

GENERAL DESCRIPTION

The Masterflex[®] L/S[®] Standard Digital drive offers a high-accuracy motor and multi-language graphical interface for easy-set-up and operation. The easy-to-use keypad provides easy navigation through menu options that include clear on-screen programming features. The high-contrast LCD shows four operating modes: continuous run, timed dispense, copy dispense, and volume dispense—allowing you to view pump performance continuously during operation. This drive offers flow rate capacities from 0.001 to 3400 mL/min, is compatible with all L/S[®] pump heads and has the capacity to mount from two to four L/S[®] heads on a single drive.



MARKETS & APPLICATIONS

Ideal for fluid transfer, filtration, dispensing, and metering applications in laboratory and process environments including pharmaceutical, biotech, food & beverage, dairy, chemical, manufacturing, and water treatment.

FEATURES & BENEFITS

- Flow range 0.001 mL/min to 3400 mL/min with L/S tubing; dependent on pump head, tubing size and drive speed range
- Digital interface with graphical LCD shows pump performance and operating modes—continuous run, timed dispense, copy dispense, or volume dispense
- Reversible, brushless, maintenance-free motor offers $\pm 0.1\%$ speed control accuracy with a 6000 to 1 turndown ratio
- Menu driven interface with option to select one of seven languages from the user-friendly menu for programming and operation
- Dispense by volume or time; programmable dispense interval lets you set the delay between cycles
 - By volume in mL (0.001 to 9,999 mL), L, or gal;
 - Copy—1 to 9,999 dispense cycles;
 - Time—time interval of on/off cycles (1 sec to 99 hr, 59 min, 59 sec per cycle)
- Cumulative volume function tracks total volume dispensed.
- Anti-drip function ensures dispensing accuracy
- Keypad Lock / Unlock feature prevents accidental changes to settings
- Remote control capability through 25-pin (DB25) connector on back of drive

OPERATION MODES

The drive operates in the following modes: Continuous, Time Dispense, Copy Dispense, and Volume Dispense via keypad or remote I/O. Keypad lockout feature is user selectable to prevent unwanted changes on the drive settings. All dispense modes feature a batch count function that lets you program the number of cycles per batch when filling multiple containers; display shows batch total and cycles completed.

Continuous Mode: allows control of flow direction and flow rate with start and stop flow control.

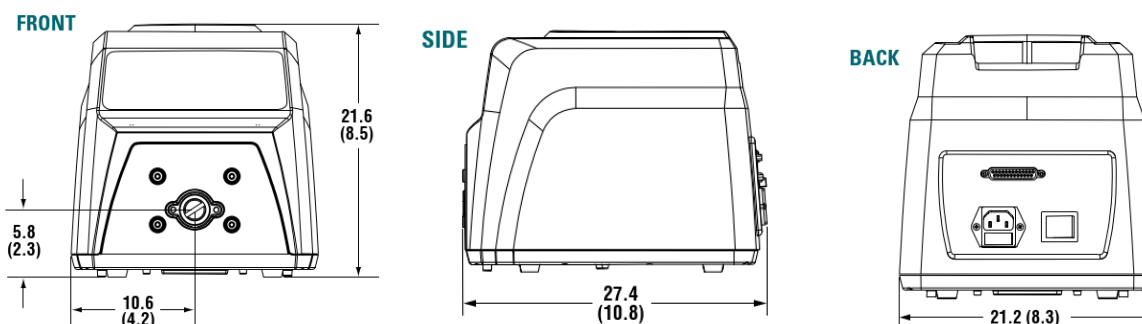
Time Dispense Mode: allows running the pump at a set flow rate over a fixed time period. "ON TIME" controls the duration of the dispense at the set flow rate; "OFF Time" controls the delay between cycles.

Volume Dispense Mode: allows for dispensing via a set volume. In this mode, the dispense volume, flow rate, number of batch cycles and delay between cycles ("OFF Time") can be set.

Copy Dispense Mode: allows for dispensing a specific volume when the specific volume is unknown. This is useful when frequently changing dispensing volume or dispensing into a container of unknown volume.



DIMENSIONS / DRAWINGS



TUBING AND FLOW RATE INFORMATION

Flow rates are dependent on the pump-head model, tubing size and specific application/conditions.

L/S® Pump Tubing Flow Rate Information (mL/min)[†]

Tubing cross section	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 @ 0.1 to 600 rpm	0.006 to 36	0.021 to 130	0.08 to 480	0.17 to 1000	0.28 to 1700	0.38 to 2300	0.17 to 1000 (0.18 to 1100)	0.28 to 1700 (0.30 to 1800)	0.38 to 2300 (0.43 to 2500)	0.48 to 2900 (0.58 to 3400)
Flow range @ 0.02 to 100 rpm	0.001 to 6	0.004 to 21	0.016 to 80	0.033 to 170	0.057 to 280	0.077 to 380	0.033 to 170 (0.036 to 180)	0.057 to 280 (0.057 to 300)	0.077 to 380 (0.086 to 430)	0.096 to 480 (0.113 to 580)

Note: Tubing dimensions are not to scale. Flow rates in parentheses can be obtained only with the L/S High-Performance pump heads.

[†] Determined under the following conditions: 0 psi at inlet, 0.5 psi at outlet using water at 22° C (72° F).

COMPATIBLE PUMP HEADS

L/S® Standard, L/S® Easy-Load®, L/S® Easy-Load® II, L/S® Easy-Load® 3, L/S® High-Performance, L/S® Multichannel Cartridge, L/S® Multichannel, L/S® PTFE-Tubing head, L/S® PTFE-Diaphragm head and L/S® Cytotflow® pump head.

SPECIFICATIONS

Model Number	MFLX07522-20	MFLX07522-30
Performance specifications		
Flow capacity	0.006 to 3400 mL/min	0.001 to 580 mL/min
RPM	0.1 to 600	0.02 to 100
Number of heads accepted	2	4
Maximum torque	Starting	381 N-cm (540 oz-in)
	Running	127 N-cm (180 oz-in)
Reversible	Yes	
External control	Input	0 to 20 mA, 4 to 20 mA, 0 to 10 V; START/STOP, CW/CCW, PRIME via contact closure
	Output	1 to 20 mA, 4 to 20 mA, 0 to 10 V; TTL pulse, drive running
Electrical specifications		
Voltage	90 to 260 VAC (50/60 Hz)	
Current	2.2 A at 115 V; 1.1 A at 230 V	
Fuse rating	3.15 A / 250 V	
Motor type	Continuous duty, brushless DC	
Motor size	75 W (1/10 hp)	
Display	Four-line graphical LCD	
Motor/speed control type	PWM with microprocessor	
Speed regulation	±0.1%	
Soft start/electronic brake	Yes/Yes	
Physical specifications		
Housing materials	Stackable ABS plastic housing and coated aluminum base	
IP rating	IP33	IP33
Agency listings	ETL, cETL, 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)	27.4 x 21.2 x 21.6 cm (10.8" x 8.3" x 8.5")	
Shipping weight	5.9 kg (13 lb.)	

ORDERING INFORMATION

L/S® Standard Digital Drives

Model Number	rpm	Power (50/60 Hz)
MFLX07522-20	0.1 to 600	90 to 260 VAC
MFLX07522-30	0.02 to 100	90 to 260 VAC

Drive Accessories

Model Number	Description
MFLX07523-92	Footswitch, momentary start/stop; 6-ft (1.8-m) cable with DB25 connector
MFLX07523-94	DB25 male connector; for creating your own cable
MFLX07523-95	Cable assembly, DB25 male connector and 25-ft (7.9-m) cable with stripped wire ends for remote control
MFLX07523-97	Handheld remote controller; 6-ft (1.8-m) cable with DB25 connector

COMPLETE PUMP SYSTEMS

Order components for complete system or choose from our preassembled complete systems referenced below.



MFLX77921-65

MFLX77921-75

MFLX77921-85

Model Number	Flow range† (mL/min)	Pump head included	Tubing included	Tubing sizes accepted	Drive included	Power (50/60 Hz)
MFLX77921-65	0.08 to 480	L/S® Easy-Load® 3 MFLX77800-60	C-Flex® ULTRA L/S 16 MFLX06434-16; 3 m (10 ft)	L/S 13, L/S 14, L/S 16, L/S 25, L/S 17, L/S 18	MFLX07522-20 0.1 to 600 rpm	90 to 260 VAC
MFLX77921-75	0.28 to 1700	L/S® Easy-Load® II MFLX77200-62	C-Flex® ULTRA L/S 24 MFLX06434-24; 3 m (10 ft)	L/S 15, L/S 24, L/S 35, L/S 36	MFLX07522-20 0.1 to 600 rpm	90 to 260 VAC
MFLX77921-85	0.047 to 280 per channel	L/S® Multichannel, 4-channel MFLX07535-04	2-Stop L/S® 16 BioPharm Plus MFLX96116-16; 8-pack	L/S 2-stop tube sets L/S 13, L/S 14, L/S 16	MFLX07522-20 0.1 to 600 rpm	90 to 260 VAC

†Note: flow range shown is with included L/S tubing; extend the flow range of these systems with the accepted tubing sizes listed above.