

GENERAL DESCRIPTION

The Masterflex® L/S® Digital Process drives offer 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, time dispense, copy dispense, and volume dispense—allowing pump performance to be viewed continuously during operation. These drives offer flow rate capacities from 0.006 to 3400 mL/min, are compatible with all L/S® pump heads, and have the capacity to mount up to two L/S® heads on a single drive.

These Process drives feature a NEMA 4X / IP66 rated housing. Choose 316 stainless steel for sanitary and washdown applications or powder-coated steel for process, water/wastewater, and manufacturing applications where stainless steel is not a critical requirement.



MARKETS & APPLICATIONS

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

FEATURES & BENEFITS

- Wider speed range delivers flows from 0.006 to 3400 mL/min with L/S pump tubing and L/S pump heads
- 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
- 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
- Menu driven interface with option to select one of seven languages from the user-friendly menu for programming and operation
- Anti-drip function ensures dispensing accuracy
- Keypad Lock / Unlock feature prevents accidental changes to settings
- Scaleable remote control of speed, direction, and start/stop enable process automation and integration
- NEMA 4X (IP66) rated housing for washdown applications

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.

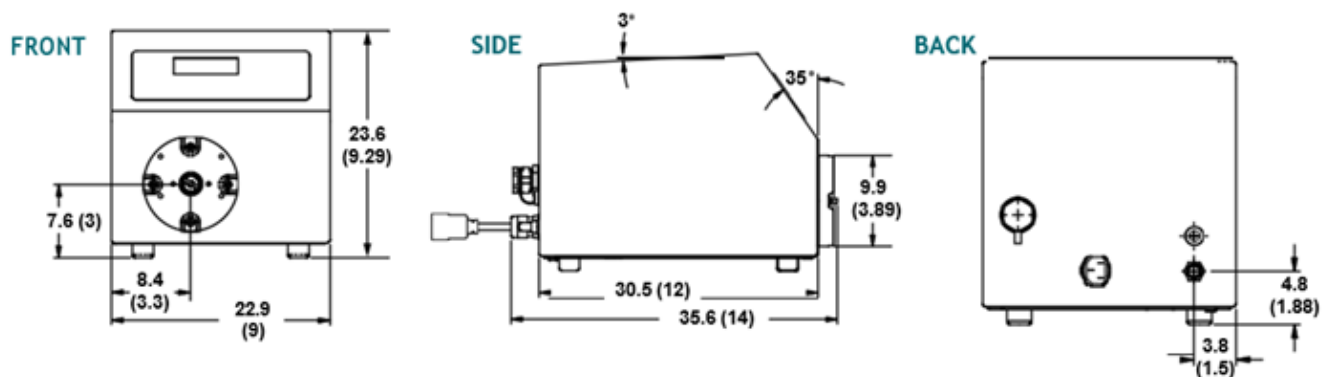
Time Dispense Mode: allows running the pump at a set flow rate over a fixed time period. "ON TIME" controls the duration of the dispense at the set flow rate; "OFF Time" controls the delay between cycles.

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.

CONTINUOUS MODE		TIME DISP. MODE		VOL DISP. MODE		COPY DISP. MODE	
100.00	mL/min 17	00:00:00	ON OFF	100.00	mL OFF	100.00 53 %	COPY OFF
1000/2000		1000/2000		1000/2000		1000/2000	

DIMENSIONS / DRAWINGS



TUBING & 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)

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

*Measured 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® Cytoflow® pump head.

SPECIFICATIONS

Model Number		MFLX07575-30	MFLX07575-40
Performance specifications			
Flow capacity		0.006 to 3400 mL/min	
RPM		0.1 to 600	
Number of heads accepted		2	
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	0 to 20 mA, 4 to 20 mA, 0 to 10 V; TTL pulse, drive running	
Remote analog connection		31-pin round, watertight	
Electrical specifications			
Voltage		90 to 260 VAC (50/60 Hz), universal voltage auto selecting	
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 (repeatability)		±0.1% (±0.1 rpm at 600 rpm)	
Soft start/electronic brake		Yes/Yes	
Physical specifications			
Housing materials		316 Stainless Steel	Powder-coated Steel
IP rating		IP66 (NEMA 4X)	
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)		30.5 x 22.9 x 23.6 cm (12" x 9" x 9-5/16")	
Shipping weight		11.8 kg (26 lb.)	

ORDERING INFORMATION

L/S® Digital Process Drives

Model Number	rpm	Housing Material	Power (50/60 Hz)
MFLX07575-30	0.1 to 600	316 Stainless Steel	90 to 260 VAC
MFLX07575-40	0.1 to 600	Powder-Coated Steel	90 to 260 VAC

Drive Accessories

Model Number	Description
MFLX07575-84	Washdown foot switch, momentary start/stop; 1.8-m (6-ft) cable.
MFLX07575-80	Remote control cable; wire to controller/PLC; 8.3-m (25-ft) length.
MFLX07575-01	Replacement seal kit includes shaft seal, hardware, and gasket.

COMPLETE PUMP SYSTEMS

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



MFLX77975-25



MFLX77975-45



MFLX77975-50

Model Number	Flow range† (mL/min)	Pump head included	Tubing included	Tubing sizes accepted	Drive included	Power (50/60 Hz)
L/S® Digital Process Pump, Stainless Steel Housing, with Easy-Load® II Pump Head						
MFLX77975-25	0.28 to 1700	L/S® Easy-Load® II MFLX77200-62	L/S 24; 3 m (10 ft)	L/S 15, L/S 24, L/S 35, L/S 36	MFLX07575-30 0.1 to 600 rpm	90 to 260 VAC
L/S® Digital Process Pump, Powder-Coat Steel Housing, with Easy-Load® II Pump Head						
MFLX77975-45	0.28 to 1700	L/S® Easy-Load® II MFLX77200-62	L/S 24; 3 m (10 ft)	L/S 15, L/S 24, L/S 35, L/S 36	MFLX07575-40 0.1 to 600 rpm	90 to 260 VAC
L/S® Digital Process Pumps, Stainless Steel Housing, with Cytoflow® Pump Head						
MFLX77975-50	0.17 to 1040	L/S® Cytoflow™ MFLX77253-00	L/S 16; 3 m (10 ft)	L/S 13, L/S 14, L/S 16, L/S 25, L/S 17, L/S 18	MFLX07575-30 0.1 to 600 rpm	90 to 260 VAC
MFLX77975-52	0.62 to 3700	L/S® Cytoflow™ MFLX77253-02	L/S 24; 3 m (10 ft)	L/S 15, L/S 24, L/S 35, L/S 36	MFLX07575-30 0.1 to 600 rpm	90 to 260 VAC

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