

AME30358 – Score Sheet

M12 – PLC Thermostat

Name(s): _____

For more details on any of the items below, please refer to the lab handout.

The following items will be *demonstrated* to the lab instructor during the allotted lab time. Credit will not be given for portions completed outside of lab.

Item and Description	Points Awarded	Possible Points
Subsystem A: PLC The Opta PLC and 12VDC supply are correctly mounted to the DIN rail. The PLC is correctly running the User Button example.		5
Subsystem B: Blower Fan Relay The blower fan is correctly wired up to the PLC relay and terminal blocks. It cycles ON and OFF every 3 seconds.		5
Subsystem C: Thermistor The correct values of temperature are printed to the serial monitor. The voltage divider is correctly wired up using the DIN rail terminal blocks.		5
Design Challenge 1 – Thermostat The system correctly cycles between a high setpoint of 325K and low setpoint of 323K. Everything is wired up correctly via the terminal blocks on the DIN rail.		7
Design Challenge 2 – User Control The set-point can be adjusted using a potentiometer.		4
Design Challenge 3 – Arduino PLC IDE The student is able to upload a program using the Arduino PLC IDE software and run it on the Opta PLC.		2
Clean-up The students returned the lab bench to its initial state.		2
TOTAL		30