Nidec
All for dreams

AD5000

The new heavy industry inverter family

Over 150 years of experience inside

The AD5000 is all about savings

We pride ourselves on our ability to put our experience in our customer's hands, offering the best technical solution to meet their needs. The AD5000 is designed to simplify installation, startup and maintenance as well as reduce footprint and cabinet size helping end users and system integrators save time and money on materials and labor.

With over 150 years of experience in industrial markets, Nidec has the experience to deliver process oriented power quality and control solutions, from components to complete engineered systems.

Nidec is a global supplier of power electronic equipment and automation systems as well as electric motors and generators. This combination of technologies and expertise is the backbone of our Low Voltage inverter solutions for global industrial markets at competitive prices. Our R&D team works in close collaboration with our project engineers and product teams to identify the optimal solution for maximum performance over the plant's life cycle.

Power, flexibility and reliability

Heavy duties require strong performance

The AD5000 offers consistent performance under extreme working conditions such as dust, humidity and high temperature variations in energy-intensive processes that demand robust, durable and reliable equipment. The adaptability and efficiency of the AD5000 make it the ideal product for a vast range of applications.

Technical features

- Voltage classes:
  380÷480 Vac (F)
  500Vac (G)
  525÷690 Vac (K)
- Power ratings (400 Vac):
  from 0.75 kW to 3200 kW
- Power ratings (690 Vac):
  from 132 kW to 4000 kW
- Power configurations:
  AC/AC (6-12-18 pulses)
  DC/AC
  AFE (regenerative versions)

What makes the AD5000 the preferred choice?

It is the ideal system integration product for revampings and upgrades.
The AD5000 seamlessly integrates into existing plants: its compact footprint is optimized for small spaces.
The AD5000 was designed as a plug & play solution for quick and easy installation and maintenance.
The AD5000 offers flexible connectivity for high power applications thanks to the stand alone “inverter control box” that easily connects through optical fibers to the inverter power modules. These are also available mounted on a cart (optional) for easy installation and reduced maintenance time (MTTR: 20 minutes).

Your power ally

Our high end inverter power module reaches 450 kW at 400 Vac or 500 kW at 690 Vac in a single frame, offering more power per cubic meter than competitors. Thanks to the fiber optic connections you can now tackle higher power requirements. The AD5000 allows up to 8 power modules in parallel for a total maximum power of 4 MW at 690 Vac.

The AD5000 is among the smallest in class

Reduced cabinet costs and size
- 2 modules can be fitted into a standard 800 mm panel;
- 3 modules can be fitted into a standard 1000 mm panel.

Panel integration is made easy by a wide range of accessories.

Versatile and reliable

A wide range of options and communication protocols is available.

Optimized power usage

The AD5000 offers high efficiency with an improved power factor, even under extreme working conditions, thereby improving process control, reducing wear on machines and creating significant energy savings.

Pre-wired or free-style

The AD5000 offers a modular design available in two solutions:

1. Pre-wired parallels on a metal chassis ready for integration to reduce configuration and assembly (up to 3 units, max power 1600 kW)
2. Power modules with cart and stand alone control box for parallel connection using fiber optics for modular, flexible and reliable solutions (up to 8 units, max power 4 MW)

Reliable power modules, easy maintenance

AD5000 inverters combine high performance and high power with easy maintenance. Independent power modules enable customer to own a unique spare kit and make localized replacements while keeping the rest of the system in operation.

- Modular solution up to 3.2 MW at 400 Vac or 4 MW at 690 Vac
- Stand alone, remotable control box
- Galvanic insulation between control and power modules through optical fibers
- N-1 function
- Same power module for inverter and AFE
- Easy replacement of power module, control, fan

Precision and control to go to the distance

Key features

- 3 motor control methods available for different performance requirements: V/Hz, Vector V/Hz (Sensorless), Vector closed loop with encoder or resolver (FOC)
- Induction and permanent magnet motor control available
- Auto-tuning functions
- Easy programming with Quick Start functions for simple applications
- Installation, monitoring, and troubleshooting with remote access or in the field
- Integrated PLC for complex and demanding process control functions (ISaGRAPH - IEC 61131)
- Fast optical connection between inverters for advanced applications

The AD5000 DriVe Manager PC tool provides a flexible and intuitive environment for configuration, monitoring & troubleshooting.

Versatile, powerful, easy to use DriVe Manager

The AD5000's user-friendly software allows you to optimize drive and motor performance and does not require specific knowledge of drive systems. The DriVe Manager has many useful functions for monitoring, maintenance and troubleshooting.

Quick Start

The AD5000's user-friendly software includes different libraries of macro functions and allows you to optimize drive and motor performance even without specific knowledge of the drive system. The AD5000 has many useful functions for monitoring, maintenance and trouble-shooting.

Programming made easy

Programming can be performed either from the keypad or remotely from your PC.

Local

Set up is simple when you use the AD5000's easy-to-read removable keypad. Short-cut options, simple navigation, copy-and-paste parameters function and a large backlight graphic LCD display with multiple meter functions help make the set up process quick and straightforward.

Remote

The AD5000 can be configured remotely using DriVe Manager, a powerful, Windows-based tool that enables you to configure advanced control options directly from your PC. DriVe Manager can also be used to monitor and troubleshoot operations remotely.

Integrated PLC

With AD5000 there is no need for additional PLCs: it includes an onboard real time IEC 61131-3 PLC that allows you to integrate the inverter with complex and demanding process control functions, including flying shears, reference cascade, loop and tension controls and impact drop compensation.

Seamless communications

Open Communication

A wide range of communications features help expand the AD5000's capabilities and functionality and simplify the integration with the automation system. These features make it easy for systems integrators to customize solutions to meet their customers' precise requirements.
Modbus RTU for diagnostics & monitoring is available as standard.

Available as standard:
- Modbus RTU
- Ethernet TCP/IP
- Profibus DP
- Modbus TCP

Optional Communication modules:
- ProfiNet
- EtherNet/IP

Standard I/O

- 7 digital inputs (optoinsulated)
- 4 analog inputs (optoinsulated)
- 3 digital outputs (1 fault relay + 2 configurable relays)
- 4 analog outputs (optoinsulated)

Thanks to a wide range of industrial fieldbuses the AD5000 can be easily integrated with existing automation systems.

Active Front End

Main benefits with AFE:

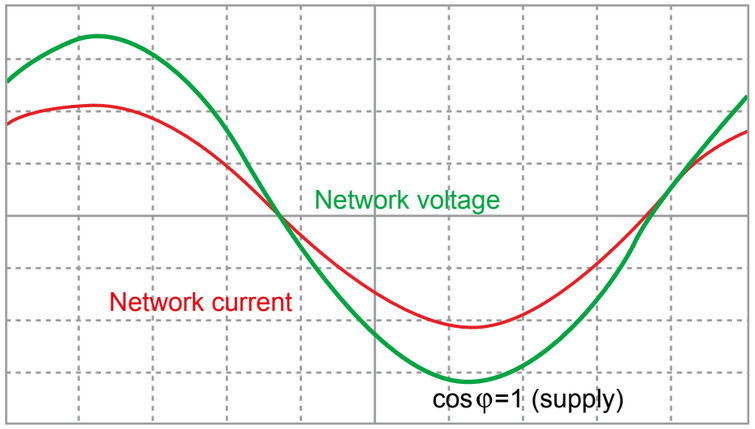
- 4 quadrant operation
- Energy recover
- Fundamental power factor (cos phi1) close to 1
- Reduced THDi (≤ 3%)
- Constant DC bus voltage regulation even under varying load conditions
- Reactive power generation on request

These features make AFE the right solution for applications like:
- ropeways, lifting systems, cranes, hoists, mine conveyors, winches
- mini hydro, wind mills and cogeneration
- battery energy storage solutions and photovoltaic systems.

AFE eliminates harmonic currents and protects devices supplied from the network from possible damage caused by harmonic distortion (IEEE 519-1992 compliant). This makes it the optimal solution for weak networks, e.g. on ships.

The AD5000 AFE power modules are the same as those used for motor control which makes integration in a panel of AFE and inverters easier.

The AD5000 is available with AFE (Active Front End) control configuration for regenerative systems.



Life cycle support

Service

Because our equipment lies at the heart of our customers' operations, we know its efficient operation and absolute reliability are essential to optimum performance. That's why SERVICE is the backbone of our business.

When technical issues arise, our engineering service team is available 24/7 to answer questions and troubleshoot problems, either servicing our solutions on-site or helping you diagnose problems through remote monitoring. We also offer preventive and predictive maintenance programs tailored to your needs and schedule.

Education and Training

Nidec offers ongoing training to help users manage their systems for long life and optimal performance. We will tailor your education and training program to address your specific needs and concerns. Both hands-on on-site training on your premises, as well as standard and specialty courses at our facilities are available. Our trainers are seasoned professionals with extensive field experience.

Technical data

CONNECTION TO MAINS			
Three-phase voltage	F=380÷480 Vac ± 10%	G=500 Vac ±10%	K=525÷690 Vac +15/-10%
Frequency	48-63 Hz		
Total Power Factor	0.93 (typical with line reactor)		
Fundamental Mode ($\cos\varphi_1$)	>0.98 (with line reactor – rated load)		
Efficiency	0.98 max (50 Hz – rated load)		
DC Supply Versions	Y=650 Vdc ± 10%, Z=770 Vdc ± 10%, J=975 Vdc ± 10%, L=1100 Vdc		
CONNECTIONS TO MOTORS			
Three-phase voltage	0 to main voltage		
Output currents	I_{N0}: continuous current without overload at 40°C I_{N1} (cl1): light duty current. Overload: 110% for 1 min/5 min at 40°C I_{N2} (cl2): heavy duty current. Overload: 150% for 1min/5 min at 40°C		
Output frequency	0,1-200 Hz		
Frequency resolution (V/f)	0, 05 Hz (typical)		
CONTROL CHARACTERISITCS			
Control Method	V/f, Vector V/f (Sensorless), Vector closed loop with encoder or resolver (FOC) Active Front End (AFE)		
Switching frequency	1.5-2-3-4-6-8 kHz		
Frequency set point accuracy (V/f)	0.1% (analog control)	0.01% (digital control)	
Speed Resolution	0.05 Hz (Sensorless) / 1:5000 (FOC)		
Speed static accuracy	0.4% slip frequency (Sensorless) / 0,01% (FOC)		
Torque Control Response Time	<10ms (Sensorless) / <5ms (FOC)		
PROTECTION FUNCTIONS			
Over-current	Inverter Over-Temperature	Earth Fault	
Over-voltage	Motor Overload	Communication Error	
Under-voltage	Motor-over speed	Watchdog	
ENVIRONMENTAL CONDITIONS			
Operating Temperature	0-40°C (1% current derating for every °C, 55°C max)		
Storage Temperature	-25 to +70°C		
Relative Humidity	95% (without condensation)		
Altitude ASL	1000m (1% current derating for every 100m, max 3000m)		
Protection grade	IP20 Frames I-VIN	IP00 Frames VII-VIII	
Cooling	Air coooling with internal fan / Optional: water cooling for frames VII & VIII		
Contamination level	Chemical gases: IEC 721-3-1, Class IC 2	Solid Particles IEC 721-3-1, Class 1S3	

ENVIRONMENTAL CONDITIONS

EN61800-2 (Low Voltage PDS: General Requirements)
EN61800-3 (PDS: EMC Requirements)
EN61800-5-1 (PDS: Safety Requirements)
EN61800-5-2 (PDS: Functional Safety)
EN50178 (Electronics Equipment in Power Installation)

OPTIONS AND ACCESSORIES

- Keypad with LCD graphic display (Standard)
- Standard RFI filter: C2 up to frame VI; C3 for all other frames
- Line reactor: standard built in from size AD5A030F to AD5A166F
- Braking switch: option from size AD5A045F to AD5A290F
- External Control Supply
- I/O expansion boards
- Encoder or resolver expansion board
- Safe Torque Off (PI e)
- Communication modules - Standard: Modbus RTU, Modbus TCP, Profibus DP; Options: Ethernet/IP, ProfiNet
- Cart with or without output reactor (available only for size VII & VIII)
- Sinusoidal filters, Harmonic filters

Ratings and Dimensions

AD5000 - F - 380÷480 Vac ± 10%

Model	Frame	Cl.0	Cl.1 - Overload: 110% for 1 min, every 5 min			Cl.2 - Overload: 150% for 1 min, every 5 min			Dimensions			
		IN0	IN1	Motor (4p)' @400 V	Motor (4p)' @460 V	IN2	Motor (4p)' @400 V	Motor (4p)' @460 V	Height	Width	Depth	Weight
		A	A	kW	HP	A	kW	HP	mm	mm	mm	Kg
AD5A030FSBFH	IIIN	42	40	18,5	30	32	15	25	454	246	279	32
AD5A036FSBFH	IIIN	55	52	22	40	40	18,5	30	454	246	279	32
AD5A045FSNFH	IVN	68	65	30	50	52	22	50	675	290	289	36
AD5A053FSNFH	IVN	81	77	37	60	65	30	50	675	290	289	36
AD5A066FSNFH	IVN	101	96	45	75	77	37	60	675	290	289	40
AD5A086FSNFH	VN	130	124	55	100	96	45	75	755	290	304.5	52
AD5A108FSNFH	VN	164	156	75	125	124	55	100	755	290	304.5	52
AD5A125FSNFH	VIN	189	180	90	150	156	75	125	1000	300	334.5	88
AD5A150FSNFH	VIN	221	210	110		180	90	150	1000	300	334.5	96
AD5A166FSNFH	VIN	252	240	132	200	200	110		1000	300	334.5	96
AD5A210FSNFH	VII	310	300	160	250	240	132	200	1068	290	526	120
AD5A260FSNFH	VII	395	370	200	300	285	160	200	1068	290	526	120
AD5A290FSNFH	VII	440	410	225	350	320	160	250	1068	290	526	120
AD5A350FSNFH	VIII	550	510	280	400	385	200	300	1490	290	526	165
AD5A370FSNFH	VIII	580	540	280	450	410	225	350	1490	290	526	165
AD5A440FSNFH	VIII	650	640	355	550	510	280	400	1490	290	526	165
AD5A480FSNFH	VIII	740	690	400	600	530	280	450	1490	290	526	165
AD5A520FSNFH	VIII	810	750	450	650	585	315	500	1490	290	526	165
AD5A580FSNFH	2xVII	880	820	450	700	640	355	500	1126	600	530	270
AD5A700FSNFH	2xVIII	1.100	1020	560	800	770	450	600	1524	600	530	335
AD5A740FSNFH	2xVIII	1.160	1080	630	900	820	450	700	1524	600	530	335
AD5A880FSNFH	2xVIII	1.300	1280	710	1000	1020	560	800	1524	600	530	335
AD5A960FSNFH	2xVIII	1.480	1380	800	1200	1060	560	900	1524	600	530	335
AD5A1K0FSNFH	2xVIII	1.620	1500	800	1300	1170	630	1000	1524	600	530	335
AD5A1K1FSNFH	3xVIII	1.740	1620	900	1350	1230	710	1050	1524	900	530	495
AD5A1K3FSNFH	3xVIII	1.950	1920	1000	1650	1530	800	1200	1524	900	530	495
AD5A1K4FSNFH	3xVIII	2.220	2070	1000	1800	1590	900	1350	1524	900	530	495
AD5A1K6FSNFH	3xVIII	2.430	2250	1250	1950	1755	1000	1500	1524	900	530	495

For electrical data of G series please refer to series F table

AD5000 - K - 525÷690Vac +15% , -10%

Model	Frame	Cl.0	Cl.1 - Overload: 110% for 1 min, every 5 min			Cl.2 - Overload: 150% for 1 min, every 5 min			Dimensions			
		IN0	IN1	Motor (4p)' @ 525 Vac	Motor (4p)' @ 690 Vac	IN2	Motor (4p)' @525 Vac	Motor (4p)' @690 Vac	Height	Width	Depth	Weight
		A	A	kW	HP	A	kW	HP	mm	mm	mm	Kg
AD5A260KSNFH	VII	230	215	200	200	160	132	150	1068	290	526	120
AD5A280KSNFH	VII	255	235	225	250	180	160	150	1068	290	526	120
AD5A440KSNFH	VIII	400	370	355	350	275	250	250	1490	290	526	165
AD5A500KSNFH	VIII	450	420	400	450	315	250	300	1490	290	526	165
AD5A530KSNFH	VIII	480	445	450	500	330	315	350	1490	290	526	165
AD5A650KSNFH	VIII	580	540	500	600	405	400	450	1490	290	526	165
AD5A880KSNFH	2xVIII	800	740	710	800	550	500	600	1524	600	530	335
AD5A1K0KSNFH	2xVIII	900	840	800	900	630	630	700	1524	600	530	335
AD5A1K1KSNFH	2xVIII	960	890	900	950	660	630	700	1524	600	530	335
AD5A1K3KSNFH	2xVIII	1160	1080	1000	1100	810	800	850	1524	600	530	335
AD5A1K5KSNFH	3xVIII	1350	1260	1250	1250	945	900	1000	1524	900	530	495
AD5A1K6KSNFH	3xVIII	1440	1335	1300	1400	990	950	1100	1524	900	530	495
AD5A2K0KSNFH	3xVIII	1740	1620	1600	1700	1215	1250	1250	1524	900	530	495

Inverter Identification code

AD5	A	520	F	S	N	F	H
Product Series	**Cooling**	**Rated Power [kVA]**	**Input Voltage**	**Control Board**	**Dynamic Breaking**	**Internal RFI Filter**	**Keypad**
AD5000	A=Air Cooling W=Water Cooling (option)	See table with electical data	F = 380-480 Vac Y= 650 Vdc G= 500 Vac Z= 770 Vdc K= 525-690 Vac J= 975 Vdc L= 1100 Vdc	S=System2	B=Installed N=Not installed	F=Installed N=Not installed	H=Installed N=Not installed

Option codes

N	C	N	00	NN
Communication Expansions	**Expansion Boards**	**Safe Torque Off function**	**External Supply**	**Cart**
E=EtherNet/IP I=ProfiNet N=Not Installed	A=Analog input expansion board E=Encoder expansion board R=Resolver expansion board N=Not installed	T=STO installed N=Not installed	10=External inverter control supply 00=Not installed	CN=Cart installed CR=Cart with output reactor installed NN=Not installed

Ratings and Dimensions

AD5000 – AFE Y – 380÷440 Vac ±10%

Model	Frame	Cl.1 - Overload: 110% for 1 min, every 5 min			Cl..2 - Overload: 150% for 1 min, every 5 min			Dimensions			
		IN1	Power dc @400V	Power dc @440V	IN2	Power dc @400V	Power dc @440V	Height	Width	Depth	Weight
		A	kW	HP	A	kW	HP	mm	mm	mm	Kg
AD5A030YSAFH---	IIIN	40	27	30	32	22	24	454	246	279	30
AD5A036YSAFH---	IIIN	52	35	39	40	27	30	454	246	279	30
AD5A045YSAFH---	IVN	65	44	49	52	35	39	675	290	289	34
AD5A053YSAFH---	IVN	77	52	58	65	44	49	675	290	289	34
AD5A066YSAFH---	IVN	96	65	72	77	52	58	675	290	289	34
AD5A086YSAFH---	VN	124	84	93	96	65	72	755	290	304.5	38
AD5A108YSAFH---	VN	156	106	117	124	84	93	755	290	304.5	50
AD5A125YSAFH---	VIN	180	122	134	156	106	117	1000	300	334.5	85
AD5A150YSAFH---	VIN	210	143	157	180	122	134	1000	300	334.5	90
AD5A166YSAFH---	VIN	240	163	179	200	136	149	1000	300	334.5	90
AD5A210YSAFH---	VII	300	204	224	240	163	179	1068	290	526	115
AD5A260YSAFH---	VII	370	251	276	285	193	213	1068	290	526	115
AD5A290YSAFH---	VII	410	278	306	320	217	239	1068	290	526	115
AD5A350YSAFH---	VIII	510	346	381	385	261	288	1312	290	526	160
AD5A370YSAFH---	VIII	540	367	403	410	278	306	1312	290	526	160
AD5A440YSAFH---	VIII	590	401	441	460	312	344	1312	290	526	160
AD5A520YSAFH---	VIII	720	489	538	560	380	418	1312	290	526	160
AD5A580YSAFH--- (AD5A290x2)	2xVII	820	557	612	640	435	478	1126	600	530	260
AD5A700YSAFH--- (AD5A350x2)	2xVIII	1020	693	762	770	523	575	1346	600	530	325
AD5A740YSAFH--- (AD5A370x2)	2xVIII	1080	733	807	820	557	612	1346	600	530	325
AD5A880YSAFH--- (AD5A440x2)	2xVIII	1180	801	881	920	625	687	1346	600	530	325
AD5A1K0YSAFH--- (AD5A520x2)	2xVIII	1440	978	1075	1120	760	836	1346	600	530	325
AD5A1K1YSAFH--- (AD5A370x3)	3xVIII	1620	1100	1210	1230	835	919	1346	900	530	480
AD5A1K3YSAFH--- (AD5A440x3)	3xVIII	1770	1202	1322	1380	937	1031	1346	900	530	480
AD5A1K6YSAFH--- (AD5A520x3)	3xVIII	2160	1467	1613	1680	1141	1255	1346	900	530	480

AD5000 - AFE J - 525÷660 Vac ±10%

Model	Frame	Cl.1 - Overload: 110% for 1 min, every 5 min			Cl.2 - Overload: 150% for 1 min, every 5 min			Dimensions			
		IN1	Power dc @525V	Power dc @660V	IN2	Power dc @525V	Power dc @660V	Height	Width	Depth	Weight
		A	kW	kW	A	kW	kW	mm	mm	mm	Kg
AD5A260JSAFH---	VII	215	192	241	160	143	179	1068	290	526	120
AD5A280JSAFH---	VII	235	209	263	180	160	202	1068	290	526	120
AD5A500JSAFH---	VIII	340	303	381	265	236	297	1490	290	526	165
AD5A530JSAFH---	VIII	445	397	499	330	294	370	1490	290	526	165
AD5A650JSAFH---	VIII	540	481	605	405	361	454	1490	290	526	180
AD5A1K0JSAFH--- (AD5A500x2)	2xVIII	680	606	762	530	472	594	1524	600	530	335
AD5A1K1JSAFH--- (AD5A530x2)	2xVIII	890	793	997	660	588	739	1524	600	530	335
AD5A1K3JSAFH--- (AD5A650x2)	2xVIII	1080	962	1210	810	722	907	1524	600	530	360
AD5A1K5JSAFH--- (AD5A500x3)	3xVIII	1020	909	1143	795	708	891	1524	900	530	495
AD5A1K6JSAFH--- (AD5A530x3)	3xVIII	1335	1190	1496	990	882	1109	1524	900	530	495
AD5A2K0JSAFH--- (AD5A650x3)	3xVIII	1620	1444	1815	1215	1083	1361	1524	900	530	550

AFE identification code

AD5	A	520	Y	S	A	F	H
Product Series	**Cooling**	**Rated Power [kVA]**	**Grid Voltage**	**Control Board**	**Application**	**Internal DC Filter**	**Keypad**
AD5000	A=Air Cooling W=Water cooling (option)	See table with electical data	Y=380-440Vac Z=480Vac J=525-660Vac L=690Vac	S=System2	A=AFE P=Renewable	F=Installed	H=Installed N=Not installed

Option codes

N	N	N	00	NN
Communication Expansions	**Expansion Boards**	**Reserved**	**External Supply**	**Cart**
E= EtherNet/IP I= ProfiNet N=Not installed	A=Analog input expansion board N=Not installed	N	10=External inverter control supply 00=not installed	CN= Cart installed CR= Cart with output reactor installed NN = Not installed

Ratings and Dimensions - Power Modules

AD5000 Power Modules - F - 380÷480Vac ±10%

Model	Frame	Cl.0	Cl.1 - Overload: 110% for 1 min, every 5 min					Cl.2 - Overload: 150% for 1 min, every 5 min					Dimensions (*)			
		I_{N0}	I_{N1}	motor (4p)'@400V		motor (4p)'@460V		I_{N2}	motor (4p)'@400V		motor (4p)'@460V		Height	Width	Depth	Weight (*)
		A	A	kW	A	HP	A	A	kW	A	HP	A	mm	mm	mm	Kg
AD5A210FNNFN	VII	310	300	160	287	250	281	240	132		200	226	1354	290	519	160
AD5A260FNNFN	VII	395	370	200	356	300	333	285	160	239	200		1354	290	519	160
AD5A290FNNFN	VII	440	410	225	395	350	388	320	160	287	250	281	1354	290	519	160
AD5A350FNNFN	VIII	550	510	280	480	400	477	385	200	356	300	333	1776	290	519	200
AD5A370FNNFN	VIII	580	540	280	480	450	501	410	225	395	350	388	1776	290	519	200
AD5A440FNNFN	VIII	650	640	355	616	550	605	510	280	480	400	477	1776	290	519	200
AD5A480FNNFN	VIII	740	690	400	690	600	676	530	280	480	450	501	1776	290	519	230
AD5A520FNNFN	VIII	810	750	450	750	650	725	585	315	551	500	556	1776	290	519	250

Same ratings valid also for Y, G, Z versions.
(*) AC/AC version with cart
For the power modules used for AFE refer to the ratings on p.16-17

AD5000 Power Modules - K - 525÷690Vac +15%, -10%

Model	Frame	Cl.0	Cl.1 -Overload: 110% for 1 min, every 5 min					Cl.2 -Overload: 150% for 1 min, every 5 min					Dimensions (*)			
		I_{N0}	I_{N1}	motor (4p)'@690V		motor (4p)'@575V		I_{N2}	motor (4p)'@690V		motor (4p)'@575V		Height	Width	Depth	Weight (*)
		A	A	kW	A	HP	A	A	kW	A	HP	A	mm	mm	mm	Kg
AD5A260KNNFN	VII	230	215	200	206	200	184	160	132	139	150		1354	290	519	160
AD5A280KNNFN	VII	255	235	225	229	250	230	180	160	166	150		1354	290	519	160
AD5A440KNNFN	VIII	400	370	355	357	350	320	275	250	243	250	230	1776	290	519	200
AD5A500KNNFN	VIII	450	420	400	404	450	405	315	250	243	300	270	1776	290	519	200
AD5A530KNNFN	VIII	480	445	450	445	500	445	330	315		350		1776	290	519	230
AD5A650KNNFN	VIII	580	540	500	505	600	540	405	400	404	450	405	1776	290	519	250

Same ratings valid also for J, L versions.
(*) AC/AC version with cart
For the power modules used for AFE refer to the ratings on p.16-17

Power modules identification code

AD5	A	520	F	N	N	F
Product Series	Cooling	Rated Power [kVA]	Input Voltage	Control	Dynamic Breaking	Internal DC Filter
AD5000	A=Air cooling W=Water cooling	See table with electical data	F=380-480Vac Y=650Vdc G=500Vac Z=770Vdc K=525-690Vac J=975Vdc L=1100Vdc	N= Not installed	B=Installed N= Not installed	F=Installed N= Not installed

N	N	N	N	10	NN
Keypad	Communication Expansions	Expansion Boards	Reserved	External Supply	Cart
N= Not installed	N= Not installed	N= Not installed	N	10=External electronic boards supply	CN= Cart installed CR= Cart with output reactor installed N N= Not installed

Control box identification code

AD5	A	CNT	X	N	N
Product Series	Cooling	Control	Reserved	Control board	Application
AD5000	A=Air Cooling W=water Cooling			S= System2	N=Motor A= AFE

4	H	N	N	N	10
Power modules number	Keypad	Communication expansions	Expansion Boards	Safe Torque Off function	External Supply
4=Max 4 power modules 8=Max 8 power modules	H= installed	E=Ethernet/IP I=ProfiNet N=Not installed	A=Analog input expansion board E=Encoder expansion board R=Resolver expansion board N=Not installed	N=Not Installed T=Full STO	10=External electronic boards supply

Available accessories

Optic fiber kits	DC BUS sharing bars kits	Common AC bars kits	Kit remote keypad

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