

Kit No. Date: / /

USE TEMPLATE
01234
56789
MISFILL -1 PT



LABORATORY 10

Please print this sheet prior to coming to laboratory. Complete the pre-laboratory tasks in your lab notebook. Complete the lab tasks in **both** your lab notebook and this submission sheet.

1 Pre-laboratory Verification

<div>4E .. 59</div>	<div>4E .. 60</div>	<div>4E .. 61</div>
<div>4E .. 62</div>	<div>4E .. 63</div>	<div>4E .. 64</div>

2 Laboratory Verification

<div>4E .. 65</div>

3 Deliverables

1. Attach a printout of the **bldc_controller.vhd** VHDL code.
2. Attach a printout of the block diagram.
3. Assuming that the motor spins at 7,200 RPM when the period of one full rotation is 231.17 μ s, calculate the approximate speed of the motor if the period is 12 ms (six states of 2 ms each). Show your calculations or dimensional analysis.

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4. How does the pitch of the motor change as you connect more signal leads? Explain why.

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5. Can the motor be started from a stopped state with all three signal leads connected? Why or why not? Provide a detailed explanation.

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