



AIRTECHNIC

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Air-Conditioning & Ventilation Components & Systems

● **AIRTECHNIC 500 & 600** **MINI AC DRIVES**



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AIRTECHNIC 500

Mini AC Drives

The AIRTECHNIC 500 series adopting V/Hz control technology are applicable to general purpose applications.



POWER RATINGS

1 x 220-240 V 0.4 - 2.2 kW

3 x 220-240 V 0.4 - 2.2 kW

3 x 380-480 V 0.75 - 3.7 kW

Small in Size
Powerful in Performance

Promoted V/Hz

PID

FDT

Multi-step Freq.

ModBus

Hot Pluggable Control Panel

Stall Protections

Braking Chopper Inbuilt

Wall & DIN-Rail mounting

.....

Start Torque @0.5Hz

180%

Overload Capability

200%

Speed accuracy \pm

0.2%

Ambient Temp $^{\circ}$ C

50

Speed Regulation

1:100

Torque Response ms

10



FEATURES

Reliable

- Ambient temperature 50° C without derating
- Thickened conformal coating
- Optimized cooling system
- Less need for cooling or oversizing
- Resistant to harsh surroundings
- Lower temperature rise

User-friendly

- Parameter copy
- Detachable control panel
- One platform numerous versions
- Save time for commissioning
- Easy for remote control
- Save stocks

Intelligent

- Warning systems
- Multiple frequency references
- All-sided protection
- Warning before stop
- Powerful in intelligent applications
- Long lifetime & less maintenance cost

APPLICATIONS

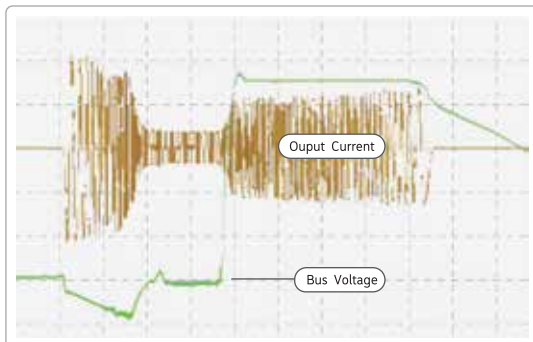
Conveyors, centrifuges, food processing machinery, packaging machinery, pumps, fans, etc.



Hot pluggable display with potentiometer



Minimum penetration of dust



Stall protections

Overvoltage and undervoltage stall protections are both procurable at 500, which pledges the operation continuous without trip at ramp down of the large-inertia load, or sudden power loss.



ModBus

| | |
|---------|-----------------------------|
| Rate | 4800/9600/19200/38400/57600 |
| Formats | RTU, ASCII |

Digital output

| | |
|------------------------------------|--------|
| Programmable digital/pulse outputs | 1 |
| Voltage level | 0-24V |
| Current level | 0-50mA |

Relay output

| | |
|----------------------------|---|
| Programmable relay outputs | 1 |
|----------------------------|---|

Remote control panel

| | |
|----------------------|----|
| Maximum cable length | 5m |
|----------------------|----|

TERMINAL

| | | | | | |
|---------------|----|----------------|----|----------------------|----|
| Analog Input | ×1 | Analog Output | ×1 | Relay Output | ×1 |
| Digital Input | ×4 | Digital Output | ×1 | Communication Port*1 | ×1 |

*1 RS485/ModBus ONLY 4800/9600/19200/38400/57600/115200bps Maximum distance - 500m

MODEL

| Model*2 | Power Rating (kW) | Rated Output Current (Amps) | Rated Input Current (Amps)*3 | Applicable Motor (kW) |
|-------------|-------------------|-----------------------------|------------------------------|-----------------------|
| 500-2T0.4B | 0.4 | 2.6 | 3.2/5.5 | 0.4 |
| 500-2T0.75B | 0.75 | 4.5 | 6.3/9.2 | 0.75 |
| 500-2T1.5B | 1.5 | 7.5 | 9/14.5 | 1.5 |
| 500-2T2.2B | 2.2 | 9.6 | 15/23 | 2.2 |
| 500-4T0.75B | 0.75 | 2.5 | 3.5 | 0.75 |
| 500-4T1.5B | 1.5 | 3.8 | 6.2 | 1.5 |
| 500-4T2.2B | 2.2 | 5.5 | 9.2 | 2.2 |
| 500-4T3.7B | 3.7 | 9.0 | 14.9 | 3.7 |

*2: 2T stands for triphase 220V or single phase 200V, 4T stands for triphase 400V *3: A/B, A tells triphase input current, B tells single phase input current.

DIMENSIONS

Unit, mm



Mounting dimensions 59 × 168 × 154



Mounting dimensions 82 × 172 × 175



AIRTECHNIC 600

General Purpose AC Drives

The AIRTECHNIC 600 series are the drives that cover general purpose applications when they are requiring V/Hz and speed sensor-less vector control.



POWER RATINGS

1 x 220-240 V 0.4 - 2.2 kW 3 x 220-240 V 0.4 - 110 kW 3 x 380-480 V 0.75 - 1200 kW 3 x 525-690 V 11 - 1200 kW

Versatile & Multifunctional

Promoted V/Hz

SVC1

SVC2

Multi-step Freq.

ModBus, CAN, CANopen & ProfiBus

Detachable Control Panel

I/O options

Frequency Binding

Parameter Copy & Backup

Flying Start

Precise autotune

Parameter Displayed & Hidden

Master & Auxiliary command & switchover

PID

FDT

S-curve

Simple PLC

2 Motor Switchover

Wobble Frequency Control

Fixed Length Control

Droop Control

Skip Frequency

Count Function

Preeminent Field-weakening Control

V/Hz Separated Control

Common DC Bus

Over Excitation Brake

Mechanical Brake

Restart Upon Power Loss

Cycle-By-Cycle Current Limit

Motor Thermal Protection

Stall Protections

.....

FEATURES

Reliable

Ambient temperature 45° C without derating
Thickened conformal coating
Optimized cooling system

Less need for cooling or oversizing
Resistant to harsh surroundings
Lower temperature rise

User-friendly

Parameter copy
Detachable control panel
One platform numerous versions

Save time for Commissioning
Easy for remote control
Save stocks

Intelligent

Warning systems
Multiple frequency references
All-sided protection
Online autotuning
PC-based monitoring software
Extensible features/parameter blocks

Warning before stop
Powerful in intelligent applications
Long lifetime & less maintenance cost
Intelligent response to delicate variation
Easy to operate
Make the drives "just for you"

APPLICATIONS

Textiles, plastics, ceramics, mining, conveyors, centrifuges, mills, saws, food processing machinery, packaging machinery, elevators and escalators, lifts, air compressors, central air conditioning, pharmaceuticals, pumps, fans, etc.



Hot pluggable and detachable control panel



Abundant hot-plugged options

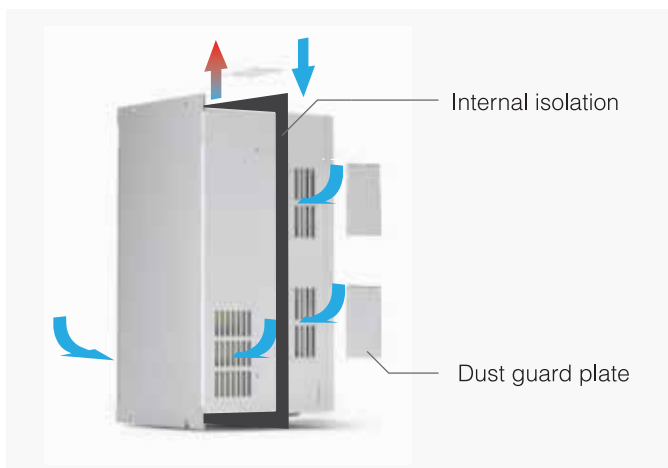


I/O Expansion

Three control modes

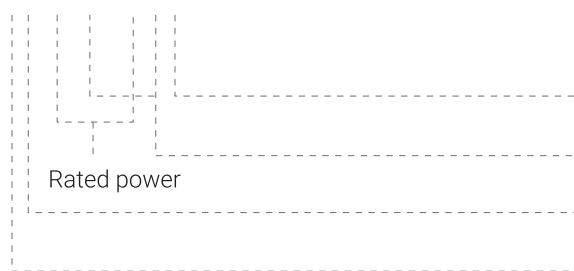
| Control mode | V/Hz | SVC1 | SVC2 |
|------------------------|-------|-------|--------------|
| Speed adjustable range | 1:100 | 1:100 | 1:200 |
| Speed accuracy | ±0.5% | ±0.2% | ±0.2% |
| Speed ripple | / | ±0.3% | ±0.3% |

Intelligent heat dissipation



MODEL

4T7.5G/11LB



B: With built-in braking chopper

L: Light duty G: Heavy duty

T: Tri-phase S: Single phase

2: 200V level 4: 400V level 6: 690V level

| Model | Power Rating (kW) | Rated Output Current (Amps) | Rated Input Current (Amps)*4 | Applicable Motor (kW) | Model | Power Rating (kW) | Rated Output Current (Amps) | Rated Input Current (Amps)*3 | Applicable Motor (kW) |
|---------------|-------------------|-----------------------------|------------------------------|-----------------------|----------------|-------------------|-----------------------------|------------------------------|-----------------------|
| 2T0.4B | 0.4 | 2.6 | 3.2/5.5 | 0.4 | 4T1.5G/2.2LB | H 1.5 | 3.8 | 5.0 | 1.5 |
| 2T0.75B | 0.75 | 4.5 | 6.3/9.2 | 0.75 | | L 2.2 | 4.8 | 5.5 | 2.2 |
| 2T1.5B | 1.5 | 7.5 | 9/14.5 | 1.5 | 4T2.2G/3.7LB | H 2.2 | 5.5 | 6.0 | 2.2 |
| 2T2.2B | 2.2 | 9.6 | 15/23 | 2.2 | | L 3.7 | 8.0 | 10 | 3.7 |
| 2T3.7B | 3.7 | 16.5 | 20.5 | 37 | 4T3.7G/5.5LB | H 3.7 | 9.0 | 10.5 | 3.7 |
| 2T5.5B | 5.5 | 24 | 29 | 5.5 | | L 5.5 | 11 | 14 | 5.5 |
| 2T7.5B | 7.5 | 30 | 35 | 7.5 | 4T5.5G/7.5LB | H 5.5 | 13 | 14.6 | 5.5 |
| 2T11(B) | 11 | 45 | 50 | 11 | | L 7.5 | 16 | 20 | 7.5 |
| 2T15(B) | 15 | 60 | 65 | 15 | 4T7.5G/11LB | H 7.5 | 17 | 20.5 | 7.5 |
| 2T18.5(B) | 18.5 | 73 | 80 | 18.5 | | L 11 | 21 | 25 | 11 |
| 2T22(B) | 22 | 91 | 95 | 22 | 4T11G/15LB | H 11 | 24 | 29 | 11 |
| 2T30(B) | 30 | 112 | 118 | 30 | | L 15 | 30 | 35 | 15 |
| 2T37(B) | 37 | 144 | 150 | 37 | 4T15G/18.5LB | H 15 | 30 | 35 | 15 |
| 2T45 | 45 | 176 | 160 | 45 | | L 18.5 | 36 | 40 | 18.5 |
| 2T55 | 55 | 210 | 192 | 55 | 4T18.5G/22L(B) | H 18.5 | 39 | 44 | 18.5 |
| 2T75 | 75 | 288 | 266 | 75 | | L 22 | 45 | 50 | 22 |
| 2T90 | 90 | 350 | 326 | 90 | 4T22G/30L(B) | H 22 | 45 | 50 | 22 |
| 2T110 | 110 | 430 | 403 | 110 | | L 30 | 56 | 60 | 30 |
| 2T | | | | | 4T30G/37L(B) | H 30 | 60 | 65 | 30 |
| | | | | | | L 37 | 72 | 76 | 37 |
| 4T0.75G/1.5LB | H 0.75 | 2.5 | 3.5 | 0.75 | 4T37G/45L(B) | H 37 | 75 | 80 | 37 |
| | L 1.5 | 3.8 | 5.0 | 1.5 | | L 45 | 91 | 95 | 45 |
| 4T | | | | | | | | | |

Pulse input

| | |
|---------------------------|-------------|
| Programmable pulse inputs | 1 |
| Frequency range | 0.1Hz-50kHz |
| Voltage level | 10-30V |

ModBus

| | |
|---------|---------------------------------------|
| Rate | 4800/9600/19200/38400/57600/115200bps |
| Formats | RTU, ASCII |

Relay output

| | |
|----------------------------|---------------------------|
| Programmable relay outputs | 1 (local), 3 (extensible) |
|----------------------------|---------------------------|

Digital output

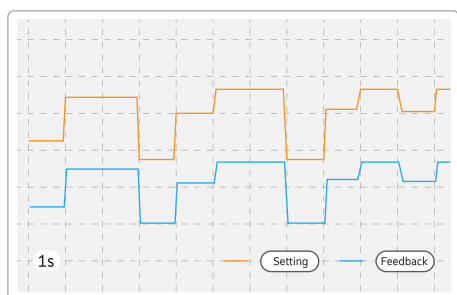
| | |
|------------------------------------|---------|
| Programmable digital/pulse outputs | 2/1 |
| Voltage level | 0-24V |
| Current level | 0-50mA |
| Pulse frequency | 0-50kHz |

Analog output

| | |
|-----------------------------|---------------------------|
| Programmable analog outputs | 1 (local), 3 (extensible) |
| Voltage level | 0-10V |
| Current level | 0-20mA |

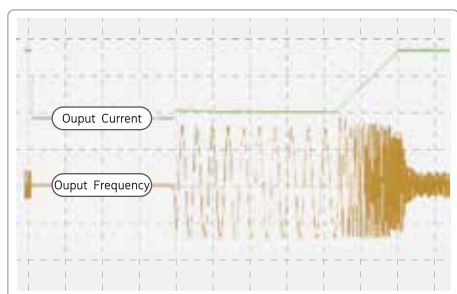
Remote control panel

| | |
|----------------------|-----|
| Maximum cable length | 15m |
|----------------------|-----|



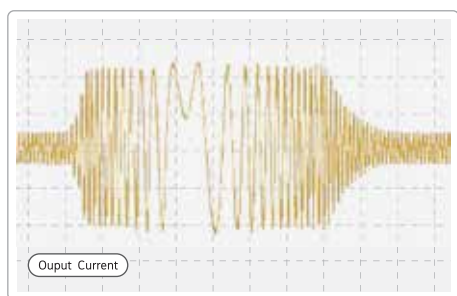
Quick dynamic response

Torque response time of 600 drives is as short as 10ms at SVC1 or SVC2 mode.



Cycle-By-Cycle current limit

The 600 drives are equipped with the function of cycle-by-cycle current limit. The drive knows how to adjust its output frequency and current suitably to avoid trip when there is a saltation at the load.

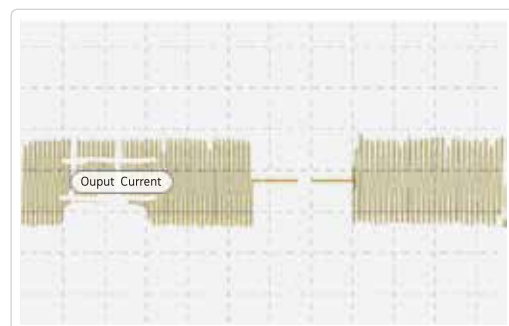


Short dead time between forward and reverse

Even at the setting of deceleration and acceleration time 0.1 second, a 600 drive can smoothly complete the transition between forward and reverse, popular at applications requiring frequent and fast switchover between forward and reverse.

Flying start supported

Two kinds of flying start selection are programmable for the smooth restart of a rotary motor. One of the selections is based on software evaluation only, while the other one should be mated with an option board for quite smooth restart without any jerk.





Management System
ISO 14001:2015



ISO 9001:2015

ISO 14001:2015

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