

MASTERFLEX[®]

L/S[®] PROCESS DIGITAL PUMP SYSTEMS

TRANSFER, DISPENSE, AND METER IN LAB,
PROCESS AND WASHDOWN ENVIRONMENTS



FEATURES AND BENEFITS

- IP66 and NEMA 4X rated. Sealed 316 stainless steel housing and sealed keypad are protected from dust, water, and chemicals in the wash down environment—simply hose down to clean.
- Flow rate: 0.006 to 3400 mL/min (0.0001 to 54 GPH) with L/S tubing. Flow rate depends on drive rpm and tubing size.
- Graphical LCD display shows six different parameters: motor rpm, flow rate, dispense volume, cumulative volume, dispense interval time, and copy number.
- Brushless, maintenance-free motor with improved 0.1% speed control accuracy between cycles for convenient, automated dispensing.
- Dispense by: volume—in milliliters (0.001 to 99,999), liters, and gallons; copy—1 to 99,999 dispense cycles. Set time interval (SEC) between dispense cycles from 1 to 99,999 seconds.
- Remote control capabilities via fluid-resistant input/output connector on back of drive:
 - Speed control input: scalable 0 to 20 mA, 4 to 20 mA, 0 to 10 V.
 - Pumping direction: requires open collector or contact closure;
 - Start/stop/purge: requires open collector or contact closure;
 - Tachometer output: scalable 0 to 20 mA, 4 to 20 mA, 0 to 10 V, or open collector



Flow Ranges, mL/min*

RPM	Precision Pump Tubing						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
	Standard*, Easy-Load®, Easy-Load® II, Easy-Load® 3						Multichannel†, Standard*, Easy-Load®, Easy-Load® II, Easy-Load® 3			
	Cartridge, Multichannel			Cartridge			Easy-Load			
0.1 to 600	0.6 to 36 <i>0.002 to 13.7</i>	0.021 to 130 <i>0.008 to 49.4</i>	0.08 to 480 <i>0.030 to 182.6</i>	0.17 to 1000 <i>0.065 to 380.4</i>	0.28 to 1700 <i>0.107 to 646.7</i>	0.38 to 2300 <i>0.145 to 875.0</i>	0.17 to 1000 (0.18 to 1100) <i>(0.068 to 418)</i>	0.28 to 1700 (0.30 to 1800) <i>(0.11 to 685)</i>	0.38 to 2300 (0.43 to 2600) <i>(0.14 to 875)</i> <i>(0.16 to 989)</i>	0.48 to 2900 (0.57 to 3400) <i>(0.18 to 1103)</i>

* Values in parentheses are with high-performance pump heads †Multichannel head is not available for P/S 36. Multichannel and Cartridge heads are available for microbore tubing. Values in italics are gallons per day.

CATALOG NUMBER			
	MK-77712-55	MK-77712-56	MK-77712-57
Includes pump head	Easy-Load® II (thin wall)	Easy-Load® II (thick wall)	High-Performance (thick wall)
PERFORMANCE			
Max number of pump heads	2	2	1
RPM	0.1 to 600		
External Control - Input	0 to 20 mA, 0 to 10 V; Scalable START/STOP, DIR. (CW/CC), PRIME via contact closure Remote / Local Enable Contact Secondary Speed Control 0-20mA or 4-20mA Auxiliary Contact (Limit Switch)		
External Control - Output	4 to 20 mA, or 0 to 10 V		
Motor running logic	N.O. or N.C. (1A @ 24 V)		
Tachometer output	5 V, TTL pulse		
Power supply output	24 V, 150 mA		
ELECTRICAL SPECIFICATIONS			
Voltage (50/60 Hz)	115/230 V AC (auto selected)		
Motor Type	Brushless continuous duty, TENV*, DC, permanent lubricated bearings		
Control type	PWM (Pulse Width Modulated)		
Speed regulation (Repeatability)	±0.1%; ±0.1 rpm @ 600 rpm; %; ±0.21 rpm @ 100 rpm		
PHYSICAL SPECIFICATIONS			
Housing materials	Electropolished, 316 Stainless steel		
IP rating	IP66 and NEMA 4X		
Agency approvals	ETL, cETL, CE, RoHS		
Operating temperature	0 to 40°C (32 to 104°F)		
Storage Temperature	-25 to 65°C (-13 to 149°F)		
Controller dimensions (L x W x H)	13.0 x 8 x 8 in.		
Shipping Weight (Drive Only)	30 lbs.		

*Totally enclosed, non-ventilating

For more information:
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