maximum 5% ripple
UP current consumption	0.07 A plus maximum 0.5 A per digital output
Internal power dissipation	Maximum 6 W with outputs unloaded
Isolation arrangement	Channels isolated from I/O bus; no isolation between channels or from process supply
Digital input characteristic	IEC 61131-2 Type 1; typical 5 mA at 24 V

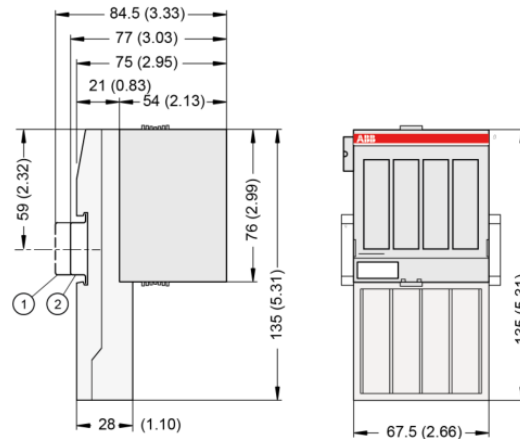
02 MOUNTING AND CONNECTION

- Isolate process and supply voltages before wiring or replacing the module.
- Install the standard DA501 on the specified TU515 or TU516 terminal unit with unobstructed natural convection.
- Connect protected 24 V DC UP and ZP supplies at the documented terminal positions; ABB specifies a 10 A fast UP fuse.
- Distinguish AI- and AO- voltage references from ZP current references before connecting analog circuits.
- Configure each analog range and configurable digital channel, then apply the output-load derating for the mounting orientation.

OFFICIAL INSTALLATION REFERENCE

Technical data
Technical data of the module

2 Dimensions



- 1 Din rail 15 mm
- 2 Din rail 7.5 mm



The dimensions are in mm and in brackets in inch.

3 Technical data

3.1 Technical data of the module

The system data of AC500 and S500 is applicable to the standard version.

☞ Chapter 4 "System data AC500" on page 9

The system data of AC500-XC is applicable to the XC version.

☞ Chapter 5 "System data AC500-XC" on page 12

Only deviating specifications are therefore described here.

The technical data is also applicable to the XC version.

Parameter	Value
Fast Counter	Integrated, many configurable operating modes
Power supply	From the process supply voltage UP
LED displays	For system displays, signal states, errors and power supply

04

CABLE ROUTING AND CONNECTION

- Install the standard DA501 on the specified TU515 or TU516 terminal unit with unobstructed natural convection.
- Connect protected 24 V DC UP and ZP supplies at the documented terminal positions; ABB specifies a 10 A fast UP fuse.
- Distinguish AI- and AO- voltage references from ZP current references before connecting analog circuits.
- Configure each analog range and configurable digital channel, then apply the output-load derating for the mounting orientation.
- Verify sensor values, command responses and counter operation in the actual host configuration before service.

05

INITIAL SYSTEM CHECKS

- Confirm model identity and compatible system components before energizing.
- Verify wiring, grounding, enclosure, and applicable hazardous-area requirements.
- Verify sensor values, analog command responses and counter operation in the actual host configuration.
- Record the installed order number and baseline operating condition.

06

CONTROLLED DOCUMENTS

Official source	ABB 3ADR010039 rev.14, 2025-11-28, DA501 original instructions
Product record	DA501
Manufacturer	ABB
Support	INFO@AMIKON.CN