

PRODUCT RANGE - WEG AUTOMATION EUROPE

Complete range
suitable for every
application

Industrial Motors

Commercial &
Appliance Motors

Automation

Digital &
Systems

Energy

Transmission &
Distribution

Coatings



Driving efficiency and sustainability





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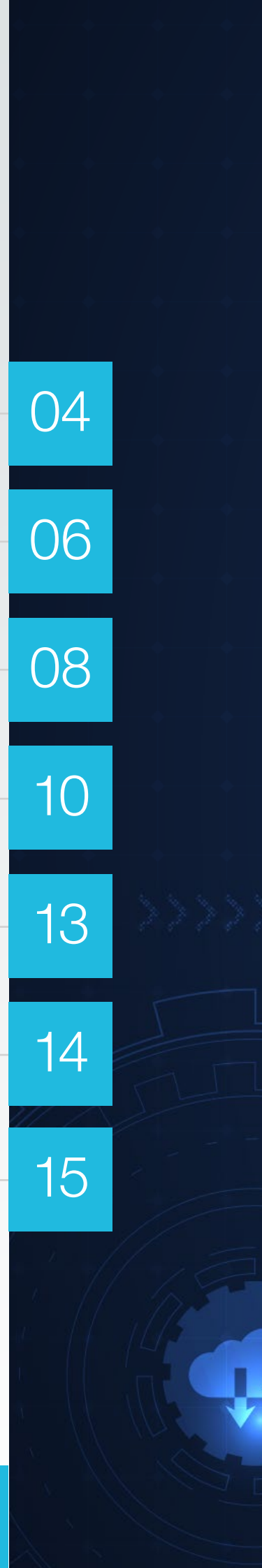
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Applications



Plastic



Wood



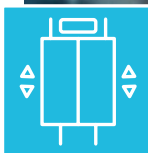
Paper



Metal



Chemical / pharmaceutical



Elevators



Textile



HVAC



Water treatment



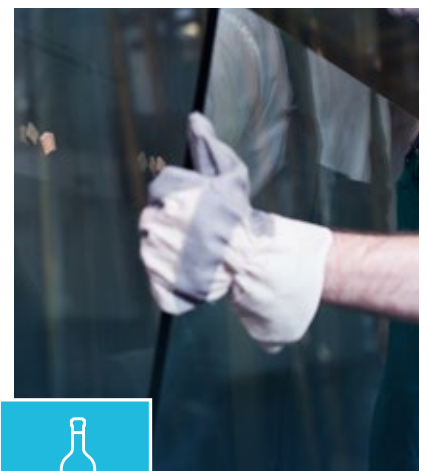
Industrial hoisting



Test benches



Lifts for mines







Glass

Guide to choices by application

Inverter					
					
	ADV200	ADV200 SP	ADV200-LC	ADV200-WA ⁽¹⁾ ADV200-HC ⁽²⁾	ADP200
Plastic processing machinery	●		●		●
Metal processing machinery	●				
Machinery for the textile industry	●				
Water treatment				● ⁽¹⁾	
HVAC				● ⁽¹⁾	
Test benches	●				
Material Handling	●				
Conveyors	●				
Material recycling machinery	●				
Lifts					
Hoisting equipment	●				
Mines	●		●		
Tunnel drilling	●		●		
Pumping station				● ⁽¹⁾	
Solar-powered pumping systems		●			
Paper	●			● ⁽¹⁾	
Hoist & Crane System				● ⁽²⁾	

Notes: 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.

Inverter lift			Digital DC drive	Regenerative power supply unit		AC/DC Power supply unit
						
ADL500	ADL300	VDL200 AGL50-EV	TPD32-EV	AFE200	FFE200	SMB200 SM32
			•	•	•	•
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				•		
				•	•	•
			•	•	•	



Inverter



Model	ADV200	ADV200 SP	ADV200-LC
Control mode	Field oriented control	Field oriented control	Field oriented control
Power	0.75 kW...1.65 MW [100...2,213 HP] (-4 models) 160 kW...1.65 MW [214...2,213 HP] (-6 models)	1.5 kW...1.8 MW	30...800 kW (40...1,000 HP)
Voltage	3 x 380...480 V ac, 50/60 Hz (-4 models) 3 x 500...690 V ac, 50/60 Hz (-6 models) 450...750 V dc (-DC-4 models) 600...1,120 V dc (-DC-6 models)	AC: 3 x 380...500 V ac, 50/60 Hz DC (from photovoltaic panels): 330...800 V dc	3 x 380...480 V ac, 50/60 Hz
Motor type	Asynchronous/Synchronous	Asynchronous	Asynchronous/Synchronous
Speed control (accuracy)	±0.01% motor rated speed ¹⁾	±0.01% motor rated speed ¹⁾	±0.01% motor rated speed ¹⁾
Analog inputs	2 (voltage/current)	2 two-pole (voltage/current)	2 (voltage/current)
Analog outputs	2 (1 voltage or current, 1 voltage)	2 two-pole (1 voltage or current, 1 voltage)	2 (1 voltage or current, 1 voltage)
Digital inputs	6 (PNP/NPN)	6 (PNP/NPN)	6 (PNP/NPN)
Digital outputs	4 (PNP/NPN), (2 static and 2 relay)	4 (PNP/NPN), (2 static and 2 relay)	4 (PNP/NPN), (2 static and 2 relay)
Overload	- Heavy: Asynchronous = 150% * In (1' every 5'); 180% * In (for 0.5 sec) Sync. = 160% * In (1' every 5'); 200% * In (for 3") - Light: Asynchronous and synchronous = 110% * In (1' every 5') ³⁾	- Heavy duty: Async. = 150% * In (1' each 5'), 180% * In (for 0,5") - Light duty: 110% * In (1' each 5') ³⁾	- Heavy duty: Async. = 150% * In (1' each 5'), 180% * In (for 0,5") Sync. = 160% * In (1' each 5'), 200% * In (for 3") - Light duty: Async. and Sync. = 110% * In (1' each 5') ³⁾
Max output frequency	500 Hz (depending on drive size)	500 Hz	500 Hz (sizes 4300...72000), 200 Hz (sizes 82500 ... 84000)
EMI filter	Integrated	Optional external	Integrated
Choke	Integrated DC side (up to 132 kW)	Integrated choke DC side	Integrated choke DC side (up to 200 kW). External choke inductance mandatory for higher powers
Braking unit	Integrated (up to 55 kW) External optional (≥75 kW)	Integrated (up to 30 kW) Optional external (≥37 kW)	Integrated (up to 90 kW) Optional external (≥110 kW)
Options for integration onboard drive	3	3	3
PLC	Yes (motion drive programmable logic controller, standard IEC 61131-3, 5 languages)	Yes (motion drive programmable logic controller, standard IEC 61131-3, 5 languages)	Yes (motion drive programmable logic controller, standard IEC61131-3, 5 languages)
Safety card	Yes (models ADV200-...-SI)	No	Yes (models ADV200-LC-...-SI)
Functions	³⁾ - Self-tuning of speed-current-flux regulators and identification of motor data with motor idle or rotating - Torque control - Quick startup menu - Instant overload up to 180% - Double overload - I ² T thermal protection for motor, drive and braking resistor - 16 programmable multispeeds and 4 multiramp settings (linear, jerk, independent and S-shape) - Motor potentiometer function - Motor auto-capture function - Droop function - Dual motor management - PID function (application pre-loaded) - Mains loss detection with: controlled stop and/or power optimisation - Variable switching frequency - AC braking - Speed feedback from encoder / resolver through option hardware	- Integrated MPPT control and optimisation - Dual source control - Double PID - Specific functions for pump control - Optional blocking diode - DC side	- Dissipation with liquid, water, or oil via an innovative cooling system - Excellent corrosion protection with aluminum cooling pipes and internal separation of electronics and cooling liquid - Revolutionary drive mounting system: inside electrical panel and with external heat-sink - Integrated temperature control function to manage the external electrovalve of the coolant circuit - Integrated humidity sensor with programmable anti condensation function
Communication protocols	RS485, Modbus-RTU. Optional: Modbus-RTU to Modbus-TCP gateway, DeviceNet, Profibus-DP, CANopen, EtherCAT, Ethernet, PROFINET	RS485 ²⁾ , Modbus-RTU. Optional: DeviceNet, Profibus-DP, CANopen ⁴⁾ , EtherCAT, Industrial Ethernet ⁴⁾ , Profinet	RS485, Modbus-RTU. Optional: Modbus-RTU to Modbus-TCP gateway, DeviceNet, Profibus-DP, CANopen, EtherCAT, Industrial Ethernet, PROFINET
Protection degree	IP20 (IP00 size 7 and parallel)	IP20 (IP00 size 7 and parallel) (version with externally installed heatsink and turnkey cabinet solution available upon request)	IP00/IP54 (-E54 = version with mounting rear panel heat sink with IP54 protection rating)
Certification	CE ⁵⁾ , UL and cUL	CE ⁵⁾ , UL and cULus	CE ⁵⁾ , UL and cULus

Notes: SLV (vector control open loop), SV (vector control closed loop), PMSLV (vector control open loop for Permanent Magnet Motor), PMSV (vector control closed loop for Permanent Magnet Motor).

1) For standard 4-pole motors.

2) The serial port is used for programming (PC) and control (Modbus communication standard in all drives).

3) For ADV200-...-4 and ADV200-...-DC models. For ADV200-...-6 models see the ADV200 catalogue.

4) Compatible to industry standards.

5) Inverter: complies with the EC Directive concerning low voltage equipment (Directives LVD 2014/35/EU, EMC 2014/30/EU, RoHS 2011/65/EU).

Inverter



Model	ADV200-WA	ADV200-HC	ADP200
Control mode	Field oriented control	Field oriented control	Vector control with feedback
Power	1.5 kW...1.8 MW [2...1,342 HP] (WA-4) 200 kW...1.8 MW [268...1,342 HP] (WA-6) 22 kW...1.8 MW [30...1,342 HP] (WA-DC)	0.75 kW...400 kW [1...536 HP] (HC-4)	7.5...75 kW (10...100 HP)
Voltage	3 x 380...500 V ac, 50/60 Hz (-4 models) 3 x 500...690 V ac, 50/60 Hz (-6 models) 450...750 V dc (-DC-4 models) 600...1,120 V dc (-DC-6 models)	3 x 380...500 V ac, 50/60 Hz (-4 models) 3 x 500...690 V ac, 50/60 Hz (-6 models) 450...750 V dc (-DC-4 models) 600...1,120 V dc (-DC-6 models)	3 x 230-400-480 V ac, 50/60 Hz
Motor type	Asynchronous	Asynchronous	Synchronous
Speed control (accuracy)	±30% motor slip rating (V/f control)	±0.01% motor rated speed ¹⁾	±0.01% motor rated speed control range: 1:1500
Analog inputs	2 two-pole (voltage/current)	2 (voltage/current)	3 AI: voltage/current + motor protection
Analog outputs	2 two-pole (1 voltage or current, 1 voltage)	2 (1 voltage or current, 1 voltage)	1 (voltage/current)
Digital inputs	6 (PNP/NPN)	6 (PNP/NPN)	6 + Enable
Digital outputs	4 (PNP/NPN), (2 static and 2 relay)	4 (PNP/NPN), (2 static and 2 relay)	2 + 2 Relay
Overload	- Light: 110% * In (1' every 5') ³⁾ - Heavy: 150% * In (1' every 5'); 180% * In (0.5" every 5')	- Light: 110% * In (1' every 5') ³⁾ - Heavy: 150% * In (1' every 5'); 180% * In (0.5" every 5')	170% * In (for 60"), 200% * In (for 3")
Max output frequency	500 Hz (depending on drive size)	500 Hz (depending on drive size)	300 Hz
EMI filter	Integrated	Integrated	Integrated on -F models
Choke	Integrated DC side (up to 160 kW)	Integrated DC side (up to 132 kW)	DC side choke: integrated in sizes 30...75 kW AC side choke: external optional (sizes 7.5...22 kW and 5S550/5S750 models)
Braking unit	Integrated (up to 75 kW) External optional (≥90 kW)	Integrated (up to 55 kW) External optional (≥75 kW)	Integrated with external resistor (except ADP200-5750 model), braking torque 150% max
Options for integration onboard drive	3	3	2
PLC	Yes (motion drive programmable logic controller, standard IEC 61131-3, 5 languages)	Yes (motion drive programmable logic controller, standard IEC 61131-3, 5 languages)	PLC with advanced IEC 61131-3 programming environment
Safety card	Yes (models ADV200-...-SI)	Yes (models ADV200-...-SI)	No
Functions	<ul style="list-style-type: none"> - Direct acquisition by Pt-100, Pt-1000, NI1000 temperature sensors (with EXP-IO-SEN-...-ADV cards) - Cascade control of up to 4 pumps, plus the master device (with EXP-IO-D5R8-ADV card) - 4 integrated timers with real time clock - Fire and bypass mode - Two independent PID controllers with autotuning - Variable and constant torque operation - Engineering units programming 	<ul style="list-style-type: none"> - Full management of the mechanical brake - Torque proving - Joystick input - Multispeed & Multiramp - Overtravel - Hoist speed up - Low speed zone - Anti-sway - Anti-impact - Wide range of encoder and communication cards - Option "Active Front End" available 	<ul style="list-style-type: none"> - Self-tuning rotational and stand still of speed-current-flux regulators and motor data identification - Torque control - Simplified start-up menu - Motor, drive and braking resistor I²t thermal protection - Multispeed function (16 programmable preset) - 4 independent programmable multi-ramp with jerks - Variable switching frequency - Motor temperature monitoring - PID function block for injection molding machine application - Flow and pressure limit control - Pressure sensor status control - Adaptive feedforward - Automatic switchover between closed-loop speed and pressure control - Speed and pressure control loops tuning - Pump rotation direction identification - Multipump convergent and divergent control - Motor protection through KTy, PTC or klixon
Communication protocols	RS485 ²⁾ , Modbus-RTU. Optional: DeviceNet, Profibus-DP, CANopen [®] , EtherCAT, Industrial Ethernet ⁴⁾ , Profinet	RS485, Modbus-RTU. Optional: Modbus-RTU to Modbus-TCP gateway, DeviceNet, Profibus-DP, CANopen, EtherCAT, Ethernet, PROFINET	RS485 ²⁾ , Modbus-RTU CANopen [®] (-C models)
Protection degree	IP20 (IP00 size 7 and parallel)	IP20 (IP00 size 7 and parallel)	IP20
Certification	CE ⁵⁾ , UL and cUL	CE ⁵⁾ , UL and cUL	CE ⁵⁾ , cULus (UL 508C)

Notes: 1) For standard 4-pole motors.

2) The serial port is used for programming (PC) and control (Modbus communication standard in all drives).

3) For ADV200-...-4 and ADV200-...-DC models. For ADV200-...-6 models see the ADV200 catalogue.

4) Compatible to industry standards.

5) Complies with the EC Directive concerning low voltage equipment (Directives LVD 2014/35/EU, EMC 2014/30/EU, RoHS 2011/65/EU).

Inverter lift



Model	ADL510	ADL530	ADL550
Control mode	Field oriented control	Field oriented control	Field oriented control
Power	4-15 kW	4-15 kW	4-15 kW
Voltage	3 x 400 V ac; 50/60 Hz	3 x 230 V ac, 3 x 400 V ac, 3 x 480 V ac; 50/60 Hz	3 x 230 V ac, 3 x 400 V ac, 3 x 480 V ac; 50/60 Hz
Motor type	Asynchronous	Asynchronous / Synchronous	Asynchronous / Synchronous
Speed control (accuracy)	±0.01% motor rated speed	±0.01% motor rated speed	±0.01% motor rated speed
Analog inputs	1	1	1
+24 V dc external supply	No	No	Yes
Digital inputs	8 + 1 Enable	8 + 1 Enable	8 + 1 Enable + 2 Fast
Digital outputs	4 (relay)	4 (relay)	4 (relay)
Overload	183% x 10s	183% x 10s	183% x 10s / 200% x 2s
Max output frequency	300 Hz	300 Hz	300 Hz
EMI filter	Integrated (ADL510-...-F models)	Integrated (ADL530-...-F models)	Integrated (ADL550-...-F models)
Choke	DC side choke: external optional AC side choke: external optional	DC side choke: external optional AC side choke: external optional	DC side choke: external optional AC side choke: external optional
Braking unit	Integrated	Integrated	Integrated
USB port	No	Yes	Yes
Wi-Fi module	No	Optional	Optional
Dimensions for roomless applications	Yes	Yes	Yes
Emergency operation	Battery powered (48-96 V dc) UPS (230 V single-phase)	Battery powered (48-96 V dc) UPS (230 V single-phase)	Battery powered (48-96 V dc) UPS (230 V single-phase)
Type of lift	Geared	Geared / Gearless	Geared / Gearless
Installations	New installation & Retrofitting	New installation & Retrofitting	New installation
Functions	<p>Wizards for:</p> <ul style="list-style-type: none"> - Drive set-up - Startup - Optimization of comfort and performance - Troubleshooting <p>Management of built-in incremental digital encoder with repetition</p> <p>Multi-speed control (EFC)</p> <p>Calculation of energy savings in regenerative configuration</p> <p>Extended emergency functions</p>	<p>In addition to the functions of the 510:</p> <ul style="list-style-type: none"> - Universal multi-encoder card integrated - Wireless control through WEG_Liftouch APP for smartphone - USB port for: <ul style="list-style-type: none"> - Import/export parameter file - FW download - Drive language selection - Setting motor data from DB - CANopen Lift 417 - Datalogger (in preparation) 	<p>In addition to the functions of the 530:</p> <ul style="list-style-type: none"> - Safety functions - System stand-by management - Optimized management of emergency battery consumption - DCP3 – DCP4 with optional card - Motors with peripheral encoder control. - Position Control - Direct Arrival (EPC)
Optional cards	-	-	<ul style="list-style-type: none"> - I/O expansion card (EXP-I01-ADL500) - DCP3 and DCP4 protocols card (EXP-DCP-ADL500) (in preparation)
Communication protocols	Modbus-TCP (RJ45 port)	Modbus-TCP (RJ45 port), CANopen and CANopen Lift DS 417	Modbus-TCP (RJ45 port), DCP3 and DCP4 (with optional card), CANopen and CANopen Lift DS 417
Protection degree	IP20	IP20	IP20
Certification	CE ¹⁾ , cULus (UL 508C), EN 81-20, EN 81-50	CE ¹⁾ , cULus (UL 508C), EN 81-20, EN 81-50	CE ¹⁾ , cULus (UL 508C), EN 81-20, EN 81-50

Note: 1) Complies with the EC Directive concerning low voltage equipment (Directives LVD 2014/35/EU, EMC 2014/30/EU, Lift 2014/33/EU, RoHS 2011/65/EU).

Inverter lift



Model	ADL550-ICS	VDL200	AGL50-EV
Control mode	Field oriented control	Field oriented control	Space Vector
Power	4-15 kW	4...22 kW	4 - 5.5 - 7.5 kW (5 - 7.5 - 10 Hp)
Voltage	3 x 230 V ac, 3 x 400 V ac, 3 x 480 V ac; 50/60 Hz	3 x 230-400 V ac, -15%+10%, 50 Hz	3 x 400 V ac ... 480 V ac, 50/60 Hz
Motor type	Asynchronous / Synchronous	Asynchronous	Asynchronous
Speed control (accuracy)	±0.01% Motor rated speed	±0.01% Motor rated speed	0.5 ... 1%
Analog inputs	1	1	1
+24 V dc external supply	Yes	No	No
Digital inputs	8 + 1 Enable + 2 Fast	8 + 1 Enable	6
Digital outputs	4 (relay)	4 (relay)	3 (1 static and 2 relay)
Overload	183% x 10s / 200% x 2s	Up to 200% In * 10"	Up to 170% * In
Max output frequency	300 Hz	300 Hz	500 Hz
EMI filter	Integrated (ADL550-ICS-...-F models)	Integrated (VDL200-F models)	Optional
Choke	DC side choke: external optional AC side choke: external optional	DC side choke: external optional AC side choke: external optional	Optional
Braking unit	Integrated	Integrated with external resistor	Integrated with external resistor
USB port	Yes	No	No
Wi-Fi module	Optional	No	No
Dimensions for roomless applications	Yes	Yes	Yes
Emergency operation	Battery powered (48-96 V dc) UPS (230 V single-phase)	Optional (UPS single-phase 230 V)	Optional (with UPS)
Type of lift	G geared / Gearless	G geared	G geared
Installations	New installation & Retrofitting	New installation & Retrofitting	New installation & Retrofitting
Functions	In addition ADL550: <ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - Speed control - Short floor management - Lift sequence management - Ramp generation - Management of up to 8 multispeeds - Load compensation - Configuration via optional keypad (5 languages) - Configuration via PC (WEG_eXpress) - Wizard for commissioning - Menu for setting electrical and mechanical parameters - Programming with linear engineering units - DC power supply or emergency single-phase power supply to return to floor with optimized consumption - The drive complies with the monitoring requirements of the correct lifting or dropping of the machine brake according to 5.6.7.3 of EN 81-20:2014 and 5.8 of EN 81-50:2014. 	<ul style="list-style-type: none"> - 16 multispeeds - 4 multitramps (linear, S-shaped with independent jerk settings) - Self-tuning of motor parameters - Integrated lift sequences - Speed expressed in m/s - Management of space calculated by the drive, even offline - Management of short floors - Motor contactor control - Integrated brake control - Temperature control for motor and drive
Optional cards	ICS-CR (Integrated Control System Car Roof card), ICS-COP (Integrated Control System Car Operator Panel), ICS-CD (Integrated Control System Car Display), ICS-FD (Integrated Control System Floor Display)	-	-
Communication protocols	Modbus-TCP (RJ45 port), CANopen and CAN and Serial Line port for communication with LOPs and car display	RS232 ¹⁾	RS485 ²⁾ , Modbus-RTU
Protection degree	IP20	IP20	IP20
Certification	CE ²⁾ , cULus (UL508C), EN 81-20, EN 81-50	CE ²⁾ , EN 81-20, EN 81-50	CE ²⁾

Notes: 1) The serial port is used for programming (PC).

2) Complies with the EC Directive concerning low voltage equipment (Directives LVD 2014/35/EU, EMC 2014/30/EU, Lift 2014/33/EU, RoHs 2011/65/EU).

Inverter lift



Model	ADL300-2T	ADL300-2M	ADL300-4
Control mode	Field oriented control	Field oriented control	Field oriented control
Power	5.5...37 kW (7.5...50 HP)	1.1...5.5 kW (1.5...7.5 HP)	4...75 kW (5...100 HP)
Voltage	3 x 200 V ac, 3 x 230 V ac, 50/60 Hz	1 x 230 V ac; 50/60 Hz	3 x 230 V ac, 3 x 400 V ac, 3 x 480 V ac; 50/60Hz
Motor type	Asynchronous / Synchronous	Asynchronous / Synchronous	Asynchronous / Synchronous
Speed control (accuracy)	±0.01% motor rated speed	±0.01% motor rated speed	±0.01% motor rated speed
Analog inputs	ADL300B: 0; ADL300A: upon request	ADL300B: 0; ADL300A: upon request	ADL300B: 0; ADL300A: upon request
Analog outputs	ADL300B: 0; ADL300A: upon request	ADL300B: 0; ADL300A: upon request	ADL300B: 0; ADL300A: upon request
Digital inputs	ADL300B: 8 + 1 Enable ADL300A: upon request	ADL300B: 8 + 1 Enable ADL300A: upon request	ADL300B: 8 + 1 Enable ADL300A: upon request
Digital outputs	ADL300B: 4 (relay) ADL300A: upon request	ADL300B: 4 (relay) ADL300A: upon request	ADL300B: 4 (relay) ADL300A: upon request
Overload	Up to 200% In * 10" (up to 11 kW) Up to 180% In * 10" (≥15 kW)	Up to 200% In * 3	Up to 200% In * 10" (up to 22 kW) Up to 180% In * 10" (≥30 kW)
Max output frequency	300 Hz	300 Hz	300 Hz
EMI filter	Integrated (ADL300.-F models) (EN 12015, EN 61800-3)	Optional external (EN 12015, EN 61800-3)	Integrated (ADL300.-F models) (EN 12015, EN 61800-3)
Choke	DC side choke: integrated (≥30 kW), external optional on lower sizes AC side choke: external optional	No	DC side choke: integrated (≥30 kW), external optional on lower sizes AC side choke: external optional
Braking unit	Integrated up to 30 kW with external resistor	Integrated with external resistor	Integrated up to 55 kW with external resistor
Port for SD card	Yes	Yes	Yes
Dimensions for roomless applications	Yes	Yes	Yes
Emergency operation	Optional (UPS)	Optional (UPS)	Optional (UPS)
Type of lift	Geared / Gearless	Geared / Gearless	Geared / Gearless
Installations	New installation & Retrofitting	New installation & Retrofitting	New installation & Retrofitting
Functions	<p>The ADL300 is available in two configurations:</p> <ul style="list-style-type: none"> - ADL300A (advanced): to guarantee maximum programmability, the ADL300A is supplied as standard with no I/O or feedback cards, leaving the customer free to perform the appropriate configuration, choosing from an extensive range of options. - ADL300B (basic) features the following as standard: <ul style="list-style-type: none"> - 8 (Prog. DI) + 1 DI (Enable) + 4 (RO). - Channels A+ A-, B+ B-, Z+ Z-, differential line drivers, optoisolated; management of loss of encoder signals; encoder signal repetition; TTL electrical interface. - Input for absolute SinCos or Endat / SSI encoder. 	<ul style="list-style-type: none"> - The ADL300 is certified for the use of a single output contactor, in accordance with EN 81-20, EN 81-50 - Safety certification for a contactorless operations: ADL300 is certified as EN 81-20, EN 81-50 - STO according to EN 61800-5-2-2007 - SIL3 - Integrated LED keypad - Speed control - Position control with direct landing at floor (EPC Elevator Positioning Control) - Automatic calculation of deceleration point - Short floor management - Off-floor stop detection - Lift sequence management - Ramp generation - Management of up to 8 multispeeds 	<ul style="list-style-type: none"> - Load compensation - DCP3/DCP4 protocol communication - CANopen communication - CANopen –Lift (CiA[®] 417) communication - Configuration via keypad with LEDs - Configuration via optional keypad (5 languages) - Configuration via PC (WEG-eXpress) - Wizard for commissioning - Menu for setting electrical and mechanical parameters - Programming with linear engineering units - DC power supply or emergency single-phase power supply to return to floor with optimized consumption - External +24 V dc power supply - Regenerative configuration with AFE200 external modules
Communication protocols	RS232 ¹⁾ , Modbus-RTU, DCP3, DCP4, CANopen and CANopen Lift DS 417 (ADL300B-...-C models).	RS232 ¹⁾ , Modbus-RTU, DCP3, DCP4, CANopen and CANopen Lift DS 417 (ADL300B-...-C models).	RS232 ¹⁾ , Modbus-RTU, DCP3, DCP4, CANopen and CANopen Lift DS 417 (ADL300B-...-C models).
Protection degree	IP20	IP20	IP20
Certification	CE ²⁾ , cULus (UL 508C), EN 81-20, EN 81-50	CE ²⁾ , EN 81-20, EN 81-50	CE ²⁾ , cULus (UL 508C), EN 81-20, EN 81-50

Notes: 1) The serial port is used for programming (PC) and control (Modbus communication standard in all drives).

2) Complies with the EC Directive concerning low voltage equipment (Directives LVD 2014/35/EU, EMC 2014/30/EU, Lift 2014/33/EU, RoHs 2011/65/EU).

Servomotors and digital DC drive



Model	SBM
Type	Standard brushless motor
Stall torque	From 0.8 to 442 Nm
Number of poles	8 poles (SBM series)
Rated power supply voltage	3 x 230 V ac, 3 x 400 V ac, 3 x 460 V ac
Speed	3,000 rpm, 4,000 rpm, 4,500 rpm, 6,000 rpm, 8,000 rpm
Type of construction	B5 (standard) Upon request: B3&B5; F75, F115
Shaft diameter	11 mm (SBM 3), 19 mm (SBM 5), 24 mm (SBM 7), 42 mm (SBM 8), 48 mm (SBM 9), Special sizes upon request.
Type of shaft	Shaft with key (standard); Upon request: shaft without key
Connections	Power and signal connectors (SBM 3-5-7); Box with power terminal strip and signal connectors (SBM 8-9).
Protection degree	IP54 (standard) Upon request: IP65
Feedback devices	2-pole resolver (standard). Upon request: digital encoder + hall probe; absolute encoder with SSI protocol; 5-track SinCos encoder; encoder with EN-DAT 2.2 protocol
Brake	Optional Upon request: motor with safety brake; motor with brake and fan
Fan	Standard in -F models Upon request: motor with fan; motor with brake and fan
Oil seal	Standard in SBM 8 and SBM 9 models Other models: upon request
General characteristics	<ul style="list-style-type: none"> - Class F motor isolation - Class H windings - Klixon thermal overload at 130 °C - Balancing: with key - Shaft with key - Any service position - Protection degree IP54 - Connections: power and signal connector (SBM 3-5-7), connection box with power terminal strip and signal connector (SBM 8-9) - Bearings permanently lubricated
Certification	CE

Model	TPD32 EV
Current rating	From 20 A to 3,300 A. Higher sizes on request
Rated AC voltage input	3 x 230 V ac -10%...690 V ac+10%, 50/60 Hz 3 x 400 V ac -10%...950 V ac+10%, 50/60 Hz ¹⁾
Rated DC voltage output	270 V dc (@ 230 V ac -2B), 240 V dc (@ 230 V ac - 4B) 470 V dc (@ 400 V ac - 2B), 420 V dc (@ 400 V ac - 4B) 600 V dc (@ 500 V ac - 2B), 520 V dc (@ 500 V ac - 4B) 810 V dc (@ 690 V ac - 2B), 720 V dc (@ 690 V ac - 4B) 680 V dc (@ 575 V ac - 2B), 600 V dc (@ 575 V ac - 4B) 1, 100 V dc (@ 950 V ac - 2B), 1,000 V dc (@ 950 V ac - 4B) ¹⁾
Operating quadrants	2B models = two quadrants; 4B models = four quadrants
Bridge configuration	6 pulses (available 12 pulses models)
Field circuit supply (U1/V1) – 1ph	230 V ac ±10%, 50/60 Hz ±5% 400 V ac ±10%, 50/60 Hz ±5% 460 V ac ±10%, 50/60 Hz ±5%
Regulation supply (U2/V2) – 1ph	115 V ac ±15%, 50/60 Hz ±5% 230 V ac ±15%, 50/60 Hz ±5%
Analog inputs	3 differential (12bit, programmable, selectable for ±10 V dc, 0 - 20 mA, 0 - 10 V dc, 4 - 20 mA)
Analog outputs	2 (±10 V dc)
Control inputs	4 (enable, start, fast stop, ext. fault; 0-24 V dc PNP/NPN, optoisolated)
Digital inputs	4 programmable (0-24 V dc PNP/NPN, optoisolated)
Digital outputs	4 programmable (0-24 V dc PNP/NPN, optoisolated)
Relay output	1: drive OK (250 V ac - 1 A) 1: programmable (250 V ac - 1 A)
Encoder input	1 (TTL increm. digit. 5 V dc / HTL 15...24 V dc, ch. A-B-Z, optoisolated) 1 (incremental sinusoidal 5 V dc channels A-B-Z) Encoder supply 5.2...6.5 V dc (TTL) - 24 V dc (HTL)
Tachogenerator input	1 (from ±22.7 V dc to 302.9 V dc)
Motor thermistor input	1 (PTC according to DIN 44081 0 44082)
Overload	I ² t algorithm programmable
EMI filter	External optional
Input choke	External optional
Options for integration onboard drive	3 (I/O expansion, fieldbus, APC300 technological card)
Functions	<ul style="list-style-type: none"> - Self-tuning of current and speed loop - 5 independent and programmable ramps - Programmable linear and S-shaped ramp - 7 programmable multispeeds - Min/max speed limits with independent adjustment for each speed direction - Armature current limitation according to speed - Speed regulator adaptive gains - Independent control of integral gain at zero speed - Programmable overload control - Jog function - Controlled stop and automatic motor restart - Motor potentiometer function - I²t motor thermal cutout switch - PID and servo diameter control function - "Speed draw" function - Auto-capture function - Droop function - External brake control - "Test SCR" function - Programmable alarms management
Communication protocols	RS485 ²⁾ , Modbus-RTU Optional: DeviceNet, Profibus-DP, CANopen [®]
Safety function	Not available
Protection degree	IP20 up to 1,000 A (-2B) and 1,050 A (-4B) IP20/IP00 for larger sizes
Certification	CE, UL and cUL (TPD32 EV-...-NA series).

Notes: 1) Special version on request.

2) The serial port is used for programming (PC) and control (Modbus communication standard in all drives).

Regenerative power supply unit



Model	AFE200	FFE200
Control mode	Active front end technology	Fundamental front end technology
Power	22 kW...1.65 MW (-4 models) 160 kW...1.65 MW (-6 models)	300 kW...2.1 MW (-4 models) 475 kW...3.8 MW (-6 models)
Voltage	3 x 380 V ac -15%...500 V ac +5%, 50/60 Hz (-4 models) 3 x 500 V ac -10%...690 V ac +10%, 50/60 Hz (-6 models)	3 x 380 V ac -15%...500 V ac +5%, 50/60 Hz (-4 models) 3 x 500 V ac -10%...690 V ac +10%, 50/60 Hz (-6 models)
Power factor	≥0.99	<0.94
THD	≤3% (considering a network with voltage THD of less than 2%)	<40%
Analog inputs	2 two-pole (voltage/current)	2 two-pole (voltage/current)
Analog outputs	2 two-pole (1 voltage or current, 1 voltage)	2 two-pole (1 voltage or current, 1 voltage)
Digital inputs	6 (PNP/NPN)	6 (PNP/NPN)
Digital outputs	4 (PNP/NPN), (2 static and 2 relay)	4 (PNP/NPN), (2 static and 2 relay)
Overload	Heavy duty: 150% * In (60" every 300") Light duty: 110% * In (60" every 300")	Heavy duty: 150% * In (60" every 300") Light duty: 110% * In (60" every 300")
EMI and LCL filters	External mandatory	Optional external EMI mains filter (line inductance mandatory)
Options for integration onboard drive	2	2
Pre-charge kit	External mandatory. External management of the intermediate circuit pre-load is a feature of the entire range. The dedicated AFE PRE-CHARGE KITS are supplied complete with pre-wired fuses, resistors and contactors.	Mandatory. In the FFE200-...+PRC the precharge circuit is integrated
Functions	<ul style="list-style-type: none"> - "Clean Power" thanks to the unit power factor and reduced harmonic distortion (<3%) - Enhanced system dynamics during drive and regeneration - Considerable energy savings during regeneration transients - Improved stability of the DC Bus circuit under load changes - Significant cost-effectiveness with the single power supply system - Elimination of uneconomical conventional braking systems and braking resistors 	<ul style="list-style-type: none"> - Efficiency enhancement of the internal power module - Limited internal dissipative losses - Enhanced system dynamics during drive and regeneration - Considerable energy savings during regeneration transients - Improved stability of the DC Bus circuit under load changes - Significant cost-effectiveness with the single power supply system - Elimination of uneconomical conventional braking systems and braking resistors.
Communication protocols	RS485, Modbus-RTU. Optional: Modbus-RTU to Modbus-TCP gateway, DeviceNet, Profibus-DP, CANopen, EtherCAT, Ethernet, PROFINET	RS485, Modbus-RTU. Optional: Modbus-RTU to Modbus-TCP gateway, DeviceNet, Profibus-DP, CANopen, EtherCAT, Ethernet, PROFINET
Protection degree	IP20 (IP00 size 7 and parallel)	IP00
Certification	CE, UL and cUL (-4 models)	CE

AC/DC power supply



Model	SBM200	SM32
Type	3-phase AC/DC power supply	3-phase AC/DC power supply
Continuous output power	490 kW...3.8 MW Heavy Duty (-4 models) 700 kW...6.6 MW Heavy Duty (-6 models)	80 kW...1.2 MW @ 400 V ac 550 kW...980 kW @ 690 V ac
Voltage	3 x 230...500 V ac ¹⁾ (-4 models) 3 x 500...690 V ac ¹⁾ (-6 models)	3 * 400...480 V ac Heavy Duty 3 * 690 V ac Heavy Duty
Mains frequency	50 Hz or 60 Hz (configurable by dip-switch)	50 Hz or 60 Hz (configurable by dip-switch)
THD	<45%	<45%
DC-link rated voltage	U _{ln} x 1.35	U _{ln} x 1.35
Continuous output current	1,025 A up to 7,577 A continuously	185 A up to 3,000 A
Digital inputs	1 (enable)	1 (enable)
Digital outputs	2 + 1 Relay outputs (drive OK contact)	2 + 1 Relay outputs (drive OK contact)
Overload	Heavy duty: 150% * I _n (60" each 300") Light duty: 110% * I _n (60" each 300")	Heavy duty: 150% * I _n (60" each 300")
Input choke	Optional (mandatory)	Optional (mandatory)
Pre-charge choke	Optional (mandatory) for +PRC models	Not necessary
Precharge kit	External Integrated on -T and +PRC models	Integrated
Functions	(Models -T and +PRC only). Opening of the OK relay in case of: - Overtemperature - Power supply loss on the regulation card (±15 V) - Power supply loss - Completely discharged DC link	Opening of the OK relay in case of: - Overtemperature - Power supply loss on the regulation card (±15 V) - Power supply loss - Completely discharged DC link
Protection degree	IP20 casing, excluded top and lower power connections where protection degree is IP00 (according to EN 60529).	IP20 (IP00 size 2,000 A)
Certification	CE. UL and cUL (with Power Supply ≤600 V ac only, on progress).	CE

Note: 1) Configurable by dip-switch.

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is essential, as much
as understanding
your needs.



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