

L/S® Economy Variable-Speed Digital Drives

Features/Benefits

- Deliver flow rates from 0.1 to 3400 mL/min with Masterflex® L/S® pump heads
- Cartridge flow rates: 0.001 to 1700 mL/min
- Two speed ranges—both accept multiple pump heads
- Digital display shows motor rpm or flow rate
- ±0.25% speed control for greater accuracy
- Keypad lockout feature prevents tampering

Drive Controls

- Manual power switch on front of drive
- Lighted display indicates power is on
- Simple, push-button programming of the following parameters:

Tubing SIZE	CALibration
PRIME	STOP/START
FLOW rate	Up/Down (▲▼)

Note: Up/Down keys are used to change the display value of flow rate and calibration functions during setup or operation.

Setup

1. Mount pump head and load tubing.
2. Turn on pump and select tubing SIZE.
3. PRIME and CALibrate pump (if required).
4. Set FLOW rate with Up/Down keys.
5. Press STOP/START key.

Speed Control/Circuitry

- Soft-start for no power surges
- Speed not affected by minor variations in line voltage or frequency
- Switch: ON/OFF
- Meets or exceeds UL 508, CSA C22.2, No. 14, EN61010 (low voltage directive) and EN61326 (EMC directive)

Motor Specifications

- Permanently lubricated
- Designed around a 90 or 180 VDC motor

Economy digital drive 07524-40 shown with High-Performance pump head 77250-62



Calibration

1. Select correct tubing size/flow rate.
2. Press CAL; calibration volume appears.
3. Press START key—stored memory dispenses specified sample quantity, stops automatically.
4. Weigh/measure the dispensed sample.
5. Use Up/Down keys to correct flashing display. Press SIZE button to exit.

Note: The microprocessor will retain one special calibration value per tubing size, even when the power is turned off. The next calibration will replace the existing value.

Selection Criteria

1. Motor rpm/flow rate.
2. Voltage required.
3. Variety of pump heads accepted.

Order pump heads and tubing separately.

Pump Heads Accepted

- Accepts nine different pump heads:
- | | |
|---------------|------------------------|
| Standard | High-Performance |
| Easy-Load® 3 | PTFE-Tubing |
| Easy-Load® II | Multichannel |
| Easy-Load® | Multichannel cartridge |
| | PTFE-Diaphragm |

Keypad Lock/Unlock Feature

- Keypad can be locked out by holding the FLOW key until dashes appear across display
- Then, while holding the FLOW key, press PRIME five times
- Repeat steps to unlock the keypad

ISO9001:2000
SUPPLIER CERTIFIED



2 year
warranty

Ordering Information

Catalog number	rpm	Power (50/60 Hz)
LJ-07524-40	10 to 600	90 to 130 VAC
LJ-07524-45		190 to 260 VAC
LJ-07524-50	1.6 to 100	90 to 130 VAC
LJ-07524-55		190 to 260 VAC

Masterflex® L/S® Pump Tubing Flow Rate Information (mL/min)

Order Masterflex® L/S® pump tubing separately on pages 60–63.

Tubing cross sections	L/S® Precision pump tubing						L/S® High-performance precision pump tubing			
	L/S® 13	L/S® 14	L/S® 16	L/S® 25	L/S® 17	L/S® 18	L/S® 15	L/S® 24	L/S® 35	L/S® 36
Flow range @ 10 to 600 rpm	0.6 to 36	2.1 to 130	8 to 480	17 to 1000	28 to 1700	38 to 2300	17 to 1000 (18 to 1100)	28 to 1700 (30 to 1800)	38 to 2300 (43 to 2600)	48 to 2900 (58 to 3400)
Flow range @ 1.6 to 100 rpm	0.1 to 6	0.4 to 21	1.4 to 80	3 to 170	5 to 280	6 to 380	3 to 170 (3 to 180)	5 to 280 (5 to 300)	6 to 380 (7 to 430)	8 to 480 (9 to 580)

Note: Flow rates in parentheses can be obtained only with Masterflex® L/S® High-Performance pump heads.

Specifications for L/S® Economy Variable-Speed Digital Drives

Catalog number	LJ-07524-40	LJ-07524-45	LJ-07524-50	LJ-07524-55
Performance Specifications				
Flow capacity	0.6 to 3400 mL/min (0 to 54 GPH)		0.1 to 580 mL/min (0 to 9.2 GPH)	
rpm	10 to 600		1.6 to 100	
Number of heads accepted	2		4	
Max torque	Starting	39 kg-cm (540 oz-in)	78 kg-cm (1080 oz-in)	
	Running	13 kg-cm (180 oz-in)	26 kg-cm (360 oz-in)	
Reversible	No			
External control – Input	Not applicable			
External control – Output	Not applicable			
Electrical Specifications				
Voltage/Frequency VAC (50/60 Hz)	90 to 130	190 to 260	90 to 130	190 to 260
Current	1.5 A	0.8 A	1.5 A	0.8 A
Fuse rating	3.15 A/250 V	1.6 A/250 V	3.15 A/250 V	1.6 A/250 V
Motor type	Continuous duty, TENV*, permanent-magnet DC			
Motor size	75 W (1/10 hp)			
Display	Four-digit, seven-segment LED			
Motor/Speed control type	Membrane keypad/microprocessor			
Speed regulation (repeatability)	±0.25% (±1 rpm at 600 rpm, ±0.1 rpm at 100 rpm)			
Soft-start/Electronic brake	Yes/No			
Physical Specifications				
Housing materials	Stackable ABS plastic housing/coated aluminum chassis			
IP rating†	IP23			
Agency listings	UL, cUL, CE			
Operating temperature	0 to 40°C (32 to 104°F)			
Storage temperature	-25 to 65°C (-13 to 149°F)			
Dimensions (L x W x H)	28.3 x 19.6 x 18.2 cm (11 1/8" x 7 3/4" x 7 1/8")			
Shipping weight	6.8 kg (15 lb)			

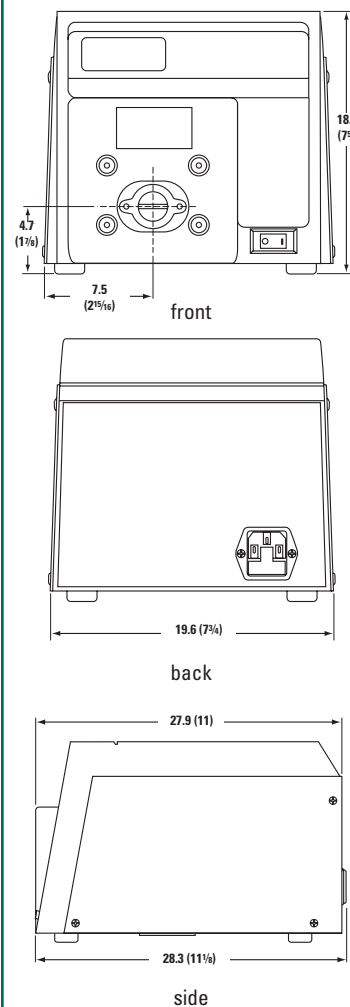
*Totally enclosed, nonventilating.

†See page 179 for an explanation of IP ratings.

NOTE

These digital drives offer a wide flow range, a powerful motor, and an easy-to-read LED display that indicates either rpm or flow rate—all at an economical price. For brushless, reversible motor, remote control, and advanced dispensing features, see our digital standard drives on pages 80–81.

Dimensional Drawings cm (in.)
07524-series



See pages 100–107

for complete L/S® pump systems.



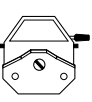
Standard
0.06 to 2900 mL/min
pages 34–35



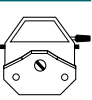
Easy-Load® 3
0.06 to 2900 mL/min
pages 36–37



Easy-Load® II
0.06 to 2900 mL/min
pages 38–39



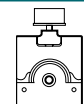
Easy-Load®
0.06 to 2300 mL/min
pages 40–41



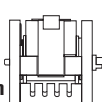
High-Performance
0.9 to 3400 mL/min
pages 42–43



PTFE-Tubing
0.06 to 65 mL/min
pages 44–45



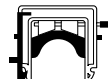
Multichannel
4- or 8-channel
for microbore tubing
0.0026 to 200 mL/min
pages 46–47



2-, 4-, or 8-channel
for L/S® Precision tubing
0.045 to 2300 mL/min
pages 48–49

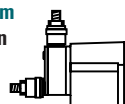


Multichannel cartridge
3- or 4-roller; up to 8-channels
0.047 to
1700 mL/min
pages 50–51



6- or 8-roller; up to 12 channels
0.0005 to 350 mL/min
pages 52–53

PTFE-Diaphragm
10 to 800 mL/min
pages 54–55



L/S® Pump Heads 32–59
L/S® Tubing 60–63
L/S® Pump Systems 100–107

Accessories 148–157

Technical Data 158–190