

## **V6 Multi-Channel Syringe Drive Pump**

### **Product Data Sheet**

The V6 55 Series Multi-Channel Pump is a programmable precision liquid metering instrument with non-volatile user program memory and system input/output (I/O). The V6 Multi-Channel Pump is designed with the flexibility and versatility to meet a variety of system configurations. It can be used as a stand alone controller, or integrated into system configurations. The module is capable of simple closed loop control of an external quantity or process without the need of an external controller for direction.

Mechanically, the syringe pump is driven via stepper motor and precision ball screw. It has a 60mm stroke and is available in two resolutions. Pump communications are compatible with other Kloehn devices.

This V6 55 Series Multi-Channel Pump uses Non-Standard length syringes. For additional custom modifications, see your Kloehn Sales Representative.



### **Physical**

- Overall Height 11.83"
- Maximum Width with an 8 Channel Manifold 6.5" (minimum width with a 2 Channel Manifold 3.2")
- Overall Depth 5.75"
- Weight 6.0 lbs.

### **Environmental**

- Operating temperature of 10° to 55° C
- Operating humidity of 5 to 95% RH, non-condensing at 55° C
- Storage temperature of -25°C to 85° C
- RoHS and WEEE compliant

### **Mechanical**

- Mounting holes at top and bottom as well as on the face plate
- Resolutions available (24000 and 48000 increments)
- Maximum Speed is 10000 steps / second.
- Syringe sizes: 25ul to 5ml (supplied separately)
- Valve type: 3 Way Solenoid Valve each channel
- PC board: **Driver & Control boards** (fully functional motor drivers and control electronics)
- Card-edge connector
- Integrated RS232 Integrated power filter

### **Interface**

- RS-485 or RS-232 communications
- Data terminal or OEM protocol
- 1200 to 38.4K baud, 8 data bits, 1 stop bit, no parity, half duplex
- Three inputs, three output ports
- Digital voltmeter
- Switched and wired device address

### **Power**

- Operation at 24V (with a maximum power voltage ripple of 720mv peak-to-peak)  
Power consumption – 80 watts, 11 watts idle.

**Syringe Pump:**

**V6 55 Series Multi-Channel Pump**

48K RESOLUTION	24K RESOLUTION	NUMBER OF CHANNELS	PUMP PART NUMBER	DECAL (Optional)
X		8 CHANNEL	29514	29555
X		7 CHANNEL	29515	29555
X		6 CHANNEL	29516	29555
X		5 CHANNEL	29517	29555
X		4 CHANNEL	29518	29555
X		3 CHANNEL	29519	29555
X		2 CHANNEL	29520	29555
	X	8 CHANNEL	29524	29555
	X	7 CHANNEL	29413	29555
	X	6 CHANNEL	29411	29555
	X	5 CHANNEL	29409	29555
	X	4 CHANNEL	29399	29555
	X	3 CHANNEL	29397	29555
	X	2 CHANNEL	29395	29555

(Add the decal to the order as required)

**Ancillary items:**

Description	Part Number
Communication cable RS485, 6" long; pump to pump (2 units)	17736
Cooling Fan Option	24290
Starter Kit (includes all items listed below)	24682
• 24VDC Power supply	24680
• Adapter (card edge to AMP connectors)	23428
• Software; operator's manual; and application notes.	23422
• Communications cable (RS232 / 5' long; pump to computer)	17734
Connector (card edge with solder pins)	26875

**Software support:**

- KloehnControl (configuration and debug program)
- KSerial (command-line communication utility)
- KCom (machine language helper program)
- KProbe (communication trouble shooting utility)

**Valve—3 Way Mini-Solenoid:**

- Part number 80841
- Orifice Diameter: .040"
- Internal Volume: 42ul
- Zero Dead Volume: No un-swept paths
- Rated Pressure: Vacuum to 50psi
- Wetted Materials: Peek, EPDM (special material available upon request)

**Standard Teflon Syringe Assembly:**

- Thread Type: ¼-28 UNF-2A
- Glass Type: Borosilicate glass
- Individually Boxed
- Fine Tuning Adjustment: Zero Dead Volume Only
- \* Tip nose is 316L Stainless Steel Teflon coated

Size	Orifice	Standard Syringe	Zero Dead Volume (ZDV)
25ul	.016	29896	29898*
50ul	.024	29435	29856*
100ul	.032	29437	29858
250ul	.039	29439	29441
500ul	.076	29442	29443
1.0ml	.076	29447	29448
1.25ml	.076	29451	29450
2.5ml	.076	29454	29452
5.0ml	.076	29456	29458

**UHMW-PE Syringe Assembly:**

- Thread Type: ¼-28 UNF-2A
- Glass Type: Borosilicate glass
- Individually Boxed
- Fine Tuning Adjustment: Zero Dead Volume Only
- \* Tip nose is 316L Stainless Steel Teflon coated

Size	Orifice	Standard Syringe	Zero Dead Volume (ZDV)
25ul	.016	29897	29899*
50ul	.024	29436	29857*
100ul	.032	29438	29859
250ul	.039	29440	29861
500ul	.076	29444	29863
1.0ml	.076	29445	29446
1.25ml	.076	29864	29449
2.5ml	.076	29455	29453
5.0ml	.076	29457	29459

\*See PDS0011 for syringe details.