

### Sensorless Motor Control and Tuning

#### Device Configuration

Driver Utilized: **DRV8350H Sensorless**

MODE: 6x PWM (Connect Mod)

DRIVER ENABLE:

GAIN: 10 V/V (Pin has 47k Pul)

IDRIVE	VDS
100/200 mA (Tied to GND)	0.06 V (Tied to GND)
150/300 mA (75 kΩ ± 5% tied to GND)	0.2 V (75 kΩ ± 5% tied to GND)
300/600 mA (High Z)	0.4 V (High Z)

#### Status Report

FAULT STATUS INDICATOR:

Electrical Speed: 0 Hz

Current Motor Speed: 0 RPM

#### Motor Parameters

Motor Rated Voltage: 20 Volts

Motor Rated Speed: 18000 RPM

Motor Poles: 2

Motor Under Rating: 40 %

MEASURE BEMF THRESHOLD:

BEMF Threshold: 10000 counts

Menu

MOTOR ENABLE

Set Motor Speed   
 0 100 0 %

Motor Direction REVERSE

PWM Switching Frequency  kHz

Motor Initial Position Mode   
Rotor Align ▼

**System Parameter Control**

Min Off Duty  %

Min On Duty  %

Maximum Duty Cycle  %

Ramp Rate Delay  PWM Cycles

**Fault Handling Control**

Under Voltage Limit  V

Over Voltage Limit  V

Stall Detect Rev Threshold  Revs

Stall Detect Timer Threshold  ms

Auto Fault Recovery Time  ms

Motor Phase Current Limit  A

**Align Control**

Align Sector

Align Wait Time  PWM

Menu

**Fault Handling Control**

Under Voltage Limit	11	V	Over Voltage Limit	67	V	Stall Detect Rev Threshold	1	Revs
Stall Detect Timer Threshold	30	ms	Auto Fault Recovery Time	6000	ms	Motor Phase Current Limit	20.7	A

**Align Control**

Align Sector	3	Align Wait Time	1	PWM Cycles
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**Open Loop Acceleration Control**

Acceleration Rate	15	Hz/s	Acceleration Stop	450	mHz	Acceleration Velocity Init	1	mHz
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**Closed Loop Control**

Commutation Blank Time	15	PWM Cycles	PWM Blank Counts	50	Clock Cycles
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