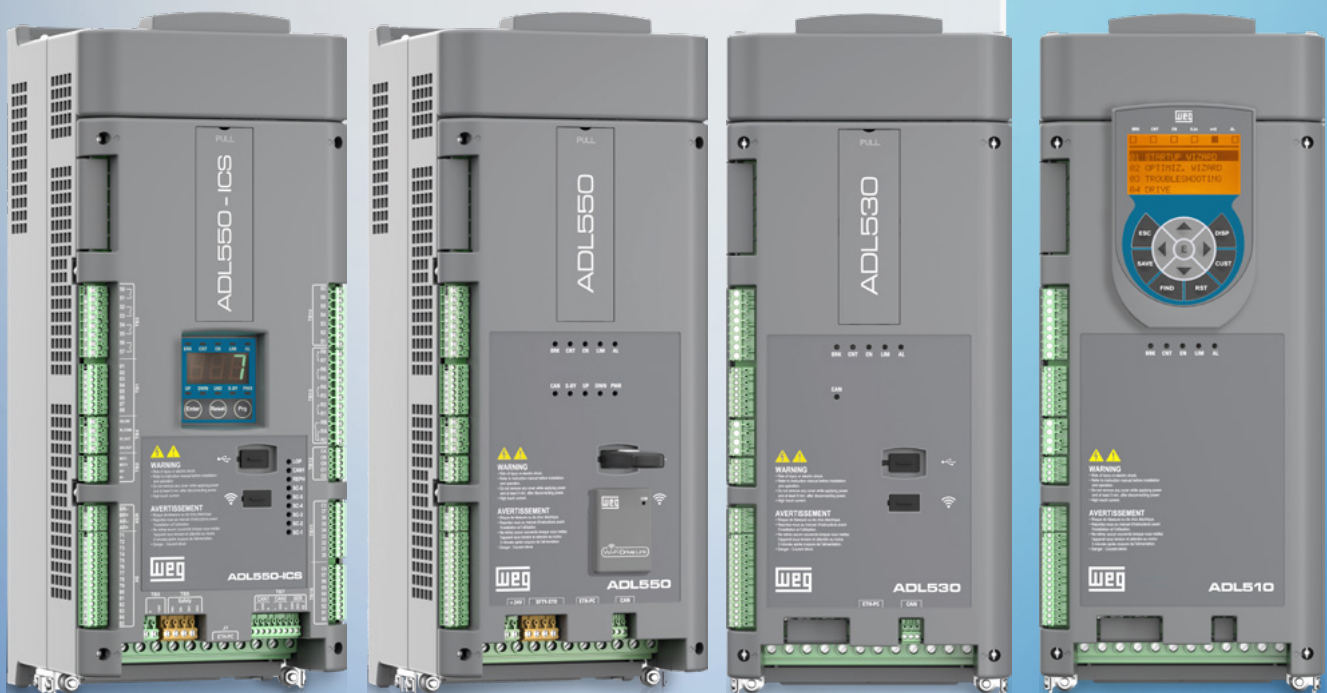


# ADL500 the Ultimate Inverter for Elevator

Smart, flexible and  
**unique in safety**

Industrial Motors  
Commercial &  
Appliance Motors  
**Automation**  
Digital &  
Systems  
Energy  
Transmission &  
Distribution  
Coatings



Driving efficiency and sustainability





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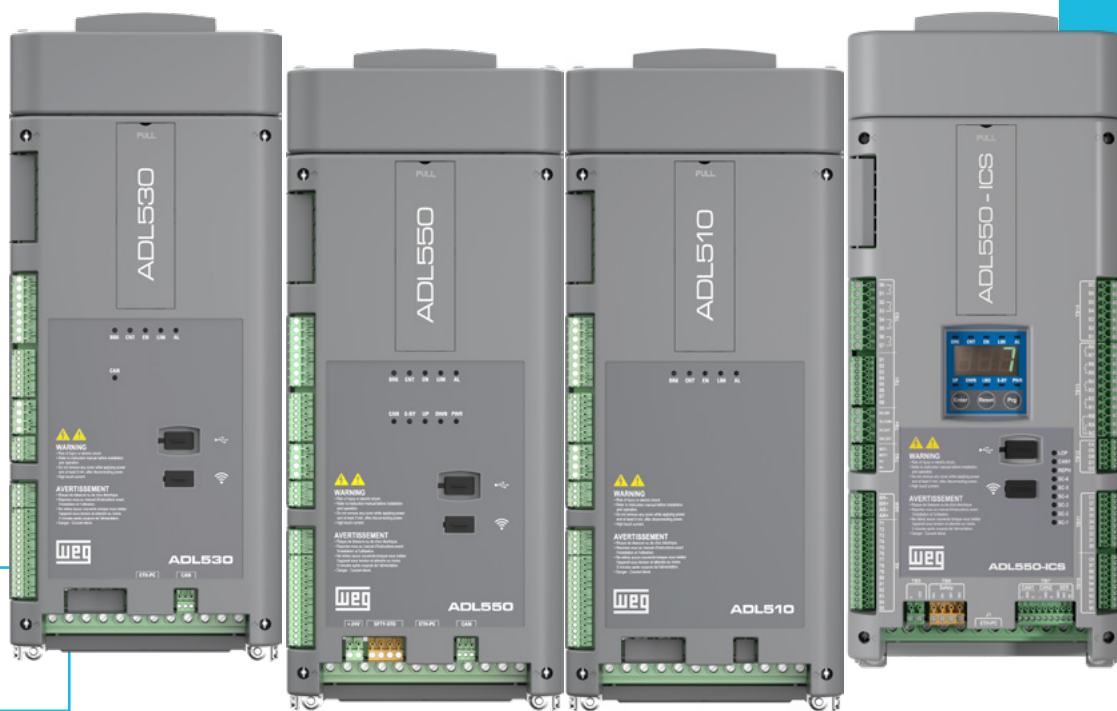
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## **The advantages of regeneration**

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In the last decade the elevators have been under a tremendous evolution from the technology standpoint like never before. Safety, comfort travel, efficiency, reliability, remote access combined with the use of smartphones and tablets are the major changes that we daily experience versus the old generation systems.

WEG has developed the new **ADL500 inverter series** specific for elevators EN 81-20 / EN 81-50 certified.

The series is composed of three lines *ADL550*, *ADL530* and *ADL510* designed to answer the requirements of high rise, medium rise and low rise buildings, without to forget the big market of the modernization.

### ADL510

- Designed to be simple and easy to install in case of **asynchronous motors** typical of low-rise buildings or modernization both in open and close loop.

### ADL530

- Designed to control both **geared and gearless** motors with integrated On-board **Universal encoder interface** (EnDat, SinCos, BiSS and Digital Incremental) and built-in CAN port for communication by CANopen 301 and CANopen Lift 417 are ready to use.

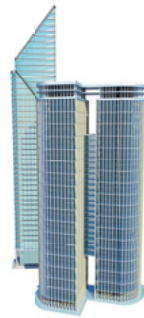
### ADL550

- With **advanced safety functions**: Safe Torque Off SIL3 (phase contactor-less), Safe Brake Test (SBT) to check the motor brakes effectiveness, and the Safe Brake Control SIL3 that replaces the electro-mechanical brakes contactors by internal electronics with the accessory EBC500 (brake contactor-less). Elevator Positioning Control (EPC) that allows to have a better comfort with the direct approach and precise floor levelling even for very high demanding elevators. Stand-by management, where the power part of the drive is shut off to eliminate the energy consumption during the idle state.

### ADL550-ICS






- The Integrated Control System creating one single environment between the inverter and the control card, optimizing the commissioning and the startup of the electronic parts of the elevator.

# Applications



	High rise	Mid rise	Low rise	Home lift
<b>Profile</b>	<ul style="list-style-type: none"> <li>- Height: 90+ m</li> <li>- Floors: 30+</li> <li>- Speed range: 2.5...5 m/s</li> </ul>	<ul style="list-style-type: none"> <li>- Height: 18...90 m</li> <li>- Floors: 6...30</li> <li>- Speed range: 0.8...2.5 m/s</li> </ul>	<ul style="list-style-type: none"> <li>- Height: 12...18 m</li> <li>- Floors: 3...6</li> <li>- Speed range: 0.6...0.8 m/s</li> </ul>	<ul style="list-style-type: none"> <li>- Height: 4...8 m</li> <li>- Floors: 1...2</li> <li>- Speed range: 0.3...0.6 m/s</li> </ul>
<b>Requirements</b>	<ul style="list-style-type: none"> <li>- High speed</li> <li>- Reliability</li> <li>- Smooth acceleration and ride comfort</li> <li>- Limited passengers' waiting and travel time</li> <li>- Regenerative solution</li> </ul>	<ul style="list-style-type: none"> <li>- Cost saving</li> <li>- Space saving</li> <li>- Low energy consumption</li> <li>- Smooth acceleration and ride comfort</li> <li>- Regenerative solution</li> </ul>		<ul style="list-style-type: none"> <li>- Cost saving</li> <li>- Space saving (MRL)</li> <li>- Low energy consumption</li> <li>- Easy commissioning</li> <li>- Singlephase 230 V</li> </ul>
<b>Specific functions</b>	<ul style="list-style-type: none"> <li>- Advanced safety functions</li> <li>- Remote monitoring</li> <li>- Pre-torque and precise landing at floor</li> <li>- Contactor-less</li> <li>- Door pre-opening</li> <li>- AFE regenerative units</li> </ul>	<ul style="list-style-type: none"> <li>- Optimized hardware solutions</li> <li>- Pre-torque and precise landing at floor</li> <li>- AFE regenerative units</li> </ul>		<ul style="list-style-type: none"> <li>- Optimized hardware solutions</li> <li>- Contactor-less</li> <li>- External +24 V dc power supply for stand-by control</li> <li>- Rapid commissioning</li> </ul>

# Guide to selection

	High rise	Mid rise	Low rise	Home lift
<b>Regenerative</b>	 <p>AFE200 + ADL500</p>			
<b>Non regenerative</b>	 <p>ADL550</p>	 <p>ADL530</p>	 <p>ADL510</p>	 <p>ADL550-2M</p>

# Fields of application

## Traffic profiles

Although an application may be defined initially in terms of floor number and car speed, the various traffic profiles are another essential factor for its better definition.

Buildings used for offices, apartments, businesses or public services require an adequate analysis of their traffic profile in order to choose the best system and all of its components.

The number of people, direction of movement, and specific time bands determine different traffic profiles, characterized by:

- People entering or leaving the loading lobby
- Inter-floor traffic
- Traffic on specific floors
- Peak hours
- Average car load

Each type of building will have different traffic profiles to be managed by the lift system.

### Office buildings

These have two peak periods: up-peak in the morning and down-peak in the evening, with inter-floor traffic limited to specific floors (restaurants, car parks, and common areas).

The system must be designed to reduce waiting times for people entering the loading lobby in the morning, to efficiently receive calls from people leaving in the evening, and to manage full loads at peak hours.

Homing functions are typically used, in which the car automatically goes to the floor in specific time bands.

Functions such as door **pre-opening and express arrival** (available in the ADL500 family) **reduce waiting times and increase the traffic handled.**

Functions such as pre-torque increase comfort regardless of the number of people in the car.



### Hotels

There is a peak in the morning to the restaurant floor for breakfast and to the exit, whereas incoming traffic has no specific peaks.

Inter-floor traffic mainly regards the hotel staff or specific floors (leisure, catering).

The entire system is improved by functions that reduce waiting times and that best manage full cars.

The ADL500 provides functions such as pre-torque and door pre-opening **to improve system performance.**

The integrated STO allows to avoid installations on contactors, **reducing the switching noise.**

# Fields of application

## Traffic profiles

### Hospitals

Peak hours are during visiting hours (if concentrated in specific time bands). Hospitals have heavy inter-floor traffic due to patients moving from one ward to another and to movements of personnel. Hospitals can **greatly reduce energy costs by using regenerative solutions**, even in Low and Mid Rise applications. Regardless of height, comfort and landing speed are critical for handling emergencies and for moving people with physical limitations. Functions such as **precise landing at the floor and comfort** when running and starting/arriving are requirements that cannot be entrusted to general purpose drives. The ADL500, designed for civil lift applications, is the best answer. The 24h x 365 days **remote monitoring** open the possibility to the predictive maintenance reducing the down service.



### Residential buildings

Residential buildings have no peak traffic hours, although traffic in the morning and in the evening is higher than the daily average. There is practically no inter-floor traffic. Because of the progressively aging population, system down-time must be reduced to an absolute minimum, and all components must be selected on the basis of quality and reliability. Thanks to the **stand-by management it is possible to save energy** limiting the power consumption to a few watts in not operative elevator time bands. The noise especially in the night can be dramatically reduced by the contactorless configuration.

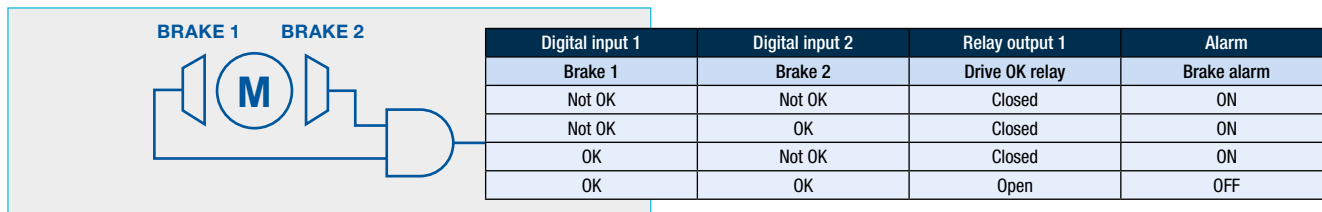
# Integrated safety functions

Since years WEG aims to increase more and more the level of safety of the inverters, helping the operators to reduce installation and maintenance costs avoiding the use of external components.

The ADL550 series integrates multiple safety features that are requested by the current standards EN 81-20/EN 81-50.

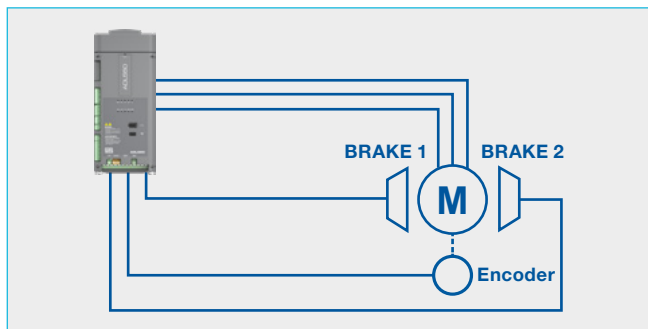
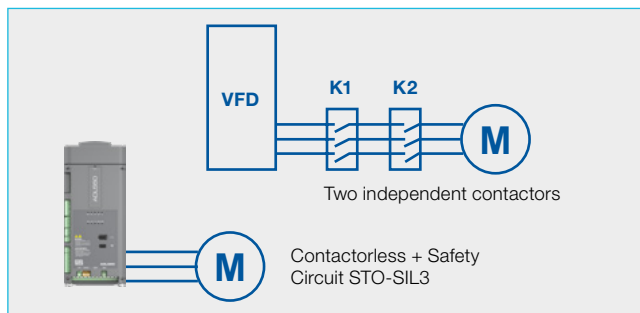
## UCM (Unintended Car Movement)

As reported in the paragraph 5.6.7 in the EN 81-20, it is requested the immediate stop of the car in case of movement with doors open. To answer this requirement, WEG introduced the continuous independent monitoring of the brakes feedback.



## STO (Safe Torque Off) SIL3

Based on the paragraph 5.9.2.5 in the EN 81-20, in order to cut the motor power supply that cause the motor rotation it is requested to use two independent contactors that increase the cost of the installation and the noise of the switch. WEG integrated the STO-SIL3 certified safety circuit that allows to avoid the installation of external contactors between the motor and the inverter.

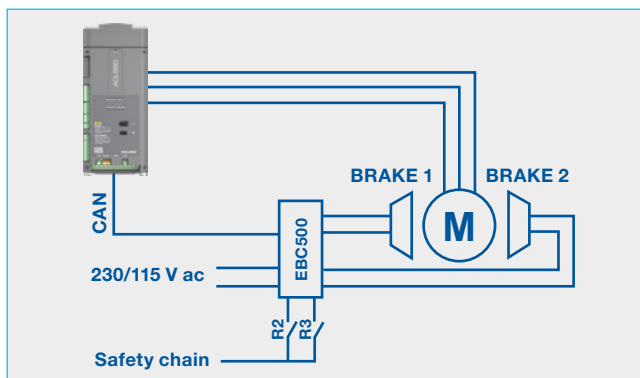


## SBT (Safe Brake Test)

WEG has developed a specific function to test the holding torque of the motor brakes (operational or holding brake) in motor with encoder, both with the two brakes active or for each brake independently. If, during the test, the rotor moves beyond an acceptable range an alarm is raised.

## EBC500 - Electronic Brake Control SIL3

The EBC500 (Electronic Brake Control) is an external optional module designed by WEG for the new inverter family ADL550/ADL550-ICS, that enable the safe control and monitoring of the motor's brakes. The traditional electro-mechanical brakes contactors, subject to wear and failures are replaced by internal electronics featuring longest lifetime (zero contactors solution) reducing the maintenance cost and increasing the durability of the service life of the brakes.





# Smart Connectivity

## Wi-Fi connection and cloud service: The new era of accessibility



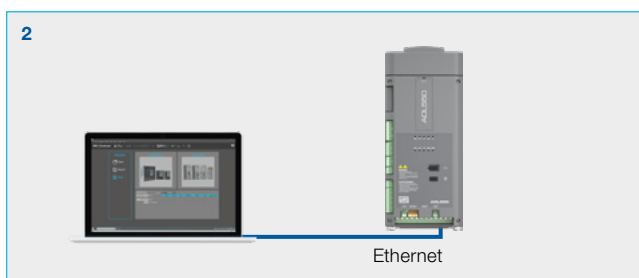
The ADL500 series introduce operators in a new era of inverter management. Together with the traditional approach by plugged keypad or cabled PC, that oblige the operators to be on-site; WEG introduces a new generation of inverter management based on the modern telecommunication technology.

Thanks to WEG Lifttouch, the app designed by WEG, operations like the startup, tuning, monitoring and the alarm check, can be easily achieved by mobile phone or tablet with a simple Wi-Fi connection, or can be fulfilled from remote, thanks to the WEG Portal, the cloud infrastructure that allows customers to create their own Elevator Management System.



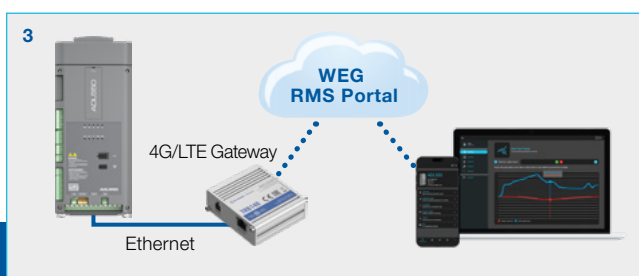
### WEG Lifttouch App

- Direct Wi-Fi connection using Wi-Fi drive link optional module (1).
- Direct ETH connection or through LAN using the Modbus-TCP protocol (2).
- Remote connection with drive connected to a IoT gateway with SIM card and data connection. By logging onto the WEG Drives RMS portal, it is possible to monitor and manage the in-field drives and access them directly (3).



### WEG Drivelabs configuration tool

- Direct ETH connection or through LAN using the Modbus-TCP protocol (2).
- Direct Wi-Fi connection using Wi-Fi DriveLink optional module (1).



# ADL500

## General characteristics

### Optional programming keypad

The optional programming keypad with internal memory is easy to use and always ready

### Expansion cards

#### Additional I/Os

Plug-in board with 4 DI + 2 RO

or

#### DCP3 and DCP4 protocols

Plug-in board for DCP3/4 Serial Communication with control board

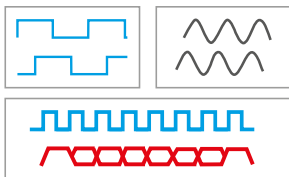
**DCP3 DCP4**

### Input/Output

	ADL550	ADL530	ADL510
Analog input	2	2	-
Digital input	8-1 enable	8-1 enable	8-1 enable
Digital output	4 (relays)	4 (relays)	4 (relays)
Fast digital input	2	-	-

### Universal multi-encoder interface

Selects the encoder type without adding dedicated boards, such as: SinCos, EnDat, BiSS, Digital Incremental



### Safety functions

Safety features to prevent accidental motor start:

- SBT Safe Brake Test
- STO Contactorless SIL3 (Category PLe)
- SBC Safe Brake Control SIL3<sup>1)</sup>

Note: 1) With EBC500 external optional module.



### Green approach

- Regenerative configuration with the AFE200 external modules
- External +24 Vdc power supply for stand-by management
- Hybrid power supply with supercapacitors
- Regenerative energy calculation



### USB port

- Uploading and downloading parameters file
- Fast upload of motor dataplate information from free database
- Uploading languages and SW applications on board the drive
- Smart FW update

### Wi-Fi communication

Plug-in for optional Drive Link Wi-Fi module for wireless communication via WEG LIFTtouch APP and WEG DriveLabs



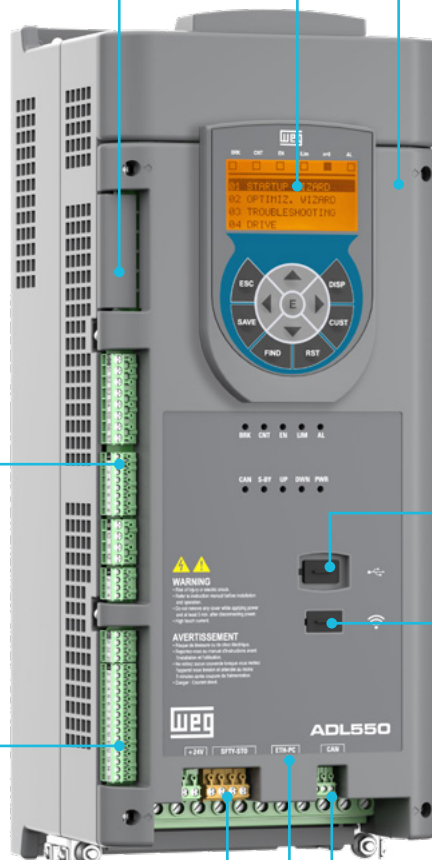
### CANopen port

- CANopen 301
- CANopen Lift 417 with dedicated SW



### Ethernet port

Built-in Ethernet communication with Modbus-TCP protocol for direct/LAN connection to monitor and configure the drive or for remote gateway connection



## General characteristics

Model	ADL510	ADL530	ADL550
Control mode	SSC (Sensorless Scalar Control), Asyn FOC (Field Oriented Control)	SSC (Sensorless Scalar Control), Asyn / Syn FOC (Field Oriented Control)	
Motor type	Asynchronous	Asynchronous, synchronous	
Input voltage (output power)	- 4: 3 x 400 Vac	- 4: 3 x 230-400-480 Vac - 2T: 3 x 200-230 Vac	- 4: 3 x 230-400-480 Vac - 2T: 3 x 200-230 Vac - 2M: 1 x 200-230 Vac
Speed accuracy	±0.01% rated motor speed		
Analog inputs	-	1	
Digital inputs	8 + 1 Enable		
Digital outputs	4 (relay)		
Fast freeze inputs	-	-	2
Overload	183% x 10s	183% x 10s	183% x 10s / 200% x 2s
+24 V dc external supply	-	-	Yes
PTC input	-	Yes	Yes
Regulation terminals	Removable		
IO extension	-	4DI + 2RO	
Max output freq.	300 Hz		
EMI filter	Integrated (in the ADL5x0...-F version)		
Braking unit	Integrated		
USB port	-	Yes	Yes
Wi-Fi module	-	Optional	Optional
Encoder	TTL/HTL	Universal multi-encoder card integrated (TTL/HTL/EnDat/BiSS/SinCos/SSI)	
Emergency operation	Battery powered (48-96 V dc) in -EMS inverter version, UPS (1 x 230 V ac)		
Functions	<ul style="list-style-type: none"> <li>- Wizards for:</li> <li>- Drive set-up</li> <li>- Startup</li> <li>- Optimization of comfort and performance</li> <li>- Troubleshooting</li> <li>- Management of built-in incremental digital encoder with repetition</li> <li>- Multi-speed control (EFC)</li> <li>- Calculation of energy savings in regenerative configuration</li> <li>- Extended emergency functions</li> </ul>	<ul style="list-style-type: none"> <li>In addition to the functions of the 510:</li> <li>- Universal multi-encoder card integrated</li> <li>- Wireless control through WEG_Liftouch APP</li> <li>- USB port for:</li> <li>- Import/export parameter file</li> <li>- FW download</li> <li>- Drive language selection</li> <li>- Setting motor data from DB</li> <li>- CANopen Lift 417</li> <li>- Datalogger (in preparation)</li> </ul>	<ul style="list-style-type: none"> <li>In addition to the functions of the 530:</li> <li>- Safety functions</li> <li>- System stand-by management</li> <li>- DCP3 – DCP4 with optional card</li> <li>- Motors with peripheral encoder control.</li> <li>- Position Control - Direct Arrival (EPC)</li> </ul>
Communication	Modbus-TCP (RJ45 port) via WEG_DriveLabs configuration SW		
Protection level	IP20		
Safety features	-	<ul style="list-style-type: none"> <li>- Safe Torque Off SIL3 (Contactorless).</li> <li>- Safe Brake Test (SBT)</li> <li>- Safe Brake Control SIL3 (with EBC500 external module)</li> </ul>	
Operating temperature	40 °C (without derating) 50 °C (with derating)		50 °C (without derating)
Altitude	Max 2,000 m (up to 1,000 m without derating)		
Marks	CE <sup>1)</sup> , cULus, EAC		
Standards	Climatic conditions: EN 60721-3-3; Electrical safety: EN 61800-5-1, ASME17.5/CSA B44.1, UL840 pollution degree 2; EMC compatibility: EN 12015 (with integrated filter), EN 12016. Other elevator standards: EN 81-20, EN 81-50.		

Note: 1) Compliant with CE directive on low-voltage equipment (Directives LVD 2014/35/EU, EMC 2014/30/EU, Lift 2014/33/EU, RoHs 2011/65/EU, Reach 1907/2006).

## Input data

Sizes		1040	1055	1075	2110	2150	
U <sub>in</sub> • AC input voltage	V ac	ADL550: three-phase 230 - 380 - 400 - 460 - 480 V ac -15%+10% ADL530: three-phase 230 - 380 - 400 - 460 - 480 V ac 15%+10% ADL510: three-phase 380 - 400 V ac -15%+10%					
F <sub>in</sub> • Input frequency	Hz	50/60 Hz, ±5%					
Connection to TT and TN networks		Yes, standard version					
Connection to IT networks		Yes, dedicated version available upon request <sup>1)</sup>					
Choke		Optional (DC or AC)					
Overtoltage threshold	V dc	820 V dc					
Undervoltage threshold	V dc	@ 480 V ac = 470 V dc @ 460 V ac = 450 V dc @ 400 V ac = 391 V dc @ 380 V ac = 371 V dc @ 230 V ac = 225 V dc					
In • Effective input current (@ I <sub>n</sub> out)							
	@ 230 V ac	A	12	17	23	31	42
	@ 400 V ac	A	11	16	22	29	40
	@ 480 V ac	A	10	15	20	26	37
THD @ I <sub>2n</sub> With optional external choke, according to EN 12015		<35%					
No-load consumption (energy rating):							
Ready (no-load) <sup>2)</sup> consumption "Fan Off"	W	20	20	20	20	20	
Fan consumption	W	8	10	10	10	16	
Ready (no-load) <sup>2)</sup> consumption "Fan On"	W	28	30	30	30	36	

Notes: 1) ADL500 can only operate on IT networks devoid of any faults (between active parts and PE) or in the presence of temporary faults.

Therefore an insulation monitor MUST be used to detect and enable prompt removal of any fault condition.

2) Power consumption when drive is powered from the three-phase mains and is ready to start.

## Cooling

Sizes		1040	1055	1075	2110	2150
Power dissipation <sup>1)</sup> (@U <sub>in</sub> = 230...460 V ac)	W	150	250	350	400	600
Fan flow rate						
Heat sink	m <sup>3</sup> /h	2 x 35	2 x 58	2 x 58	2 x 58	2 x 58
Minimum cabinet opening for cooling	cm <sup>2</sup>	72	144	144	144	328

Note: 1) Values that refer to operation at default switching frequency.

## Output data

Sizes		1040	1055	1075	2110	2150
<b>In • Rated output current (fsw = default)</b>						
@ UIn = 230 V ac	A	9	13.5	18.5	24.5	32
@ UIn = 400 V ac	A	9	13.5	18.5	24.5	32
@ UIn = 460 V ac	A	8.1	12.2	16.7	22	28.8
<b>Pn mot (recommended motor power, fsw = default)</b>						
@ UIn = 230 V ac	kW	2	3	4	5.5	7.5
@ UIn = 400 V ac	kW	4	5.5	7.5	11	15
@ UIn=460 V ac	HP	5	7.5	10	15	20
<b>Reduction factor</b>						
Kv <sup>1)</sup>		0.95	0.95	0.95	0.95	0.95
Kt ADL550 <sup>2)</sup>		1	1	1	1	1
Kt ADL510-530 <sup>3)</sup>		0.90	0.90	0.90	0.90	0.90
Kalt <sup>4)</sup>		1.2	1.2	1.2	1.2	1.2
<b>Overload</b>		ADL510, ADL530: 183% x 10s ADL550: 183% x 10s/200% x 2s				
Maximum switching frequency	kHz	10				
U2 • Maximum output voltage		0.98 x UIn (UIn = AC input voltage)				
f2 • Maximum output frequency	Hz	300				
IGBT braking unit		Standard internal (requires external resistor); braking torque 150% MAX				

Notes: 1) Kv: derating factor for mains voltage at 460 V ac and power supply from AFE200.

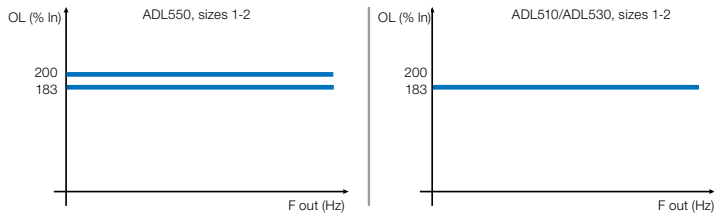
2) Kt (ADL550): no derating.

3) Kt (ADL510/ADL530): derating factor for ambient temperature of 50 °C (1% every °C above 40 °C).

4) 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% \* 10 = 12% derating; In derated = (100 - 12) % = 88 % In.

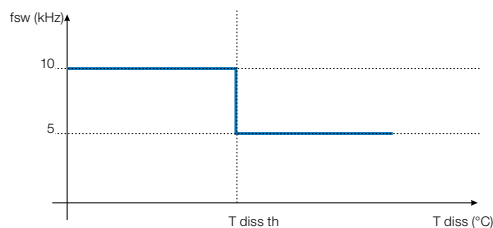
### Derating values in overload condition (ADL5.0-...-4)

In overload conditions the output current do not depends on the output frequency, as shown in the figure below.

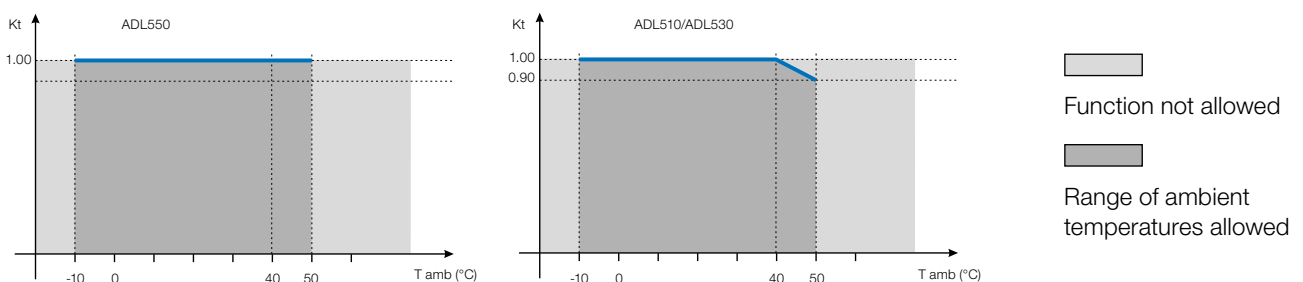


### Derating values for switching frequency

The switching frequency is modified according to the temperature of the drive (measured on the heat sink), as shown in the figure below.

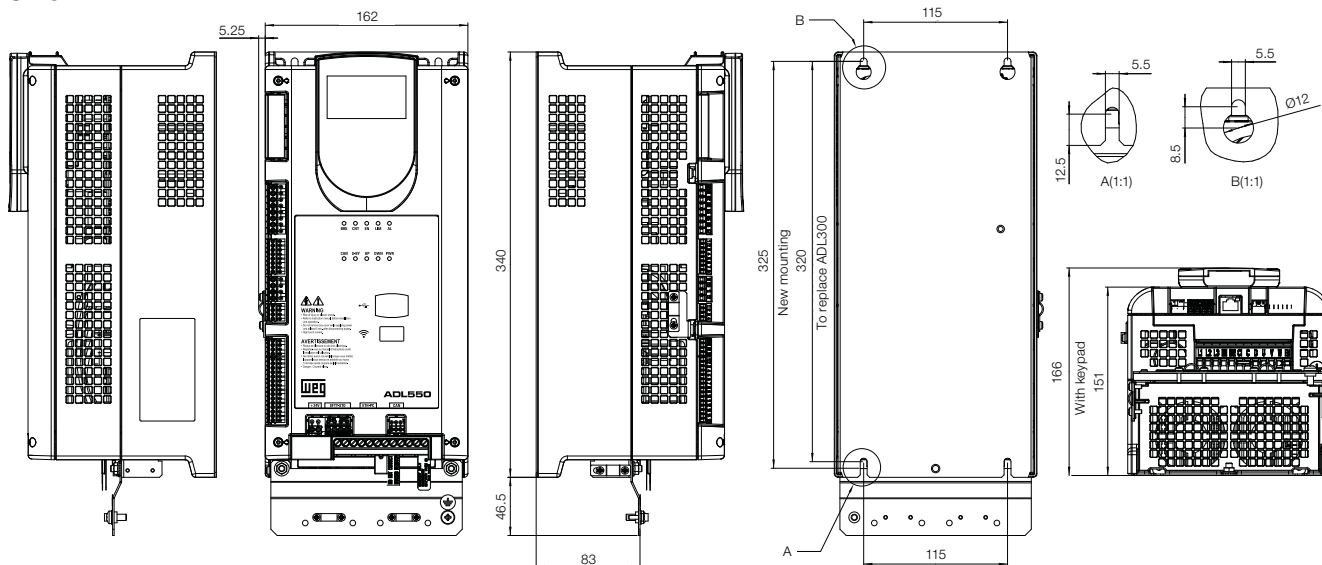


### Ambient temperature reduction factor

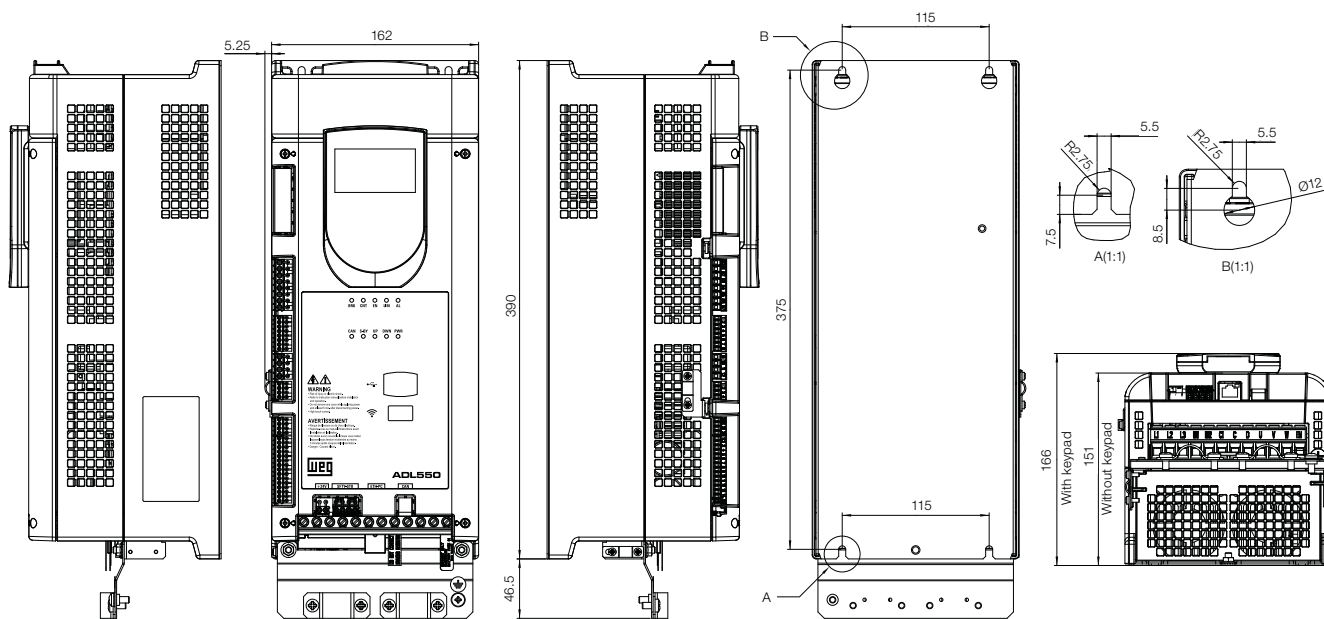


## Dimensions and weights

### Size 1



### Size 2

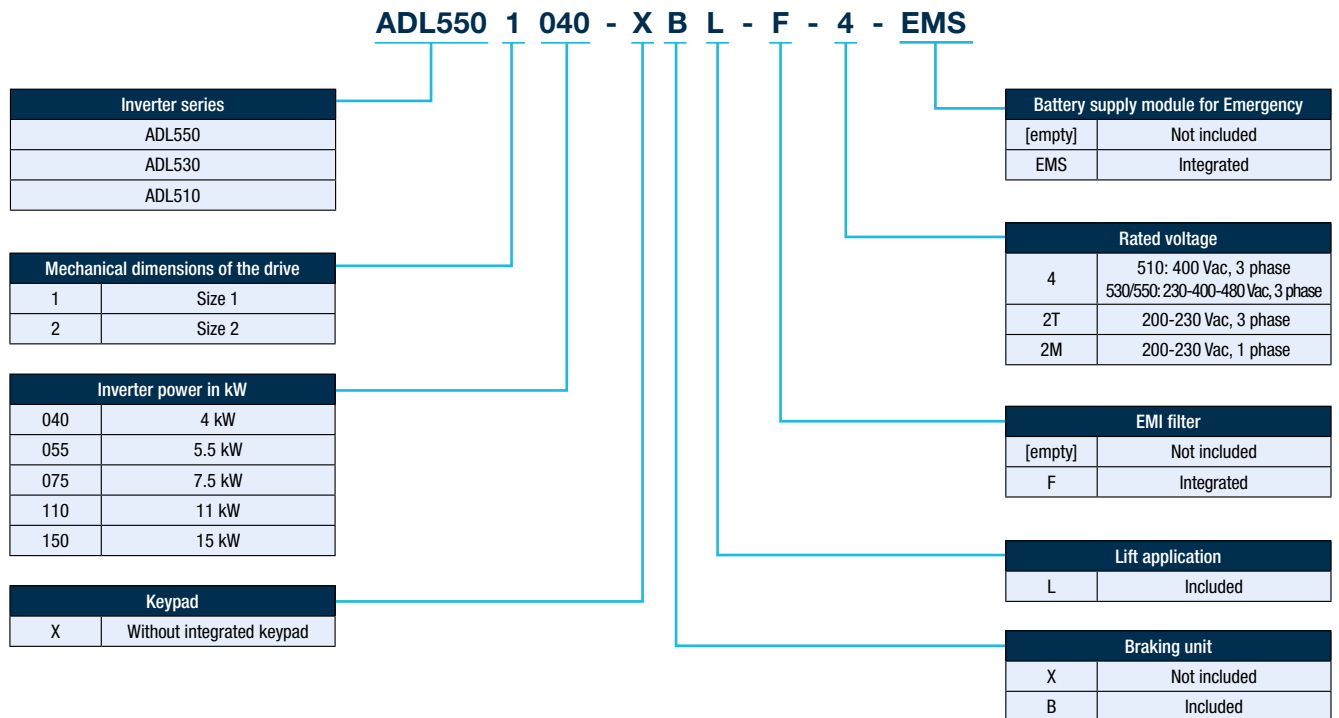


Sizes	Dimensions: Width x Height x Depth <sup>1)</sup>		Weight	
	mm	inches	kg	lbs
ADL510/530/550-1...	162 x 340 x 151	6.38 x 13.38 x 5.9	5.5	12.1
ADL510/530/550-2...	162 x 390 x 151	6.38 x 15.35 x 5.94	7.0	15.4

Note: 1) Without optional power shield (KIT-POWER-SHIELD).

## Ordering codes

### Product identification



### ADL510 - 400 V ac three-phase

Feedback for Incremental Digital + Sinusoidal Encoder

Code	Type	Pn at 400 V ac	Configuration
S9DL5101	ADL510-1040-XBL-4	4 kW	Integrated braking module - External EMC filter
S9DL5102	ADL510-1055-XBL-4	5.5 kW	Integrated braking module - External EMC filter
S9DL5103	ADL510-1075-XBL-4	7.5 kW	Integrated braking module - External EMC filter
S9DL5104	ADL510-2110-XBL-4	11 kW	Integrated braking module - External EMC filter
S9DL5105	ADL510-2150-XBL-4	15 kW	Integrated braking module - External EMC filter
S9DL5121	ADL510-1040-XBL-F-4	4 kW	Integrated braking module - Integrated EMC filter
S9DL5122	ADL510-1055-XBL-F-4	5.5 kW	Integrated braking module - Integrated EMC filter
S9DL5123	ADL510-1075-XBL-F-4	7.5 kW	Integrated braking module - Integrated EMC filter
S9DL5124	ADL510-2110-XBL-F-4	11 kW	Integrated braking module - Integrated EMC filter
S9DL5125	ADL510-2150-XBL-F-4	15 kW	Integrated braking module - Integrated EMC filter
S9DL5141	ADL510-1040-XBL-4-EMS	4 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5142	ADL510-1055-XBL-4-EMS	5.5 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5143	ADL510-1075-XBL-4-EMS	7.5 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5144	ADL510-2110-XBL-4-EMS	11 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5145	ADL510-2150-XBL-4-EMS	15 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5161	ADL510-1040-XBL-F-4-EMS	4 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5162	ADL510-1055-XBL-F-4-EMS	5.5 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5163	ADL510-1075-XBL-F-4-EMS	7.5 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5164	ADL510-2110-XBL-F-4-EMS	11 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5165	ADL510-2150-XBL-F-4-EMS	15 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module

## Ordering codes

### ADL530 - 230-400-480 V ac three-phase

Feedback for multi encoder

Code	Type	Pn at 400 V ac	Configuration
S9DL5301	ADL530-1040-XBL-4	4 kW	Integrated braking module - External EMC filter
S9DL5302	ADL530-1055-XBL-4	5.5 kW	Integrated braking module - External EMC filter
S9DL5303	ADL530-1075-XBL-4	7.5 kW	Integrated braking module - External EMC filter
S9DL5304	ADL530-2110-XBL-4	11 kW	Integrated braking module - External EMC filter
S9DL5305	ADL530-2150-XBL-4	15 kW	Integrated braking module - External EMC filter
S9DL5321	ADL530-1040-XBL-F-4	4 kW	Integrated braking module - Integrated EMC filter
S9DL5322	ADL530-1055-XBL-F-4	5.5 kW	Integrated braking module - Integrated EMC filter
S9DL5323	ADL530-1075-XBL-F-4	7.5 kW	Integrated braking module - Integrated EMC filter
S9DL5324	ADL530-2110-XBL-F-4	11 kW	Integrated braking module - Integrated EMC filter
S9DL5325	ADL530-2150-XBL-F-4	15 kW	Integrated braking module - Integrated EMC filter
S9DL5341	ADL530-1040-XBL-4-EMS	4 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5342	ADL530-1055-XBL-4-EMS	5.5 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5343	ADL530-1075-XBL-4-EMS	7.5 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5344	ADL530-2110-XBL-4-EMS	11 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5345	ADL530-2150-XBL-4-EMS	15 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5361	ADL530-1040-XBL-F-4-EMS	4 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5362	ADL530-1055-XBL-F-4-EMS	5.5 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5363	ADL530-1075-XBL-F-4-EMS	7.5 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5364	ADL530-2110-XBL-F-4-EMS	11 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5365	ADL530-2150-XBL-F-4-EMS	15 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module

### ADL550 - 230-400-480 V ac three-phase

Feedback for multi encoder

Code	Type	Pn at 400 V ac	Configuration
S9DL5501	ADL550-1040-XBL-4	4 kW	Integrated braking module - External EMC filter
S9DL5502	ADL550-1055-XBL-4	5.5 kW	Integrated braking module - External EMC filter
S9DL5503	ADL550-1075-XBL-4	7.5 kW	Integrated braking module - External EMC filter
S9DL5504	ADL550-2110-XBL-4	11 kW	Integrated braking module - External EMC filter
S9DL5505	ADL550-2150-XBL-4	15 kW	Integrated braking module - External EMC filter
S9DL5521	ADL550-1040-XBL-F-4	4 kW	Integrated braking module - Integrated EMC filter
S9DL5522	ADL550-1055-XBL-F-4	5.5 kW	Integrated braking module - Integrated EMC filter
S9DL5523	ADL550-1075-XBL-F-4	7.5 kW	Integrated braking module - Integrated EMC filter
S9DL5524	ADL550-2110-XBL-F-4	11 kW	Integrated braking module - Integrated EMC filter
S9DL5525	ADL550-2150-XBL-F-4	15 kW	Integrated braking module - Integrated EMC filter
S9DL5541	ADL550-1040-XBL-4-EMS	4 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5542	ADL550-1055-XBL-4-EMS	5.5 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5543	ADL550-1075-XBL-4-EMS	7.5 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5544	ADL550-2110-XBL-4-EMS	11 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5545	ADL550-2150-XBL-4-EMS	15 kW	Integrated braking module - External EMC filter - Integrated EMS module
S9DL5561	ADL550-1040-XBL-F-4-EMS	4 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5562	ADL550-1055-XBL-F-4-EMS	5.5 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5563	ADL550-1075-XBL-F-4-EMS	7.5 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5564	ADL550-2110-XBL-F-4-EMS	11 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module
S9DL5565	ADL550-2150-XBL-F-4-EMS	15 kW	Integrated braking module - Integrated EMC filter - Integrated EMS module



## Ordering codes

### Options

#### DC input choke - ADL510/530/550-....-4

Code	Type	1040	1055	1075	2110	2150
S7AI10	LDC-004	1				
S7AI11	LDC-005		1			
S7AI12	LDC-007			1		
S7AI13	LDC-011				1	
S7AI14	LDC-015					1

#### AC output chokes - ADL510/530/550-....-4

Code	Type	1040	1055	1075	2110	2150
S7FG3	LU3-005	1	1	1		
S7FG4	LU3-011				1	
S7FH2	LU3-015					1

#### External braking resistors - ADL510/530/550-....-4

Gearled low speed

Code	Type	1040	1055	1075	2110	2150
S8SZ3	RFPR 750 D 68R	1				
S8SZ7	BRK RES EC 1K5 68R T		1			
S8SZ8	BRK RES EC 1K5 49R T			1		
S8SZ9	BRK RES EC 2K 28R T				1	
S8SZ9	BRK RES EC 2K 28R T					1

Gearled high speed or gearless low speed

Code	Type	1040	1055	1075	2110	2150
S8SZ3	RFPR 750 D 68R	1				
S8SZ7	BRK RES EC 1K5 68R T		1			
S8SZ8	BRK RES EC 1K5 49R T			1		
S8SZ9	BRK RES EC 2K 28R T				1	
S8SZ9	BRK RES EC 2K 28R T					1

Gearless high speed

Code	Type	1040	1055	1075	2110	2150
S8SZ3	RFPR 750 D 68R	1				
S8SZ10	BRK RES EC 3K 68R T		1			
S8SZ11	BRK RES EC 4K 49R T			1		
S8SZ12	BRK RES EC 5K 28R T				1	
S8SZ13	BRK RES EC 8K 28R T					1

#### Various

Code	Type	Description
S5DL408	EXP-I01-ADL500	I/O expansion (4 digital inputs + 2 relays)
S52969WF	Wi-Fi Drive Link	Wi-Fi plug-in module
S5P11T	KB-ADL500	Programming keypad
S5P11TK1	KIT REMOTE KB-ADL500 5MT	RJ45 keypad remoting kit, L = 5 m
S5P11TK2	KIT REMOTE KB-ADL500 10MT	RJ45 keypad remoting kit, L = 10 m
S72684S12	KIT-POWER-SHIELD S1	Power cable shielding kit for Size 1
S72684S13	KIT-POWER-SHIELD S2	Power cable shielding kit for Size 2
On request	EBC500	Electronic Brake Control Module

# ADL550-ICS

## General characteristics

### Optional programming keypad

The optional programming keypad with internal memory is easy to use and always ready

### Integrated keypad

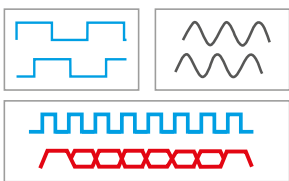
The built-in keypad for monitoring and parameters visualisation

### Input/Output

Analog input	2
Digital input	8-1 enable
Digital output	4 (relays)
Fast digital input	2

### Universal multi-encoder interface

Selects the encoder type without adding dedicated boards, such as: SinCos, EnDat, BiSS, Digital Incremental



### Safety functions

Safety features to prevent accidental motor start:

- SBT Safe Brake Test
- STO Contactorless SIL3 (Category PL<sub>e</sub>)
- SBC Safe Brake Control SIL3<sup>1)</sup>

Note: 1) With EBC500 external optional module.



### Green approach

- Regenerative configuration with the AFE200 external modules
- External +24 Vdc power supply for stand-by management
- Hybrid power supply with supercapacitors
- Regenerative energy calculation



### Lift control card

Card integrated to control Lift functions: safety chain, 6 relay outputs and 16 digital inputs

### USB port

- Uploading and downloading parameters file
- Fast upload of motor dataplate information from free database
- Uploading languages and SW applications on board the drive

### Wi-Fi communication

Plug-in for optional Drive Link Wi-Fi module for wireless communication via WEG Liftouch APP and WEG DriveLabs



### CAN and Serial Line port

CAN and Serial Line port for communication with LOPs and car display

### Ethernet port

Built-in Ethernet communication with Modbus-TCP protocol for direct/LAN connection to monitor and configure the drive or for remote gateway connection



## General characteristics

Model	ADL550-ICS
Control Mode	SSC (Sensorless Scalar Control), Asyn/Syn FOC (Field Oriented Control)
Input voltage (output power)	3 x 230 V ac (2-7.5 kW), 3 x 400 V ac (4-15 kW), 3 x 480 V ac (5-20 kW)
Motor type	Asynchronous and synchronous
Speed accuracy	±0.01% rated motor speed
Analog inputs	1 (Inverter) + 1 (Car Roof Card)
Digital inputs	24 (Inverter) + 14 (Car Roof Card) + 1 Enable
Digital outputs	10 (Inverter) + 1 (Car Roof Card)
Fast freeze inputs	2
Overload	183% x 10s/200% x 2s
Max output freq.	300 Hz
EMI filter	Integrated (ADL550-...-F models)
Braking unit	Integrated
USB port	Yes
Wi-Fi module	Optional
Emergency operation	Battery powered (48-96 V dc) in EMS inverter version, UPS (1 x 230 V ac)
Functions	Maintenance and inspection mode, independent run mode, operator mode, return to floor in case of fire, firefighter control, automatic return to floor, return to floor at night, deceleration at floor, overload, earthquake, anti-vandalism, call management with full car, double stop management, time management, energy savings.
Number of elevators	Simplex - Duplex - Group (up to 8)
Number of stop	Up to 64
Number of floor	Up to 64
Speed range	Up to 5 m/s
Car door operation	Up to 3 independent doors
Car display/button panel	Up to 2
Communication & wiring system type	CAN bus serial communication (shielded cables) or RS485 serial communication
Call management	Full selective - Down selective - Up selective
Protection level	IP20
Safety features	<ul style="list-style-type: none"> <li>- Safe Torque Off SIL3 (contactorless)</li> <li>- Safe Brake Test (SBT)</li> <li>- Safe Brake Control SIL3 (with EBC500 external module)</li> </ul>
Operating temperature	50 °C (without derating)
Altitude	Max 2,000 m (up to 1,000 m without derating)
Marks	CE <sup>1)</sup> , cULus, EAC.
Standards	Climatic conditions: EN 60721-3-3; Electrical safety: EN 61800-5-1, ASME17.5/CSA B44.1, UL 840 pollution degree 2; Energy consumption: ISO 25745; EMC compatibility: EN 12015 (with integrated filter), EN 12016. Other elevator standards: EN 81-20, EN 81-50.
Options	The following options are available to complete the system: <ul style="list-style-type: none"> <li>- ICS-CR (Integrated Control System Car Roof card) manages the complete operation of the car and sends all the information to the controller via a dedicated CAN bus communication</li> <li>- ICS-COP (Integrated Control System Car Operator Panel) card that interfaces between control panels and Car Roof Card. It collects commands such as call booking or special commands like fire brigade calls</li> <li>- ICS-CD (Integrated Control System Car Display) 7 inch TFT car display, shows floor indications, direction, overload, etc. It communicates with the ICS-CPU control system via a dedicated CAN channel (CAN 1) or RS485</li> <li>- ICS-FD (Integrated Control System Floor Display) a choice of many LCD or TFT displays are available</li> </ul>

Note: 1) Compliant with CE directive on low-voltage equipment (Directive LVD 2014/35/EU, EMC 2014/30/EU, Lift 2014/33/EU, RoHs 2011/65/EU, Reach 1907/2006).

## Input data

Sizes		1040	1055	1075	2110	2150	
U <sub>in</sub> • AC input voltage	V ac	Three-phase 230 - 380 - 400 - 460 - 480 V ac -15%+10%					
F <sub>in</sub> • Input frequency	Hz	50/60 Hz, ± 5%					
Connection to TT and TN networks		Yes, standard version					
Connection to IT networks		Only on request <sup>1)</sup> , please contact the WEG Automation					
Choke		Optional (DC or AC)					
Overvoltage threshold	V dc	820 V dc					
Undervoltage threshold	V dc	@ 480 V ac = 470 V dc @ 460 V ac = 450 V dc @ 400 V ac = 391 V dc @ 380 V ac = 371 V dc @ 230 V ac = 225 V dc					
<b>In • Effective input current (@ I<sub>n</sub> out)</b>							
	@ 230 V ac	A	12	17	23	31	42
	@ 400 V ac	A	11	16	22	29	40
	@ 480 V ac	A	10	15	20	26	37
THD @ I <sub>2n</sub> With optional external choke, according to EN 12015		<35%					
<b>No-load consumption (Energy rating):</b>							
Ready (no-load) <sup>2)</sup> consumption "Fan Off"	W	20	20	20	20	20	
Fan consumption	W	8	10	10	10	16	
Ready (no-load) <sup>2)</sup> consumption "Fan On"	W	28	30	30	30	36	

Notes: 1) ADL500-ICS can only operate on IT networks devoid of any faults (between active parts and PE) or in the presence of temporary faults. Therefore an insulation monitor **MUST** be used to detect and enable prompt removal of any fault condition.  
2) Power consumption when drive is powered from the three-phase mains and is ready to start.

## Cooling

Sizes		1040	1055	1075	2110	2150
Power dissipation <sup>1)</sup> (@U <sub>in</sub> = 230...460 V ac)	W	150	250	350	400	600
<b>Fan flow rate</b>						
Heat sink	m <sup>3</sup> /h	2 x 35	2 x 58	2 x 58	2 x 58	2 x 58
Minimum cabinet opening for cooling	cm <sup>2</sup>	72	144	144	144	328

Note: 1) Values that refer to operation at default switching frequency.

## Output data

Sizes		1040	1055	1075	2110	2150
<b>In • Rated output current (fsw = default)</b>						
@ UIn = 230 V ac	A	9	13.5	18.5	24.5	32
@ UIn = 400 V ac	A	9	13.5	18.5	24.5	32
@ UIn = 460 V ac	A	8.1	12.2	16.7	22	28.8
<b>Pn mot (recommended motor power, fsw = default)</b>						
@ UIn = 230 V ac	kW	2	3	4	5.5	7.5
@ UIn = 400 V ac	kW	4	5.5	7.5	11	15
@ UIn = 460 V ac	HP	5	7.5	10	15	20
<b>Reduction factor</b>						
	Kv <sup>1)</sup>	0.95	0.95	0.95	0.95	0.95
	Kt <sup>2)</sup>	1	1	1	1	1
	Kalt <sup>3)</sup>	1.2	1.2	1.2	1.2	1.2
<b>Overload</b>		183% x 10s/200% x 2s				
<b>Maximum Switching frequency</b>	kHz	10				
<b>U2 • Maximum output voltage</b>		0.98 x UIn (UIn = AC input voltage)				
<b>f2 • Maximum output frequency</b>	Hz	300				
<b>IGBT braking unit</b>		Standard internal (requires external resistor); braking torque 150% MAX				

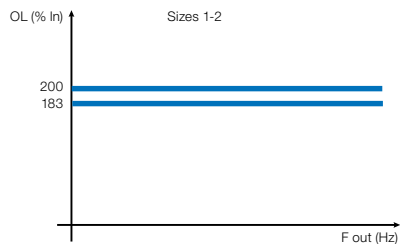
Notes: 1) Kv: derating factor for mains voltage at 460 V ac and power supply from AFE200.

2) Kt: no derating.

3) 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% \* 10 = 12% derating; In derated = (100 - 12) % = 88 % In

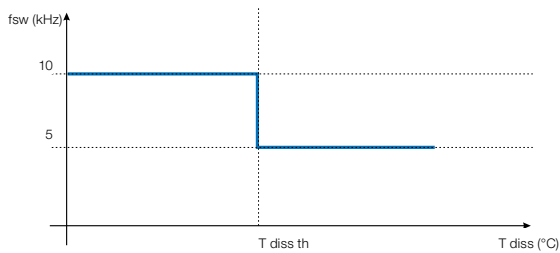
### Derating values in overload condition

In overload conditions the output current DO NOT depends on the output frequency, as shown in the figure below.

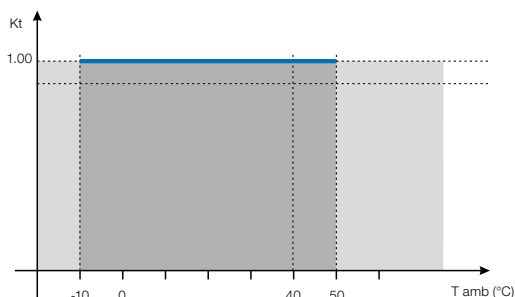


### Derating values for switching frequency

The switching frequency is modified according to the temperature of the drive (measured on the heat sink), as shown in the figure below.



### Ambient temperature reduction factor

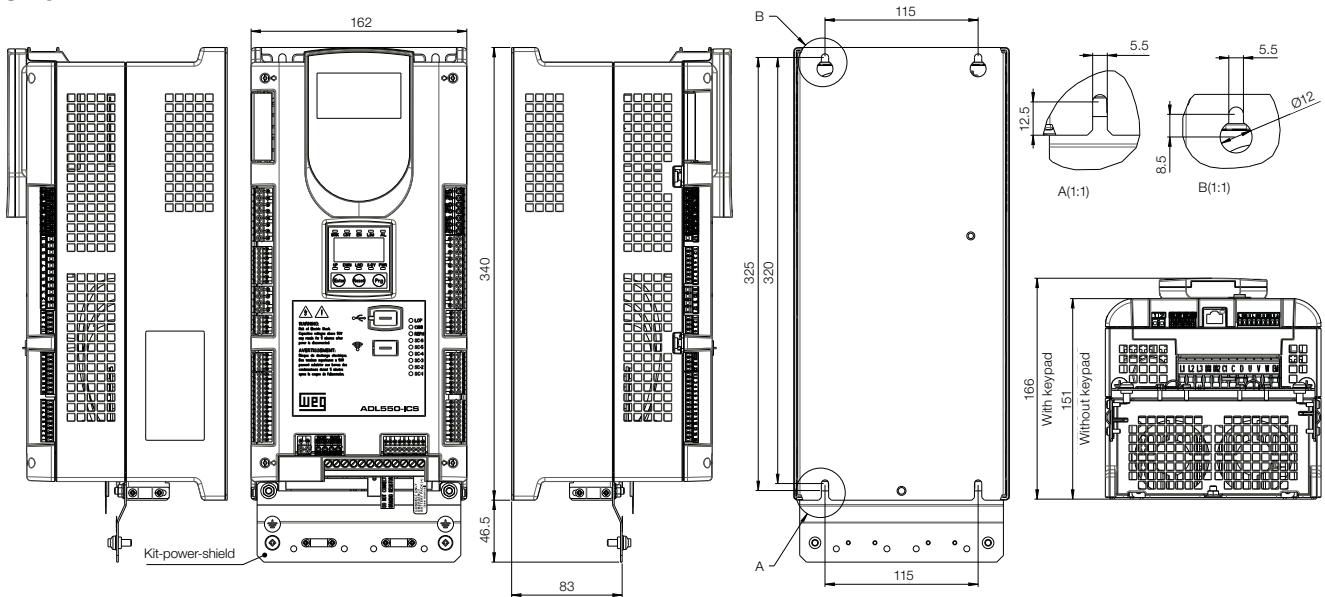


 Function not allowed

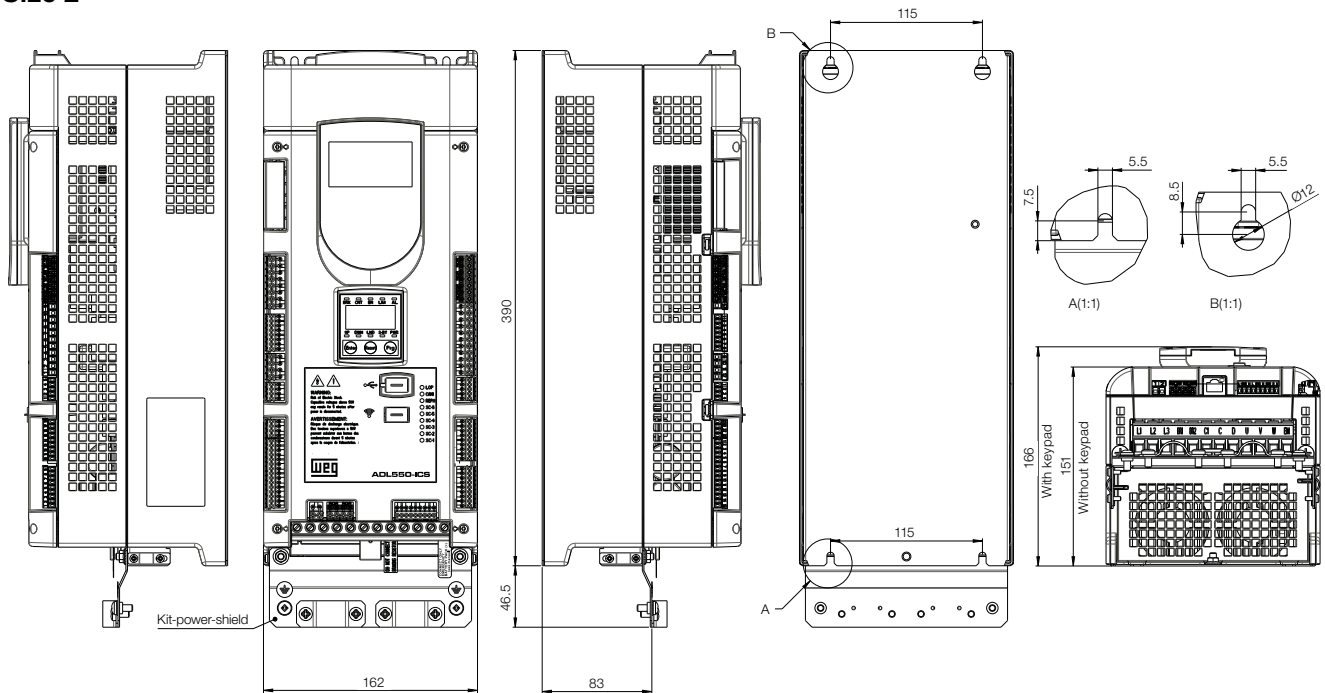
 Range of ambient temperatures allowed

## Dimensions and weights

### Size 1



### Size 2

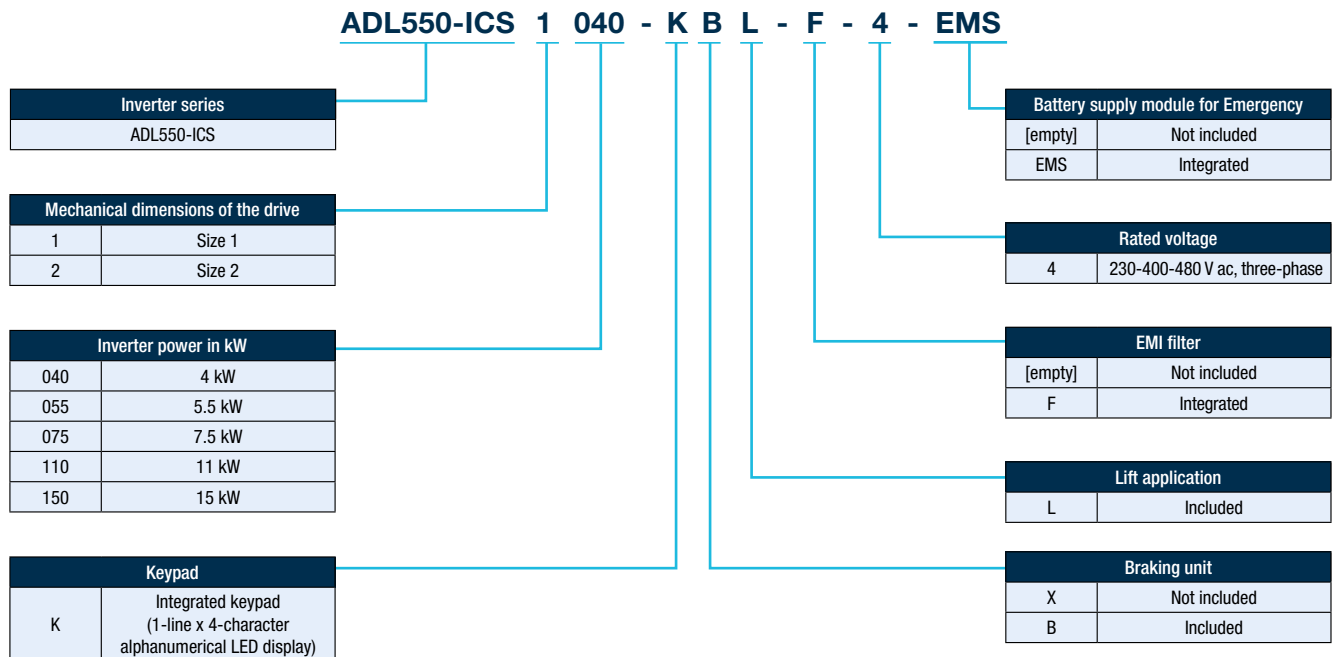


Sizes	Dimensions: Width x Height x Depth <sup>1)</sup>		Weight	
	mm	inches	kg	lbs
ADL550-ICS-1...	162 x 340 x 151	6.38 x 13.38 x 5.9	5.5	12.1
ADL550-ICS-2...	162 x 390 x 151	6.38 x 15.35 x 5.94	7.0	15.4

Note: 1) Without option "Kit power shield".

## Ordering codes

### Product identification



### ADL550-ICS - 230-400-480 V ac three-phase

Code	Type	Pn at 400 V ac	Configuration
S9DLI5501	ADL550-ICS-1040-KBL-4	4 kW	Integrated lift control card - Integrated braking module - External EMC filter
S9DLI5502	ADL550-ICS-1055-KBL-4	5.5 kW	Integrated lift control card - Integrated braking module - External EMC filter
S9DLI5503	ADL550-ICS-1075-KBL-4	7.5 kW	Integrated lift control card - Integrated braking module - External EMC filter
S9DLI5504	ADL550-ICS-2110-KBL-4	11 kW	Integrated lift control card - Integrated braking module - External EMC filter
S9DLI5505	ADL550-ICS-2150-KBL-4	15 kW	Integrated lift control card - Integrated braking module - External EMC filter
S9DLI5521	ADL550-ICS-1040-KBL-F-4	4 kW	Integrated lift control card - Integrated braking module - Integrated EMC filter
S9DLI5522	ADL550-ICS-1055-KBL-F-4	5.5 kW	Integrated lift control card - Integrated braking module - Integrated EMC filter
S9DLI5523	ADL550-ICS-1075-KBL-F-4	7.5 kW	Integrated lift control card - Integrated braking module - Integrated EMC filter
S9DLI5524	ADL550-ICS-2110-KBL-F-4	11 kW	Integrated lift control card - Integrated braking module - Integrated EMC filter
S9DLI5525	ADL550-ICS-2150-KBL-F-4	15 kW	Integrated lift control card - Integrated braking module - Integrated EMC filter
S9DLI5541	ADL550-ICS-1040-KBL-4-EMS	4 kW	Integrated lift control card - Integrated braking and EMS modules - External EMC filter
S9DLI5542	ADL550-ICS-1055-KBL-4-EMS	5.5 kW	Integrated lift control card - Integrated braking and EMS modules - External EMC filter
S9DLI5543	ADL550-ICS-1075-KBL-4-EMS	7.5 kW	Integrated lift control card - Integrated braking and EMS modules - External EMC filter
S9DLI5544	ADL550-ICS-2110-KBL-4-EMS	11 kW	Integrated lift control card - Integrated braking and EMS modules - External EMC filter
S9DLI5545	ADL550-ICS-2150-KBL-4-EMS	15 kW	Integrated lift control card - Integrated braking and EMS modules - External EMC filter
S9DLI5561	ADL550-ICS-1040-KBL-F-4-EMS	4 kW	Integrated lift control card - Integrated braking module, EMC filter and EMS module
S9DLI5562	ADL550-ICS-1055-KBL-F-4-EMS	5.5 kW	Integrated lift control card - Integrated braking module, EMC filter and EMS module
S9DLI5563	ADL550-ICS-1075-KBL-F-4-EMS	7.5 kW	Integrated lift control card - Integrated braking module, EMC filter and EMS module
S9DLI5564	ADL550-ICS-2110-KBL-F-4-EMS	11 kW	Integrated lift control card - Integrated braking module, EMC filter and EMS module
S9DLI5565	ADL550-ICS-2150-KBL-F-4-EMS	15 kW	Integrated lift control card - Integrated braking module, EMC filter and EMS module

## Ordering codes

### Options

#### DC input choke - ADL550-ICS-....-4

Code	Type	1040	1055	1075	2110	2150
S7AI10	LDC-004	1				
S7AI11	LDC-005		1			
S7AI12	LDC-007			1		
S7AI13	LDC-011				1	
S7AI14	LDC-015					1

#### AC output chokes - ADL550-ICS-....-4

Code	Type	1040	1055	1075	2110	2150
S7FG3	LU3-005	1				
S7FG3	LU3-005		1			
S7FG3	LU3-005			1		
S7FG4	LU3-011				1	
S7FH2	LU3-015					1

#### External braking resistors - ADL550-ICS-....-4

Geared low speed

Code	Type	1040	1055	1075	2110	2150
S8SZ3	RFPR 750 D 68R	1				
S8SZ7	BRK RES EC 1K5 68R T		1			
S8SZ8	BRK RES EC 1K5 49R T			1		
S8SZ9	BRK RES EC 2K 28R T				1	
S8SZ9	BRK RES EC 2K 28R T					1

Gearled high speed or gearless low speed

Code	Type	1040	1055	1075	2110	2150
S8SZ3	RFPR 750 D 68R	1				
S8SZ7	BRK RES EC 1K5 68R T		1			
S8SZ8	BRK RES EC 1K5 49R T			1		
S8SZ9	BRK RES EC 2K 28R T				1	
S8SZ9	BRK RES EC 2K 28R T					1

Gearless high speed

Code	Type	1040	1055	1075	2110	2150
S8SZ3	RFPR 750 D 68R	1				
S8SZ10	BRK RES EC 3K 68R T		1			
S8SZ11	BRK RES EC 4K 49R T			1		
S8SZ12	BRK RES EC 5K 28R T				1	
S8SZ13	BRK RES EC 8K 28R T					1



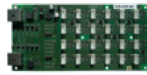
## Ordering codes

### Options

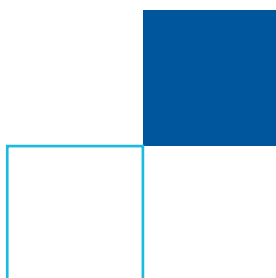
#### Various

Code	Type	Description
S52969WF	Wi-Fi Drive Link	Wi-Fi plug-in module
S5P11T	KB-ADL500	Programming keypad
S5P11TK1	KIT REMOTE KB-ADL500 5MT	RJ45 keypad remoting kit, L = 5 m
S5P11TK2	KIT REMOTE KB-ADL500 10MT	RJ45 keypad remoting kit, L = 10 m
S72684S12	KIT-POWER-SHIELD S1	Power cable shielding kit for Size 1
S72684S13	KIT-POWER-SHIELD S2	Power cable shielding kit for Size 2

#### Cards, panels and display



Code	On request	On request	On request	On request	On request
Type	ICS-CR	ICS-COP	ICS-CD	ICS-FD	Push buttons and covers
Description	Integrated control system car roof card. The ICS-CR card manages complete cabin operation, sending all information to the controller via a dedicated CAN bus communication.	Integrated control system car operator panel. Card that interfaces between button panels and car roof card (ICS-CR).	Integrated control system car display. Cabin display: 7 inch TFT. Communication with ICS-CPU control system via dedicated CAN channel (CAN 1) or RS485.	Integrated control system floor display. This display is positioned in the floor. It is possible to select the display based on the wished technology (e.g. LCD, TFT). The communication with the ICS-CPU can be via CAN or RS485.	This are optional parts, WEG can provide these parts, in alternative the customers are free to connect their selected parts.



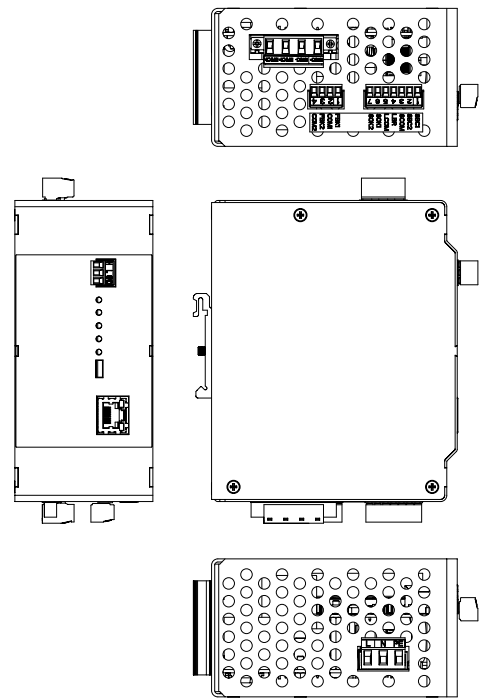
# EBC500

## Electronic Brake Control

The EBC500 module is an electronic device for the excitation and control of the brakes elements with the ability to communicate and synchronize with the ADL550 series drives.

The EBC500 module simplifies the brake control system by eliminating rectifiers and contactors while maintaining the highest level of safety and improving the efficiency and overall maintenance of the brake system.

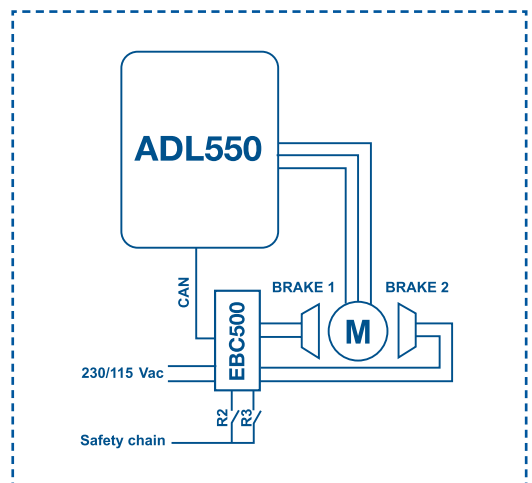
The EBC500 manages the uncontrolled car movements requirements according to EN 81-20/50 and new revamping requirements UNI 10411-1.



DIMENSIONS (WxHxD)		WEIGHT	
mm	inches	kg	lbs
66x144x116	2,59x5,66x4,56	0,680	1,5

### Main Features:

- Up to 2 brake circuits from 105 to 207 Vdc
- Output current: 2 x 3,4 Arms
- Input voltage: 110-220 Vac @50/60Hz
- Controlled via CAN
- Safe Brake Control SIL 3 Certified



### ZERO CONTACTORS

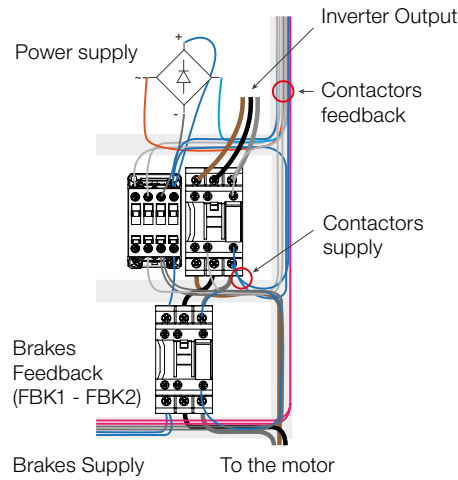
Integrated Safety circuit STO SIL 3  
+ Safe Brake Control SIL 3

# Advantages

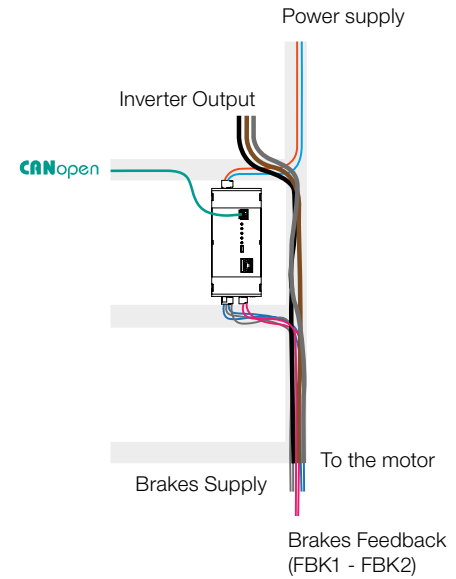


## COMMISSIONING

### Traditional



### EBC500 + STO



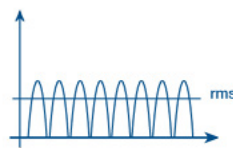
- Comparison with traditional approach
- Less cables and devices
- Less time for installation



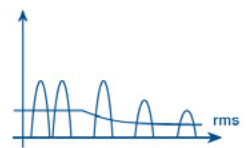
## ENERGY SAVING

- Adjustable output voltage and current
- Reduced holding voltage for lowest energy consumption

### Traditional



### EBC500



## MAINTENANCE

- No need to periodically check cabling and connections
- No limitation coming from contactors durability



## TROUBLESHOOTING

- Mean Time Between Failures (MTBF) increase
- Reduced EMC noise
- Less devices and cabling



## SAFETY

- Faults elevator stop improved in terms of safety
- Brakes continuous monitoring
- Brakes control in line with EN81-20/50, SIL 3



## COST SAVING

- All the above advantages leads to a cost reduction in both first investment and system life cycle

# Drive programming

## WEG Liftouch App



Fully responsive App, compatible with smartphones, tablets and PCs, and with any operating system.

### Ease to use

Always keep track of the drive status, but with the intuitiveness of a common mobile app.

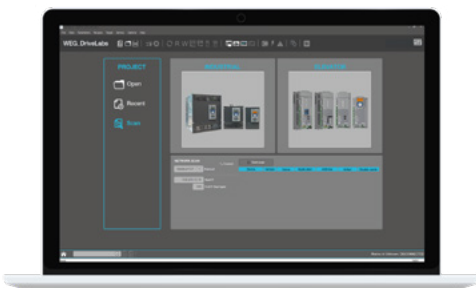
Available for Android, IOS, Windows.

## Connect easily your mobile to your ADL500

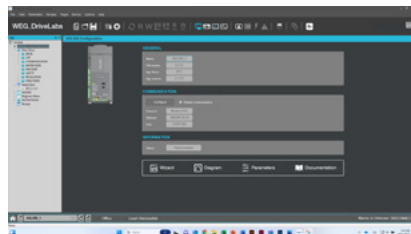
In less than one minute

- 1** Plug Wi-Fi Drive Link Module on ADL530 or ADL550.
- 2** Open the App and follow the step by step connection procedure or select one of the preferred connections.
- 3** Select your access level and insert your password.

## WEG DriveLabs – Configurator

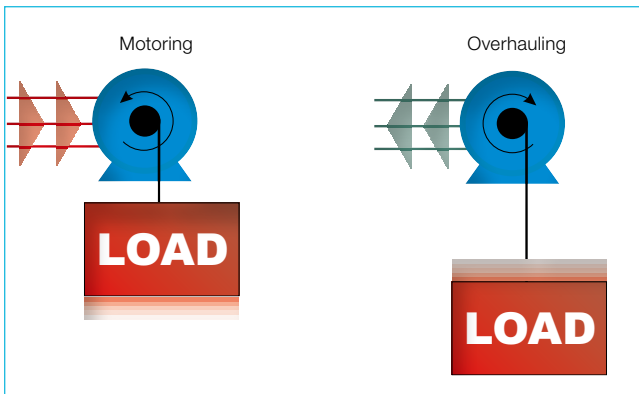


Enhancement of WEG PC configurator features in the same “family feeling” programming.



- Drive selection and scan
- Offline mode
- 4 wizards
- Function diagrams
- Digital oscilloscope

# The advantages of regeneration

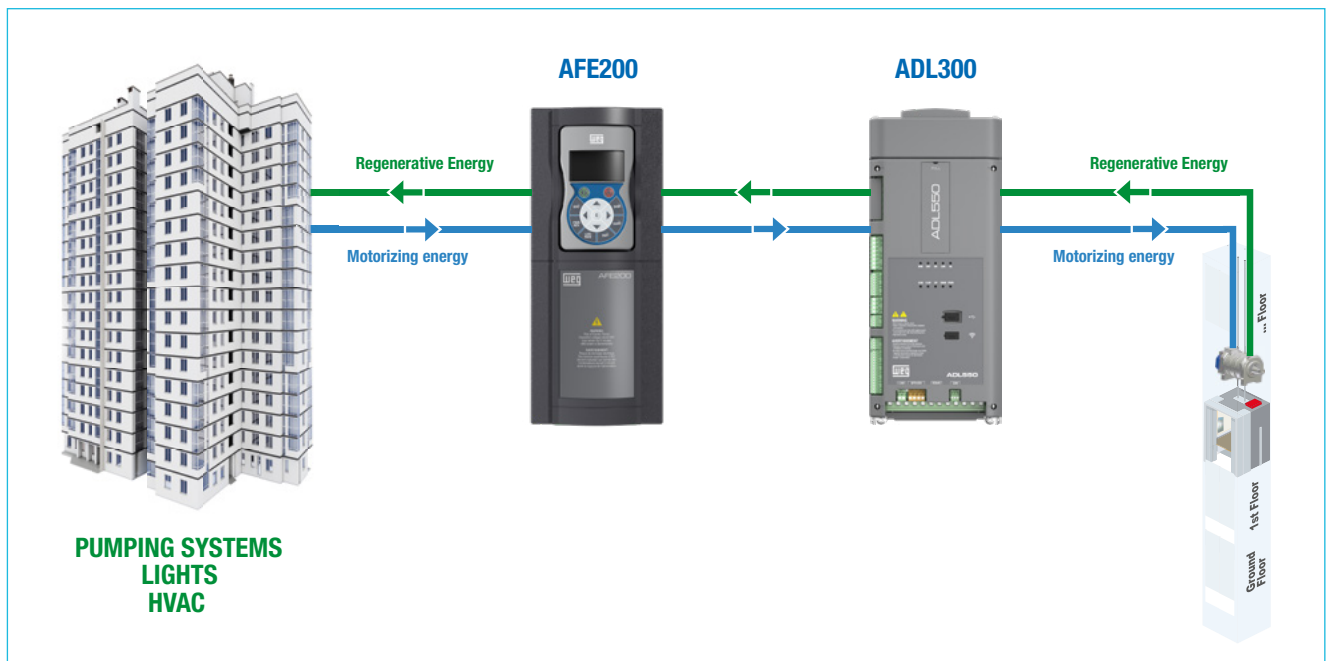
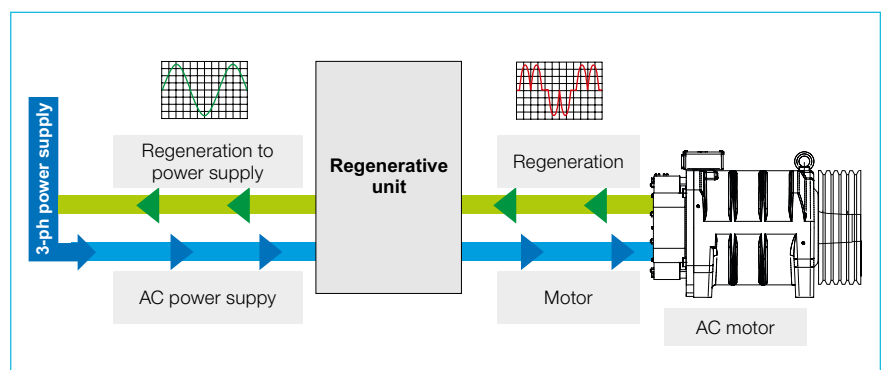


## Lower operating costs

Regenerative units in lift systems provide significant benefits in terms of Building Automation and Energy Efficiency. Where justified by traffic profiles, a system with regenerative units provides both economic and technical advantages. The operating principle is simple: when the empty car goes up or the full car goes down, the mechanical system generates potential energy that the electric motor, “pulled” by the car load, converts into electrical energy.

## Clean energy

The regenerative unit transforms the electrical energy generated by the motor into clean energy, namely with reduced harmonic distortion (THD <4%), making it reusable by other electrical equipment in the building.



## More efficient buildings

In addition to reducing installation space (because braking resistors are no longer needed), this solution reduces the building’s energy consumption, most of which is attributable to air conditioning systems, refrigeration, pump systems, and lifts. Regenerative systems can be used with external Active Front End (AFE) solutions (coupled with the ADL500 series).

*WEG reserves the right to make changes and variations to products, data, dimensions at any time without the obligation of prior notice. The data indicated are provided for the sole purpose of describing the product and must not be considered as legally binding characteristics.*

# Global presence is essential, as much as understanding your needs.



## Global Presence

With more than 30,000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our **ADL500 - The Ultimate Inverter for Elevator** is the right choice for your application and business, assuring safety, efficiency and reliability.



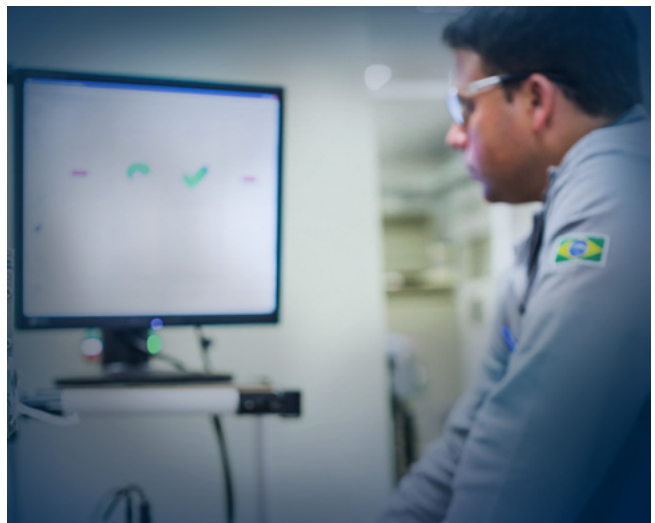
**Availability** is to have a global support network



**Partnership** is to create solutions that suits your needs



**Competitive edge** is to unite technology and innovation



# Know More

High performance and reliable products to improve your production process.



Excellence is to provide a whole solution in industrial automation that improves our customers productivity.

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 [youtube.com/wegvideos](https://youtube.com/wegvideos)

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 **+39 02 967601**

 **info.motion@weg.net**

 **Gerenzano (VA) Italy**

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The values shown are subject to change without prior notice.  
The information contained is reference values.