



Series Description

The Altus AD700 series of frequency inverters caters to large applications requiring robustness, dynamic performance, static precision, and power. It features a wide power range from 0.5 to 250 HP and supply voltages from 220 to 380 Vac (single-phase and three-phase) with fully flexible input and output points. The quality and reliability of a machine or process are, in most cases, the result of precise and dynamic control of AC motors.

The AD 700 inverter line has the following main characteristics: Controle vetorial em malha fechada ou aberta;

- Adjustment of acceleration and deceleration ramps via local or remote parameterization;
- Detachable display for panel door installation;
- LED display allowing visualization of up to 2 simultaneous values, in Portuguese. Optional LCD version;
- Optional harmonic filters (RFI/RFO);
- Configuration software;
- PID control;
- Various configuration possibilities for digital and analog inputs and outputs;
- Additional 10/24 Vdc power supply for control devices;
- Automatic power source optimization function (solar/grid);
- Log of the last 30 faults;

General Characteristics of the Series

Power Supply	Input voltage	As per model: 1 x 220V (Single-phase 220Vac) 3 x 127Vac (Three-phase 220Vac) 3 x 220Vac (Three-phase 380Vac)
	Internal source	Switching power supply, available in 10Vdc and 24Vdc for control signals.
	Power, Input current, Output current	See tables for each model starting on page 3.
Motor	Type	Asynchronous motor, permanent magnet motor
	Connection distance	100 meters (If the cable length between the motor and the inverter exceeds the maximum limit, the following measures can be taken: Install an output reactor (most common solution); Reduce the switching frequency; Use a motor with a higher insulation class.)
Control	Control method	Open-loop or closed-loop vector control
	Starter command source	Control via operating panel, via I/O terminal, via communication.
	Frequency	0~1200Hz
	Speed	0rpm~60000rpm
	Starting torque	180%
	Acceleration	Controlled via HMI or remotely or by control signal.
	Overcurrent	150% up to 3600 seconds
	Carrier Frequency	1 a 16kHz
	Acceleration Time	0 to 30000s, configurable via parameter
	Deceleration Ramp	Controlled via HMI or remotely or by control signal.
	Deceleration Time	0 to 30000s, configurable via parameter
Communication	Modbus RS485 (Other forms of communication via Expansion Board from page 7)	
I/O	Power supply output	10V / 10mA 24V / 200mA
	Digital input	7 isolated inputs via optocoupler, including 1 high-frequency input (50kHz). Activation: 9-30Vdc
	Digital output	1. High frequency output (50kHz). 0~24V / 50mA.
	Analog input	2 independent selectable inputs 0~10V or 4~20mA.
	Analog output	2 independent selectable outputs 0~10V or 4~20mA.
	Relay output	2 relay outputs 250Vac/3A or 30Vdc/1A
Display and Keyboard	LED display	Display of 2 parameter variables, state or alarm.
	LCD display	Optional
	External display	Detachable display for panel door installation. Connection via RJ-45 connector.
	Copy parameters	Quick parameter replication through the use of the LED/LCD display.

	Key lock and function selection	Partial or complete key locking and defining the scope of action of certain keys to prevent accidental operation.
	Functions	Parameterization, motor start and stop, increment and decrement (acceleration, speed and frequency), variable monitoring and visualization of messages and faults.
Dimensions	See the dimensions table for each model starting on page 5.	
Environment	Operating temperature	-10 ~ +50°C
	Storage temperature	-20 ~ +60°C
	Relative humidity	0 ~ 95%, without condensation
	Altitude	Up to 1000m
	Vibration	Up to 5.9 m/s (0.6 g)
	Protection	IP20
Protections	Fault detection	Overcurrent during acceleration, overcurrent during deceleration, overcurrent during operation, overcurrent during idle, overvoltage during acceleration, overvoltage during deceleration, overvoltage during operation, overvoltage during idle, low voltage, inverter overload, motor overload, inverter overheating, motor short circuit, input phase failure, output phase failure, ground fault, phase-to-phase short circuit, ground short circuit, EEPROM error, communication error, loss of PID feedback signal, hardware current failure, load loss, motor overheating, motor speed, power supply phase imbalance.
Certificacates	 IEC/EN 61800-3: 2023 IEC/EN 61800-3-11: 2019 EN 61800-3-12: 2011/A1:2024 EN 61800-5-1: 2007+A1: 2017+A11: 2021	

CURRENT AND POWER SPECIFICATIONS FOR AD700 SERIES INVERTERS**Single-phase 220Vac** (-15% ~ +20%)

Model	Power (kW)	Power (CV)	Input Current (A)	Output Current (A)
AD700-2S-0.4GB	0,4	0,5	5,4	2,1
AD700-2S-0.75GB	0,75	1	8,2	3,8
AD700-2S-1.5GB	1,5	2	14	7
AD700-2S-2.2GB	2,2	3	23	9
AD700-2S-4.0GB	4,0	5	40	17
AD700-2S-5.5GB	5,5	7,5	60	25
AD700-2S-7.5GB	7,5	10	75	32

Three-phase 220Vac (-15% ~ +20%)

Model	Power (kW)	Power (CV)	Input Current (A)	Output Current (A)
AD700-2T-0.75GB	0,75	1	4,2	3,8
AD700-2T-1.5GB	1,5	2	7,7	7
AD700-2T-2.2GB	2,2	3	12	9
AD700-2T-4.0GB	4,0	5	19	17
AD700-2T-5.5GB	5,5	7,5	28	25
AD700-2T-7.5GB	7,5	10	35	32
AD700-2T-11GB	11	15	47	45
AD700-2T-15GB	15	20	65	60
AD700-2T-18.5GB	18,5	25	80	75
AD700-2T-22GB	22	30	97	90
AD700-2T-30GB	30	40	115	110
AD700-2T-37GB	37	50	166	152
AD700-2T-45G	45	60	190	176
AD700-2T-55G	55	75	214	210
AD700-2T-75G	75	100	307	304
AD700-2T-93G	93	125	389	377
AD700-2T-110G	110	150	435	426

Three-phase 380Vac (-15% ~ +20%)

Model	Power (kW)	Power (CV)	Input Current (A)	Output Current (A)
AD700-4T-0.75GB	0,75	1	3,4	2.1
AD700-4T-1.5GB	1,5	2	5	3,8
AD700-4T-2.2GB	2,2	3	5,8	5,1
AD700-4T-4.0GB	4	5	10,5	9
AD700-4T-5.5GB	5,5	7,5	14,6	13
AD700-4T-7.5GB	7,5	10	20,5	17
AD700-4T-11GB	11	15	26	25
AD700-4T-15GB	15	20	35	32
AD700-4T-18.5GB	18,5	25	38,5	37
AD700-4T-22GB	22	30	46,5	45
AD700-4T-30GB	30	40	62	60
AD700-4T-37GB	37	50	76	75
AD700-4T-45G	45	60	92	90
AD700-4T-55G	55	75	113	110
AD700-4T-75G	75	100	157	152
AD700-4T-93G	93	125	180	176
AD700-4T-110G	110	150	214	210
AD700-4T-132G	132	180	256	253
AD700-4T-160G	160	215	307	304
AD700-4T-185G	185	250	345	340

PHYSICAL DIMENSIONS OF AD700 SERIES INVERTERS**Single-phase 220Vac** (-15% ~ +20%)

Model	Width (mm)	Height (mm)	Depth (mm)
AD700-2S-0.4G	80	200	138
AD700-2S-0.75G	80	200	138
AD700-2S-1.5G	80	200	138
AD700-2S-2.2G	80	200	138
AD700-2S-4.0G	98	260	170
AD700-2S-5.5G	115	310	187
AD700-2S-7.5G	115	310	187

Three-phase 220Vac (-15% ~ +20%)

Model	Width (mm)	Height (mm)	Depth (mm)
AD700-2T-0.75GB	80	200	138
AD700-2T-1.5GB	80	200	138
AD700-2T-2.2GB	80	200	138
AD700-2T-4.0GB	98	260	170
AD700-2T-5.5GB	115	310	187
AD700-2T-7.5GB	115	310	187
AD700-2T-11GB	165	395	210
AD700-2T-15GB	220	440	220
AD700-2T-18.5GB	220	440	220
AD700-2T-22GB	145	550	255
AD700-2T-30GB	265	660	305
AD700-2T-37GB	265	660	305
AD700-2T-45G	300	785	305
AD700-2T-55G	300	785	305
AD700-2T-75G	340	835	325
AD700-2T-93G	410	915	370
AD700-2T-110G	410	915	370

Three-phase 380Vac (-15% ~ +20%)

Model	Width (mm)	Height (mm)	Depth (mm)
AD700-4T-0.75GB	80	200	138
AD700-4T-1.5GB	80	200	138
AD700-4T-2.2GB	80	200	138
AD700-4T-4.0GB	98	260	170
AD700-4T-5.5GB	98	260	170
AD700-4T-7.5GB	98	260	170
AD700-4T-11GB	115	310	187
AD700-4T-15GB	115	310	187
AD700-4T-18.5GB	165	395	210
AD700-4T-22GB	165	395	210
AD700-4T-30GB	220	440	220

AD700-4T-37GB	220	440	220
AD700-4T-45G	145	550	255
AD700-4T-55G	265	660	305
AD700-4T-75G	265	660	305
AD700-4T-93G	300	785	305
AD700-4T-110G	300	785	305
AD700-4T-132G	340	835	325
AD700-4T-160G	340	835	325
AD700-4T-185G	410	915	370

AD700 EXPANSION BOARDS

Model	Description	Function
AD700-IO	I/O expansion board	Digital multi-function input terminal, open collector switch terminal, temperature detection (PT100/PT1000)
AD700-PN	Profinet bus expansion board	Bus module and communication protocol
AD700-DP	Profibus bus expansion board	Bus module and communication protocol
AD700-TCP	Modbus TCP bus expansion board	Bus module and communication protocol
AD700-PLC	PLC expansion board	Multi-channel programmable relay output that supports Ladder logic and mathematical blocks.

Maintenannce

Periodic maintenance consists of the following procedures:

- Cleaning and dusting the unit
- Clearing ventilation openings
- Checking the rail attachment
- Tightening the electrical connection screws