



VISTA[®] V7A INVERTERS 1/8 - 5 HP





- Sensorless Vector Standard
- V/Hz Mode Programmable
- 2 Wire and 3 Wire Logic for Forward / Stop / Reverse
 - Operate from Keypad or Remote Operators
 - 2 Accel and 2 Decel adjustments selectable
 - 7 Multi-function Digital Inputs
 - Electronic Motor Overload protection
 - Speed Reference 0 -10 VDC, 0-20 mA, 4-20 mA, Keypad Potentiometer, Keypad Digital, Pulse Follower or Up/Down Push buttons
- Independent stall prevention for Accel, Run and Decel
 - DC injection braking for Start and Stop selectable

VECTOR CONTROL

The V7A can be operated in either sensorless vector or V/Hz mode to allow you to match the application requirements. Our sensorless vector control affords superior torque and speed regulation characteristics. For pure simplicity or for multi-motor applications, you can always program the V7A for V/Hz.

COMMUNICATIONS

Many users and OEM's have already recognized the benefits of serial communications with motor controllers. The lower cost of engineering and installation combined with enhanced flexibility make this an attractive low cost alternative to control wiring. Many products offer serial communications only as an option. The V7A comes with RS-485/422 capability right out of the box. No need to worry about special connectors or cables because the wiring is done directly on the terminal strip.

KEYPAD WITH MEMORY

The V7A offers many sophisticated functions not normally available in other micro-inverters. For example, the keypad can be used as a "copy unit" to conveniently download parameters into multiple drives. It uses Flash ROM to support custom software via an RS-232 port. The keypad can be remote wired with a simple telephone cable. The cooling fan can be set to run only during inverter operation to maximize MTBF. These are but a few examples that differentiate the V7A.

Specifications

Control Method	Sensorless (Open Loop) Vector or V/Hz
Input Voltage Rating	200/230 VAC; 380/460 VAC; 50/60 Hz; 3-phase; 1-phase available with 30% derate
Input Voltage Tolerance	+10%, - 15%
Frequency Control Range	0.1 - 400 Hz
Frequency Accuracy	<i>Digital</i> : ± 0.01% (-10 to + 50°C) <i>Analog</i> : ± 0.5% (25 ± 10°C)
Speed Commands	0 to 10 Vdc, 0-20 mA, 4 - 20 mA, pulse reference, serial communications, cover-mounted speed pot, Digital Keypad, Up/Down Push buttons
Overload Capacity	150% for 1 minute
Braking	DC Injection or Dynamic-Braking (Transistor is built-in)
Protective Functions	Motor Overload, Peak Overcurrent, Inverter Overload, Ground Fault, Over Temperature, Fan Loss, Stall (Trip) Prevention
Programmable I/O	7 Digital Inputs; 3 Digital Outputs; 1 Analog Output
Serial Communications	RS-485/422, Modbus, 19.2 kBPS, terminal strip wiring

FUNCTION DISPLAY LED'S

LED switches to another function each time (DSPL) is pressed. The displayed data can be changed.

DSPL KEY

Switches between functions LED's

DATA/ENTER KEY

Press to enter the constant data. (Display the constant data when selecting constant no. by (PRGM) LED.)

NUMBER CHANGE KEYS

Increase or decrease constant no./data value.

▲: Increment key ▼: Decrement key



FREQUENCY SETTING CONTROL

(Potentiometer) Changes frequency setting.

RUN KEY with STATUS INDICATOR

Press to run the motor.

STOP/RESET KEY

Press to stop the motor.

(Press to reset faults.)

FUNCTION LED'S

FREF: Frequency reference setting/monitoring

FOUT: Output frequency monitor

IOUT: Output current monitor

MNTR: Multi-function monitor

F/R: Operator RUN command FWD/REV selection

LO/RE: Local/Remote selection

PRGM: Constant no./data

Model Ratings & Dimensions

Stock Number	Rated HP	Rated KVA	Input		Output		Size (in.)			Model Number V7A-	Wt. (lbs.)
			Volts	Amps	Amps	Carrier	H	W	D		
V7A23D13-1CT	0.13	0.3	230	0.9	0.8	10KHz	5.8	2.7	3.3	20P1	1.3
V7A23D25-1CT	0.25	0.6	230	1.8	1.6	10KHz	5.8	2.7	3.3	20P2	1.3
V7A23D75-1CT	0.75	1.1	230	3.6	3.0	10KHz	5.8	2.7	5.4	20P4	2.0
V7A231D0-1CT	1	1.9	230	6.0	5.0	10KHz	5.8	4.2	5.5	20P7	2.4
V7A232D0-1CT	2	3.0	230	9.6	8.0	7.5KHz	5.8	4.2	5.5	21P5	3.1
V7A233D0-1CT	3	4.2	230	13.2	11.0	7.5KHz	5.8	4.2	5.5	22P2	3.7
V7A235D0-1CT	5	6.7	230	21.0	17.5	7.5KHz	5.8	5.5	6.0	23P7	5.3
V7A43D50-1CT	0.5	0.9	460	1.3	1.2	7.5KHz	5.8	4.2	3.9	40P2	2.2
V7A431D0-1CT	1	1.4	460	2.0	1.8	7.5KHz	5.8	4.2	4.7	40P4	2.4
V7A432D0-1CT	2	2.6	460	3.8	3.4	7.5KHz	5.8	4.2	5.8	40P7	3.3
V7A433D0-1CT	3	3.7	460	5.3	4.8	7.5KHz	5.8	4.2	6.5	41P5	3.3
V7A435D0-1CT	5	7.0	460	9.5	8.6	7.5KHz	5.8	5.5	6.0	43P7	5.3

Stock Number Definition: **V 7 A 2 3 D 1 3 - 1 C T**

V7A Vector Series

Voltage Rating

23: 230 VAC, 3PH

43: 460 VAC, 3PH

Nominal HP Rating

D13: .13HP

1D0: 1.0 HP

1D5: 1.5 HP

Brake Transistor

T: Standard

0: No Transistor

Torque Rating

C: Constant Torque

V: Variable Torque

Enclosure Type

0: Chassis Mounting

1: NEMA 1

STANDARD CONNECTIONS

V
7
A
V
E
C
T
O
R
S
E
R
I
E
S

