



UP/DOWN SETTER

MODEL L778

Before installing this module, a **TECHNICALLY QUALIFIED INDIVIDUAL** who is familiar with this type of equipment and the hazards involved, should **READ** this **ENTIRE INSTRUCTION SHEET**.

INTRODUCTION

The Up/Down Setter module, Model L778, is used in combination with remote operators to control motor speed by use of UP, DOWN and HALT commands.

Acceleration/deceleration time range of 3-30, 12-120, 35-350 or 45-450 seconds can be selected by switch settings inside the module. Acceleration and deceleration are separately adjustable.

RECEIVING

All equipment is tested against defect at the factory. Report any damages or shortages evident when the equipment is received immediately to the commercial carrier who transported the equipment. Assistance, if required, is available from the nearest MagneTek Drives & Systems Office.

INSTALLATION

WARNING

HAZARDOUS VOLTAGE CAN CAUSE SEVERE INJURY OR DEATH.

LOCK ALL POWER SOURCES FEEDING DRIVE IN "OFF" POSITION.

1. Disconnect all electrical power to drive.
2. Remove drive front cover.
3. Verify that voltage has been disconnected by using a voltmeter to check for voltage at incoming power terminals.

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Table 1. Specifications and Characteristics of Up/Down Setter

AC Power Supply		220 VAC (180 to 242 VAC), 50/60HZ across terminals 2 and 4. 200 VAC (170 to 220 VAC), 50/60HZ across terminals 3 and 4.	
AC Power Supply Capacity		Approx. 7VA	
Input Characteristics	Input Commands	UP: terminal 9 DOWN: terminal 11 HALT: terminal 12	
	Input Command Voltage	24V ±30%	
	Rated Input Command Current	10mA	
	Command Supply Voltage	24V ±30% unregulated from terminal 8	
	Allowable Command Output Current	50mA max at terminal 8	
Output Characteristics	Rated Output Voltage	+10V at terminals 14 and 15 (ref. common at terminal 10 or 13)	
	Rated Output Current	2.5mA at terminals 14 and 15	
	Rated Min. Load Resistance	4K ohms at terminals 14 and 15	
Accel (Decel) Time Range *		1SW-1 (or -3)	1SW-2 (or -4)
		OFF	OFF
		ON	OFF
		OFF	ON
		ON	ON
		3 to 30 s (factory set)	
		12 to 120 s	
		35 to 350 s	
		45 to 450 s	
Quick Stop (HALT) Time		Approximately 20 ms	
Accel/Decel Time Variation With Temperature		±5%/35°C	
Output Voltage Resolution		0.1%	
Zero-point Offset Voltage		±10 mV max	
Zero-point Temperature Drift		±5 mV/35°C	
Operation Temperature		-10 to +55°C	
Storage Temperature		-40 to +85°C	

* Accel/Decel time can be individually set. It can be adjusted within the range of 3 to 30 seconds (1SW-1 to 4 set to OFF - factory setting).

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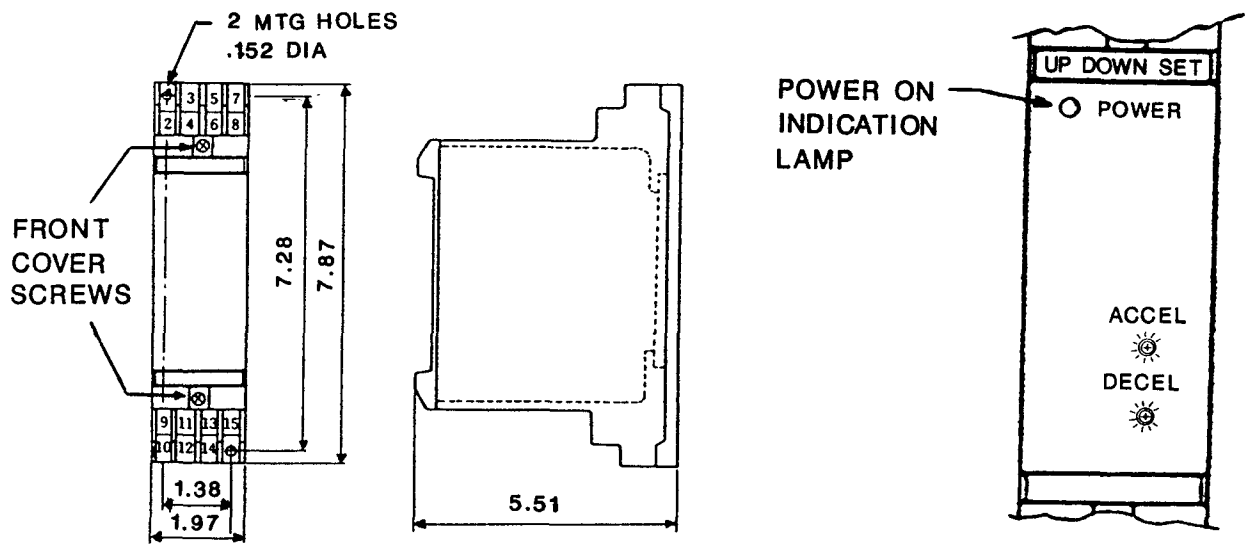


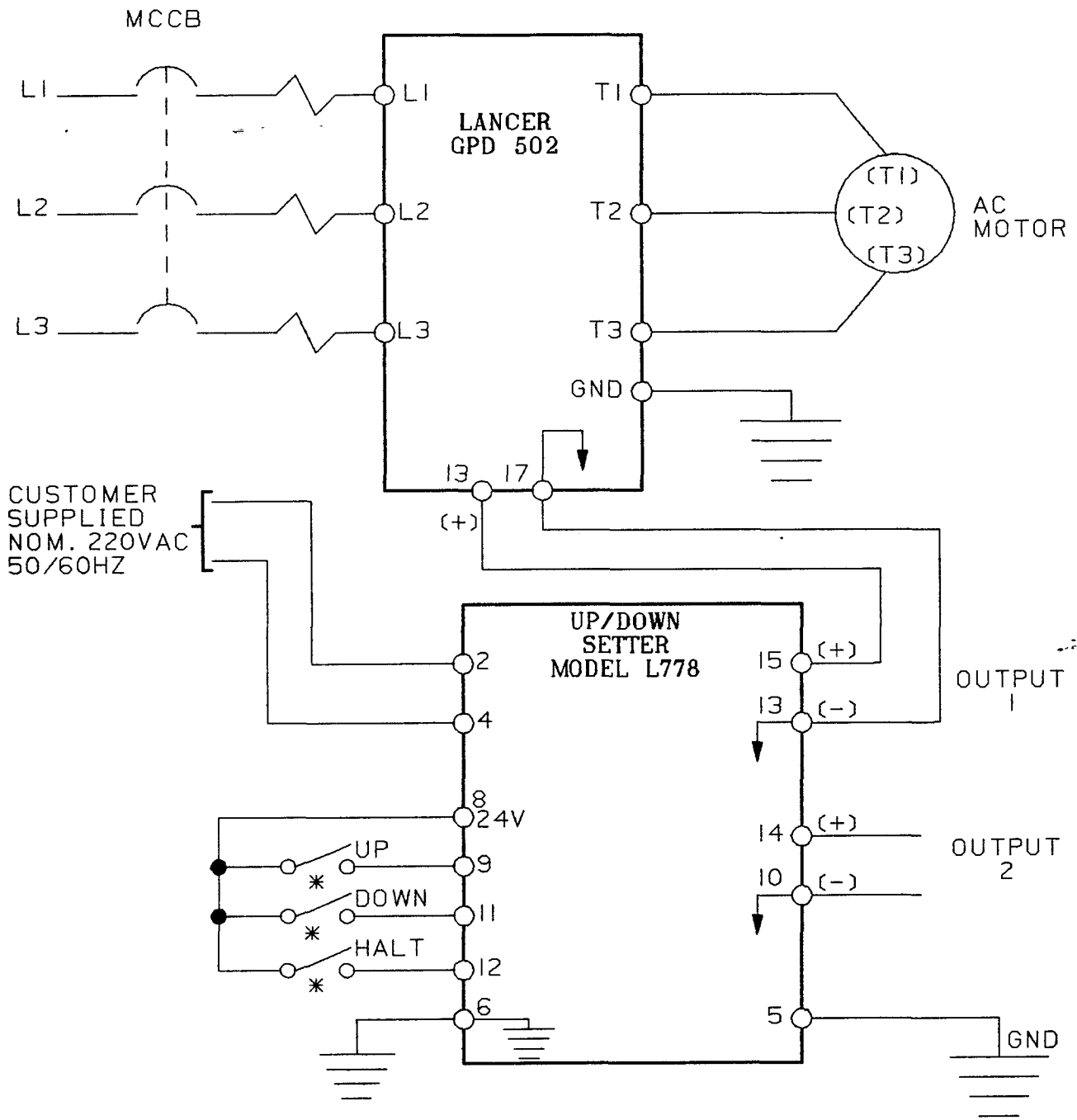
Figure 1. Up/Down Setter Module

IMPORTANT

This instruction sheet describes direct interconnection with Lancer GPD drives. Other applications are possible; interconnection should be modified as necessary for the specific installation.

4. Mount the Up/Down Setter module in the desired location (see dimensions in Figure 1). Then make connections according to the appropriate connection diagram, Figure 2 or 3.

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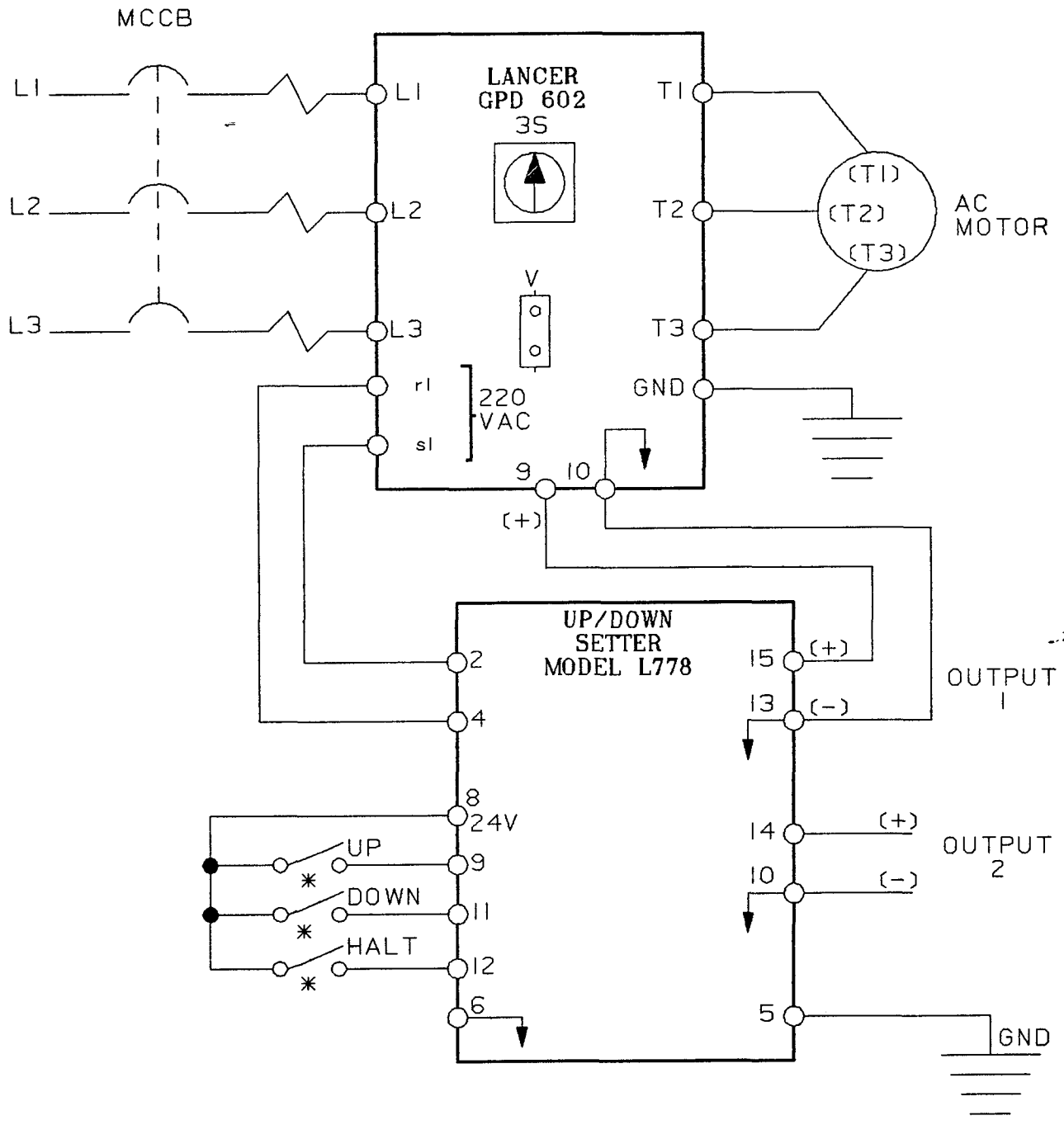


* INDICATES NOT SUPPLIED BY
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Figure 2. Connection of Up/Down Setter With GPD 502

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Figure 3. Connection of Up/Down Setter With GPD 602

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5. Up/Down Counter Setup Requirements

Loosen the module front cover screws, and pull the front cover/printed circuit board assembly partially out of the module casing. Refer to Figure 4, Figure 5 and Table 1. Set 1SW-1 and -2 to select desired ACCEL time range, and set 1SW-3 and -4 to select desired DECEL time range. Then close the module and secure the front cover.

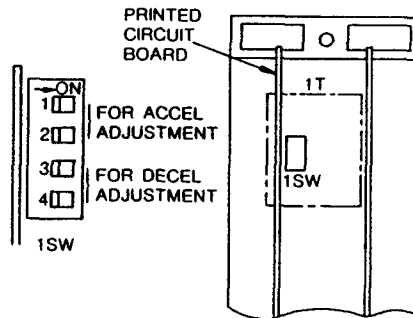


Figure 4. ACCEL/DECEL Time Range Selection Switch, 1SW

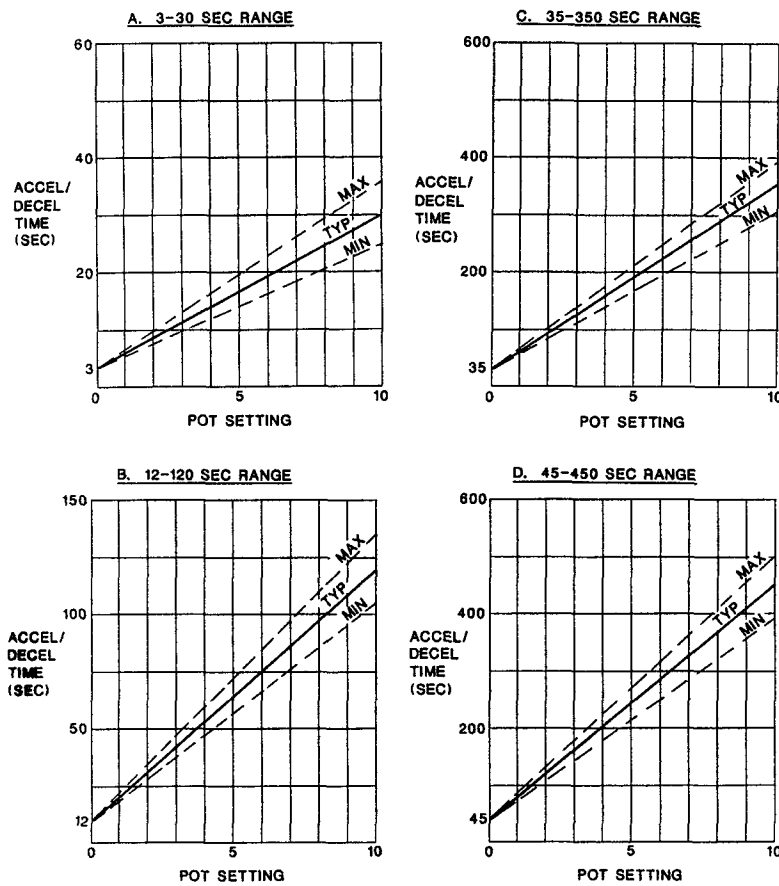


Figure 5. ACCEL/DECEL Time Characteristics

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ADJUSTMENTS

6. Description of Up/Down Setter Operation (Ref. Figure 6)

The +24V source for the UP, DOWN and HALT commands is outputted at terminal 8 of the module. When the UP command is applied at terminal 9, the Up/Down Counter counts up by clock pulse, at the frequency output from OSC1 as adjusted by the ACCEL potentiometer. The output of the counter is converted to analog voltage by the D/A converter and sent to terminals 14 and 15 as output signals.

When the DOWN command is applied at terminal 11, the Up/Down Counter counts down by clock pulse, at the frequency output from OSC2 as adjusted by the DECEL potentiometer. When the quickstop (HALT) command is applied at terminal 12, the Up/Down Counter is reset and the output signal immediately drops to 0V.

Priority sequence of the input commands is HALT, DOWN, UP. If both UP and DOWN commands are applied at the same time, the DOWN command takes priority; and the HALT command takes priority over the other two commands.

Accel time and decel time can be set independently within one of four time ranges: 3-30 sec, 12-120 sec, 35-350 sec or 45-450 sec. Accel range is selected by 1SW-1 and -2 in the module, and decel range is selected by 1SW-3 and -4. Adjustments within the selected ranges are made by the ACCEL and DECEL potentiometers.

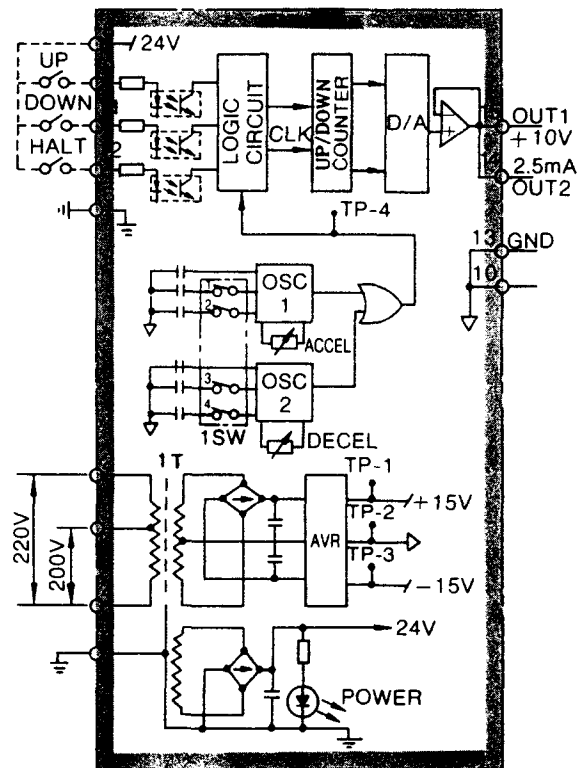


Figure 6. Up/Down Setter Schematic

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7. Setting Accel Time

Connect a voltmeter to module terminals 15(+) and 13. Apply power to the module. Apply the UP command input and note the time it takes for the output signal to reach maximum (+10V). Apply the HALT command. Adjust the ACCEL potentiometer, if required, and check by use of UP and HALT commands until desired ACCEL time is obtained.

8. Setting Decel Time

With the meter still connected, apply the UP command and allow output to reach maximum (+10V). Then apply the DOWN command and note the time it takes for the output signal to reach 0V. Adjust the DECEL potentiometer, if required, and check by use of UP and DOWN commands until desired DECEL time is obtained. Then remove power and disconnect the voltmeter.

9. Reinstall and secure front cover on drive.

10. Place this instruction sheet with your drive Technical Manual.

This completes installation of this module.

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