



**Series 18H  
Washdown Vector**



**3/4 thru 15 Hp  
3/4 thru 15 Hp**

**230 VAC  
460 VAC**

**3 Phase - 50/60 Hz  
3 Phase - 50/60 Hz**

**Applications:** Constant torque or constant horsepower applications. New installations, replacements and original equipment manufacturers. (OEM). Suitable for frequent washdowns.

**Features:** NEMA 4X enclosure as standard. Output frequency 0-500Hz with peak overload capability of 200%. Automatic tuning to motor and full rated torque down to zero speed. Digital speed or torque control. Built in two and three input PID process control loop.

**Design Specifications**

- Process follower  $\pm 5$ VDC  
0-5 VDC,  $\pm 10$ VDC 0-10 VDC,  
4-20mA, digital via keypad or  
optional RS232/485
- Linear or S-curve deceleration
- 15 preset speeds
- 2 assignable analog outputs
- 2 assignable opto outputs
- 2 assignable relay outputs

**Operator Keypad**

- Forward/Reverse command
- Motor RUN and JOG
- Local/Remote key
- Stop command
- 32 character display
- Remote mount to 100 feet (60m)  
from control
- NEMA 4X enclosure when  
mounted on panel

**Environmental and  
Operating Conditions**

- Input voltage  
Three phase 200-240 VAC  $\pm 10\%$   
Three phase 378-480 VAC  $\pm 10\%$
- Input frequency  
50 or 60Hz  $\pm 5\%$
- Service factor - 1.0
- Duty - continuous
- Humidity - 100% max RH
- Altitude - 3300 feet (1000m)  
max without derate

**Protective Features**

- Adjustable current limit
- Isolated control circuitry
- Digital display for fault conditions
- Selectable automatic restart at  
momentary power loss
- DC bus charge indicator
- Cause of last 31 trip retained  
in memory

<b>Output Ratings</b>	Overload Capacity	150% for 60 seconds, 170-200% for 3 seconds for constant torque 115% for 60 seconds for variable torque
	Frequency	0-500 Hz
	Voltage	0-maximum input voltage (RMS)
<b>Input Ratings</b>	Frequency	50 or 60 Hz $\pm 5\%$
	Voltage	180 - 264 VAC; 340 - 528 VAC
	Phase	Three phase (or single phase with derate)
	Impedance	3% minimum required for Size A, B
<b>Control Spec</b>	Control Method	Microprocessor controlled PWM output
	PWM Frequency	Adjustable 1-5kHz STD, 1-16 kHz quiet
	Speed Setting	$\pm 5$ VDC, 0-5 VDC $\pm 10$ VDC, 0-10 VDC, 4-20 mA; digital via keypad, RS232/485
	Accel/Decel	0-3600 sec.
	Motor Matching	Automatic tuning to motor with manual override
<b>Motor Feedback</b>	Feedback Type	Incremental encoder coupled to motor shaft
	Pulses/Rev	60-15,000 selectable, 1024 standard
	Voltage Output	2 channel in quadrature, 5 VDC, differential
	Marker Pulse	Required for position orientation
	Power Input	5 VDC, 300 mA maximum
	Max. Frequency	1 MHz
	Positioning	Optional buffered encoder pulse train output for position loop controller
<b>Protective Functions</b>	Vector Trip	Missing control power, over current, over voltage, under voltage, motor over speed Over temperature (motor or control), output shorted or grounded, motor overload
	External Output	LED indicator for trip conditions, 4 assignable logic outputs 2 assignable analog outputs 0-5 VDC
	Short Circuit	Phase to phase, phase to ground
<b>LCD Display</b>	Running	Output frequency, motor RPM; output current, voltage (selectable)
	Setting	Parameter values for setup and review
	Trip	Separate message for each trip, last 31 trips retained in memory
<b>Ambient Conditions</b>	Temperature	-10 to 40°C for UL listing
	Cooling	Forced air included when required

**OPTIONS:** See pages 275-276 for optional Expansion Boards including RS-232, RS-485. See page 266 for enclosure Dimensions  
See pages 273-274 for optional Dynamic Braking Assemblies.

Farm Duty  
Motors

Definite Purpose  
Motors

Unit Handling

Brake Motors

200 & 575 Volt  
Motors

IEC Frame  
Motors

50 Hertz  
Motors

Inverter/Vector  
Motors & Controls

DC Motors  
and Controls

Soft Starters &  
Dynamic Brakes