

# Thermo Scientific Masterflex

## P/S Standard Digital Pump Systems



Masterflex® P/S Pump Systems

**Thermo Fisher Scientific combines digital control with peristaltic pump technology to provide high-accuracy, maintenance and worry free performance to your chemical feed applications.**

- Menu-driven LCD graphical interface provides easy system set-up.
- Loaded with a broad range of remote control options—ideal for automated process applications.
- The brushless motor driven by a PWM control is capable of a flow range turndown of 380,000:1.
- Other control capabilities include programmable dispensing by volume, time, or copy modes with a programmable delay between cycles for convenient, automated dispensing.
- Precise PWM speed control ( $\pm 0.1\%$ ) maximizes accuracy and efficiency while the brushless motor gives you quiet, maintenance-free reliability.
- Optimize system accuracy by calibrating the pump system in process. The calibration is stored in memory—one calibration value per tubing size.
- Program the drive via the simple membrane keypad and multi-language display.
- Reversible motor so you can purge tubing before or after pumping.
- IP33 rated ABS housing for improved splash and dust resistance.



ISO 9001:2000  
SUPPLIER CERTIFIED

2 year  
warranty



P/S 1.1

## Flow rates in mL/min (flow rates in parentheses can only be obtained with the High-Performance pump head)

RPM	Precision pump tubing						High-performance precision pump tubing*			
	P/S 13	P/S 14	P/S 16	P/S 25	P/S 17	P/S 18	P/S 15	P/S 24	P/S 35	P/S 36
0.1 to 600	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)	.38 to 2300 (0.43 to 2600)	0.48 to 2900 (0.57 to 3400)
0.02 to 100	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 (0.033 to 180)	0.057 to 280 (0.057 to 300)	0.077 to 380 (0.077 to 430)	0.096 to 480 (0.096 to 580)

\* Values in parentheses are with high-performance pump heads

## Specifications & Ordering Information

Catalog number	1300-3600-955	1300-3600-956	1300-3600-965	1300-3100-955	1300-3100-956	1300-3100-965
Included pump head	Easy-Load II	Easy-Load II	High-Performance	Easy-Load II	Easy-Load II	High-Performance
	(thin wall)	(thick wall)	(thick wall)	(thin wall)	(thick wall)	(thick wall)
Number of heads accepted	2	2	1	4	4	1
RPM	0.1 to 600			0.02 to 100		
External control – input	0 to 20 mA, 0 to 10V; Scaleable					
	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 @ 24V)					
Tachometer output	5V, TTL pulse					
Power supply output	24V, 150 mA					
Voltage (50/60 Hz)	115/230 VAC (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					
Operating temperature	0 to 40°C (32 to 104°F)					
Storage temperature	–25 to 65°C (–13 to 149°F)					
Housing materials	ABS, Powder-coated aluminum)					
IP rating	IP33					
Agency approvals	ETL, cETL, CE					
Controller dimensions (L x W x H)	13.0 x 8 x 8					
Shipping weight	20 lbs.					

P/S 1.2

[www.thermo.com/fluidhandling](http://www.thermo.com/fluidhandling)

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