DOCUMENT
CPU 310 datasheet
LADV-DS-310

PROJECT
Wartens LADV virtual PLCs
Rev 1.0

CPU 310 datasheet

LADV300 advanced controller. Order number LV300-C310-16DDT.

Document	CPU 310 datasheet
Code	LADV-DS-310
Revision	1.0, 1 November 2026
Firmware	V1.0.0
Issued by	Wartens, makers of LADX

> Wartens LADV controllers are virtual PLCs that run in a web browser, for learning, for testing logic and for preparing for commissioning. They are not real time, not safety rated, and they cannot control equipment.

Overview

Modular controllers on a virtual backplane. Choose the CPU, slot in digital and analog modules, and size the system to the I/O list, the way a line controller is specified.

Modular CPU, 8 module slots, 8 DI and 8 DO on board.

Technical data

Property	Value
Series	LADV300 Advanced
CPU	CPU 310
Order number	LV300-C310-16DDT
Variant, as printed	DC/DC/DC
Digital inputs	8
Digital outputs	8
Analog inputs	0
Analog outputs	0
Expansion slots	8, for LADV-DI16, LADV-DO16, LADV-AI8, LADV-AO4
Program memory, ladder	4096 tags, 2048 rungs, 64 routines
Program memory, Structured Text	4096 variables, 16384 statements, 128 program organisation units
Fastest scan	5 ms
Watchdog	150 ms per scan
Retentive memory	Yes. A warm restart keeps RETAIN variables, and ladder memory
Languages	Ladder (LADX), IEC 61131-3 Structured Text
Tasks	Cyclic and event tasks, priorities from 0, non-preemptive

Property	Value
Online functions	Watch, modify, force I/O, 64-entry diagnostic buffer
Status lamps	RUN, STOP, ERROR, MAINT
Firmware	V1.0.0
Serial number, as printed	WL26-310-54890
Availability	Available in the VPLC lab

Addressing

Structured Text names a channel by its IEC 61131-3 direct address. Ladder wires tags to channels in the order the tags are listed.

Channels	Count	Structured Text addresses
Digital inputs	8	%IX0.0 to %IX0.7
Digital outputs	8	%QX0.0 to %QX0.7
Analog inputs	0	none
Analog outputs	0	none

Channels on modules follow the CPU's own, in slot order: a LADV-DI16 in the first slot after a CPU with 16 digital inputs gives DI16 to DI31, %IX2.0 to %IX3.7.

Status lamps

Lamp	Colour	Meaning
RUN	Green	The program is executing and outputs are live.
STOP	Amber	Stopped. Outputs are off.
ERROR	Red	Faulted. Outputs are off until the fault is reset. The diagnostic buffer gives the code.
MAINT	Amber	At least one I/O point is forced.

Not included

- No fieldbus, no network protocols and no physical I/O.
- No hard real-time guarantee: scans run on simulated time in the browser.
- No safety rating. Safety functions belong in a safety-rated controller.

Related documents

- LADV system manual, LADV-SM
- Structured Text programming manual, LADV-PM-ST
- Ladder instruction reference, LADV-IR-LD
- Diagnostic and fault codes, LADV-DC