MODERNIZATION AND LOW-DEMANDING

ADL510

THE ULTIMATE INVERTER FOR LIFTS

DESIGNED FOR
MODERNIZATION AND
LOW-DEMANDING
APPLICATIONS

PRODUCT RANGE
3 ph 400 V - from 4 to 22 kW

MOTOR CONTROL
Geared motors | OL - SSC and Vector SLS | CL - TTL and HTL digital encoder

EMERGENCY OPERATION
Single phase UPS | DC batteries 48-96 V (-UB or -EMS version)

COMMUNICATION
Parallel IO | Modbus TCP

EASY TO USE
Easy to install | Guided procedures | Optimized control for modernization

COMPLIANCES
EN81-20 | EN81-50 certified

MORE INFO

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ADL510 - The Ultimate Inverter for Lifts

Designed for **modernization** and **low-demanding** applications

GENERAL SPECIFICATIONS	
Control Mode	SSC (Scalar control OL and CL) Asyn SLS (Sensorless FOC) Asyn FOC (Field Oriented Control CL)
Power	4 ... 22 kW
Elevator / Motor type	Asynchronous
Digital inputs	8 DI + Enable, 4 relay outputs
Encoder	digital incremental and sinusoidal interface (TTL / HTL)
Advanced Functions	Wizards for: Drive setup, Startup, Optimization of comfort and performance, Troubleshooting Management of built-in incremental digital encoder with repetition, Multi-speed control (EFC), Calculation of energy savings in regenerative configuration, Extended emergency functions
Communication port	Modbus-TCP (RJ45 port)
EMI Filter	Integrated (in the ADL5X0-...-F version)
Emergency operation	Based on drive version: UPS (1x230 Vac), UPS or battery with aux PW supply (UB version), direct 48-96 Vdc battery supply (EMS version)
Protection class	IP20
Operating temperature	40°C (without derating) 50°C (with derating)
Normative compliances	EN 81-20, EN 81-50, EN 50581:2012
Markings *	CE EAC UKCA

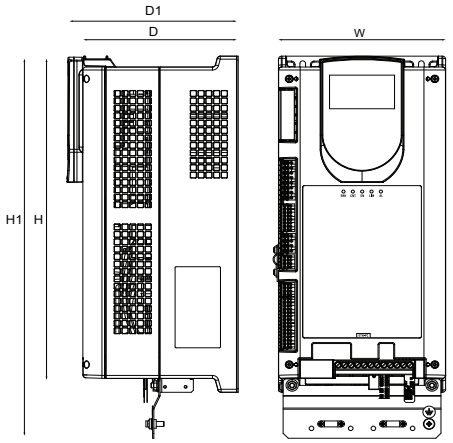
***** To verify based on model

INPUT DATA			1040	1055	1075	2110	2150	3185	3220
ULN - AC Input voltage		Vac	Three-phase 400 Vac -15% +10%						
FLN - Input frequency		Hz	50/60, ±5%						
Overvoltage threshold		Vdc	820 Vdc						
Undervoltage threshold		Vdc	@ 400 Vac = 391 Vdc						
IN Effective input current (@ IN OUT)	@ 400 Vac	A	11	16	22	29	40	47	53

OUTPUT DATA			1040	1055	1075	2110	2150	3185	3220
In - Rated output current (fsw = default)		A	9	13.5	18.5	24.5	32	39	45
Pn mot (Recommended motor power, fsw=default)		kW	4	5.5	7.5	11	15	18.5	22
Reduction factor	Kt[1]		0.90	0.90	0.90	0.90	0.90	0.90	0.90
	KALT [2]		1.2	1.2	1.2	1.2	1.2	1.2	1.2
Overload		%	183% x 10 s @ 0 Hz						
Switching frequency		kHz	10						
U2 - Maximum output voltage		Vac	0.98 x Uln (Uln = AC input voltage)						
f2 - Maximum output frequency		Hz	300						
IGBT braking unit			Standard internal (requires external resistor); braking torque 150% MAX						

Notes
[1] Kt: derating factor for ambient temperature of 50°C (1% every °C above 40°C).
[2] Kalt: derating factor for installation at altitudes above 1,000 meters a.s.l. Value to be applied = 1.2% each 100 m increase above 1,000 m.
E.g.: altitude 2,000 m, Kalt = 1.2% x 10 = 12% derating; In derated = (100 - 12) % = 88 % In

DIMENSION AND WEIGHT



MECHANICAL SIZE		1	2	3
W	[mm]	162	162	235.8
H	[mm]	340	390	392
H1	[mm]	386.5	436.5	434.5
D	[mm]	151	151	179.1
D1	[mm]	166	166	194.4
Weight	[kg]	5.5	7	10

Tools for operators

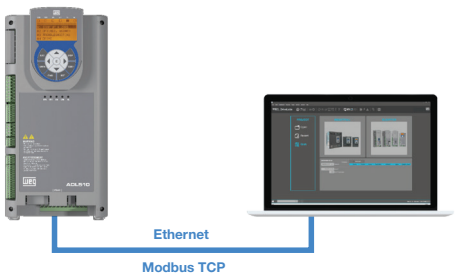
WEG Liftouch APP

The WEG Liftouch app is used to interface locally via Ethernet. The intuitive and responsive interface makes user experience simple and smart.

GET IT ON Google Play | Available on the App Store | Windows installer

WEG DriveLabs

The WEG DriveLabs configurator software is a Windows based professional interface enabling advanced drive control including datalogger and Digital Oscilloscope tools.



Wizards

The ADL500 drive interface has been expanded with 4 multi-step guided procedures leading the user through a sequence of small steps for:

- **Drive setup:** for drive setting at first power-on.
- **System Startup:** for elevator commissioning.
- **Performance optimization:** to optimize control response in order to maximise cabin comfort.
- **Troubleshooting:** to have direct access to the parameters affected by specific elevator operating conditions.

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Cod: 50162121
Rev: 00
Date (m/y): 01/2026

Driving efficiency and sustainability