

# Automated Valve Starter Kit

The Valve Starter Kit includes everything you need to incorporate uProcess automated valves into your microfluidic setup.

The uProcess™ product line is a modular, breadboard-based platform for automated microfluidic circuits.

uProcess™ software lets you program sequences of valve and syringe pump actuations. Products interface directly with LabSmith's CapTite™ Microfluidic connectors and components.



Description	Qty	AV201-C360-PKG for 360µm Capillary	AV201-C360-PKG for 1/32" Tubing	AV201-C360-PKG for 1/16" Tubing
<b>3-Port Automated Valve</b>	2	AV201-C360	AV201-T132	AV201-T116
<b>uProcess Interface (USB)</b> includes uProcess software	1		EIB200	
<b>4 Valve Manifold</b>	1		4VM02	
<b>uProcess breadboard</b> with 5 device connections	1		uPB-05	
<b>One-piece fitting</b> interfaces valve with capillary tubing	10	C360-100	T132-100	T116-100
<b>Tools for component and breadboard installation</b>	1 ea	LS-HEX hex wrench, LS-TORX Torx wrench, LS-Screws.25		

## 3-Port Automated Valve (AV201)

- ▶ Automatically switched fluid routing
- ▶ Low swept volume
- ▶ Fast switching
- ▶ Innovative software for coordinated control
- ▶ Direct connection to 1/32" or 1/16" tubing, or 360 µm OD capillary
- ▶ Compatible with a wide range of chemicals



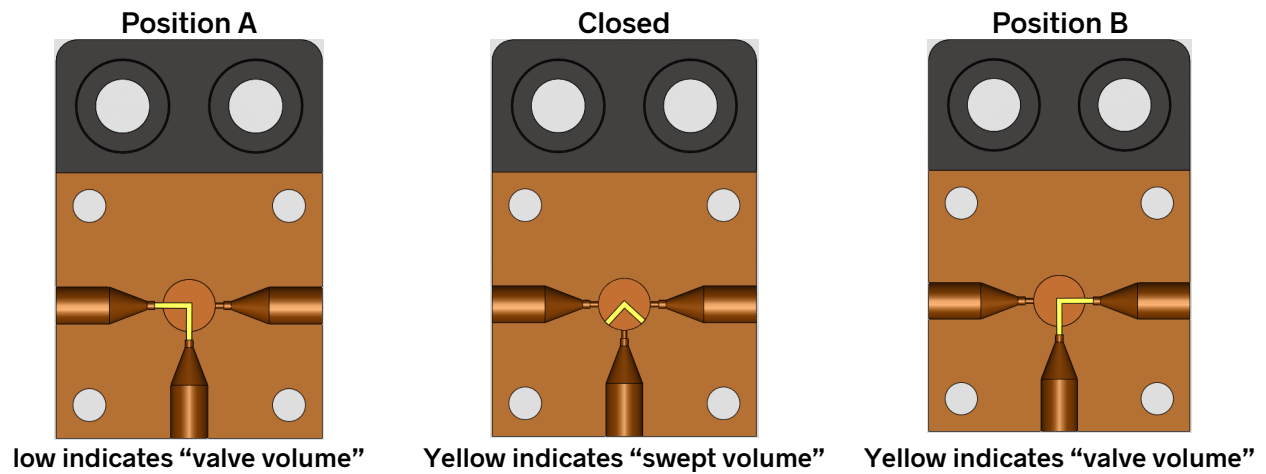
AV201 valve  
actual size

Model	Swept Volume	Valve Volume	Through Hole Diameter	Capillary or Tubing Interface
AV201-C360	130 nl	170 nl	0.01" (250 µm)	360 µm OD (via p/n C360-100)
AV201-T132	130 nl	170 nl	0.01" (250 µm)	1/32" OD (via p/n T132-100)
AV201-T116	130 nl	280 nl	0.01" (250 µm)	1/16" OD (via p/n T116-100)

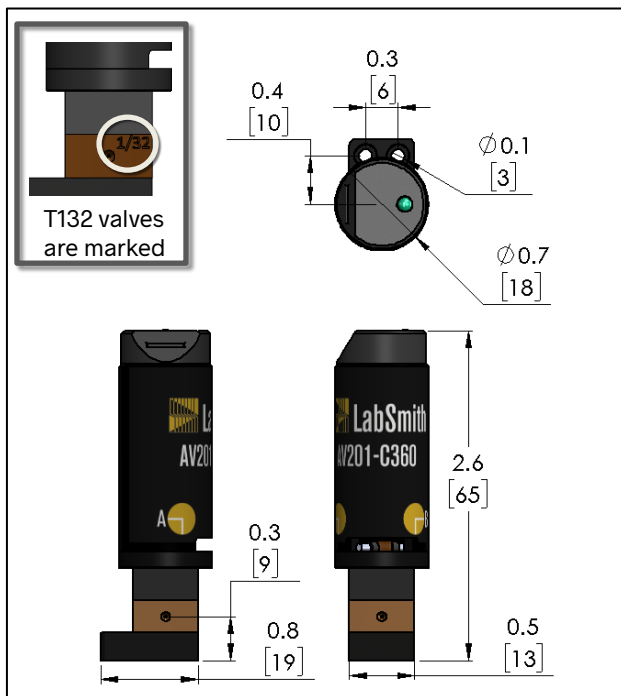
All Models	
<b>Port Configuration</b>	3-port, 2-position (+ closed), "L" pattern flow
<b>Typical Application</b>	Redirecting flow
<b>Wetted Material</b>	Vespel.® Select valves available in PCTFE (contact LabSmith)
<b>Switch Time</b>	0.65-0.78 s (A-B or B-A); 0.25-0.50 s (closed-A or closed-B)
<b>Actuation method</b>	Gear motor
<b>Cleaning</b>	Flush valve ports with DI water or solvent
<b>Service Temperature Range</b>	50-176°F (10-80°C)
<b>Maximum Pressure</b>	2000 psi (14 MPa)
<b>Electrical Connection</b>	Connects to 4VM02 valve manifold via flat flex ribbon cable

## 3-Port Automated Valve (AV201)

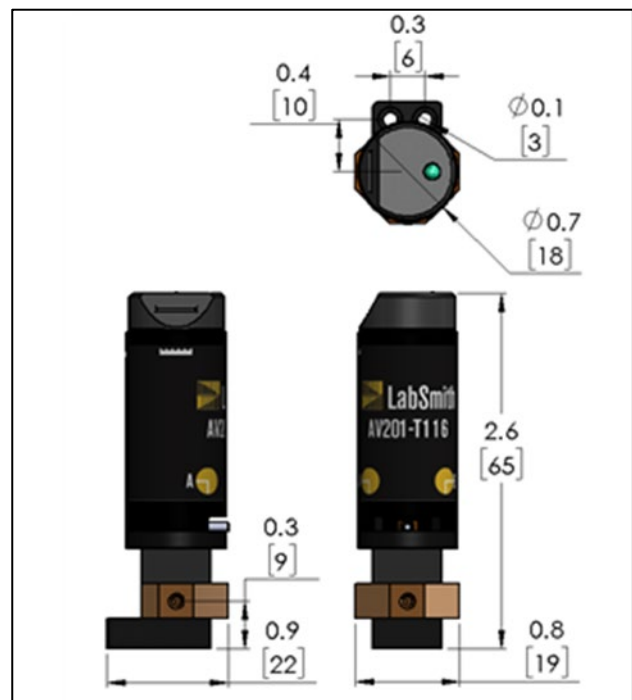
### Configurations



### Dimensions



AV201-C360, AV201-T132



AV201-T116

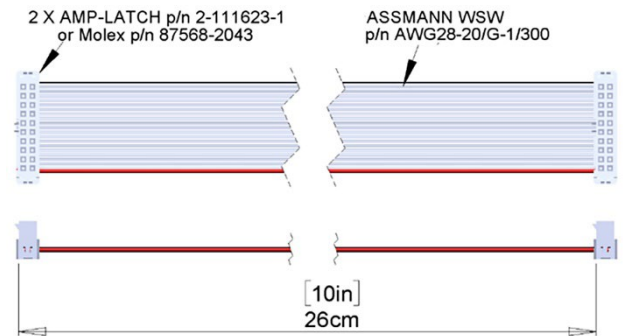
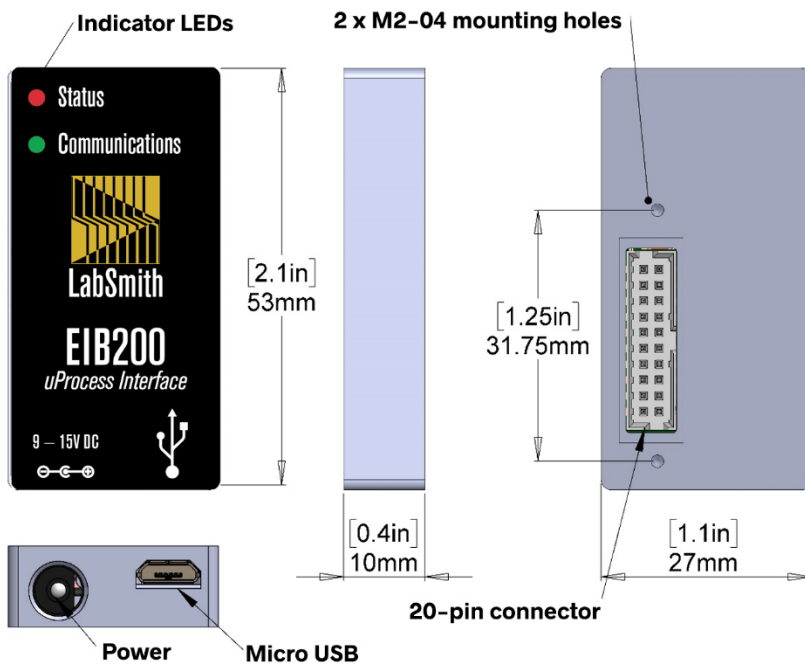
## uProcess Interface (EIB200)

- ▶ For monitoring and controlling uProcess™ devices
- ▶ Control over 100 devices
- ▶ USB computer interface
- ▶ uProcess™ software, LabVIEW™ drivers, SDK included



**EIB200**  
actual size

Specifications	EIB200
Computer interface cable (included)	Micro USB 2.0
Case material	Conductive ABS
Power supply (included)	12 V/ 2.0 A
Power jack connector	2.1 mm x 5.5 mm
Control and data acquisition	uProcess™ Software, LabVIEW™ drivers, SDK (C++)
Interface to uProcess devices and breadboard	2.00 mm pitch, 20 pin, dual row receptacle



**EIB200 Device Communication Cable**

## 4 Valve Manifold (4VM02)

- ▶ Simultaneous control of up to four uProcess™ automated valves
- ▶ Interfaces with uProcess software for coordinated control

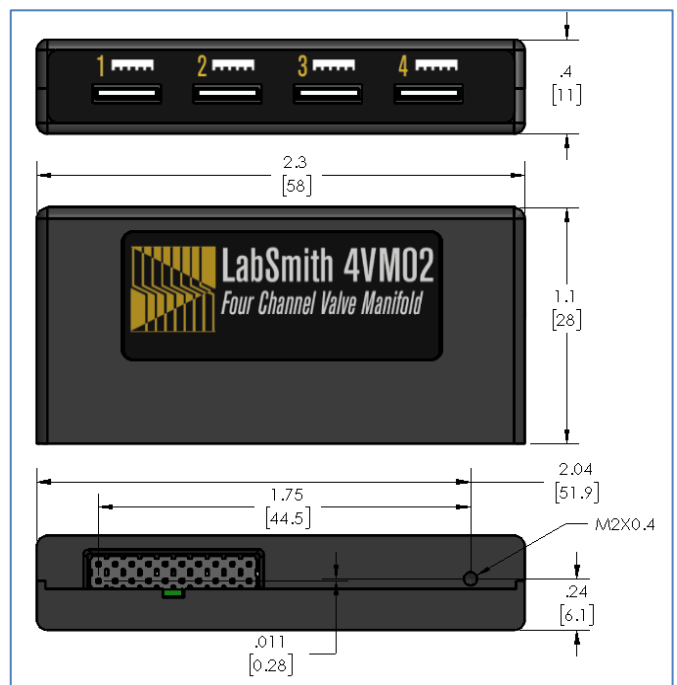


**4VM02**  
actual size

## Specifications

<b>Interface to valves</b>	6 conductor (1 mm pitch) same-side flat flex ZIF cable. Includes 4 flat flex ribbon cables: 1 x 8", 2 x 10", 1 x 12"
<b>uProcess Interface</b>	Required for control of 4VM02 via uProcess™ software
<b>Interface to EIB or breadboard</b>	2.00 mm pitch, 20 pin, dual row receptacle
<b>Case material</b>	Plated aluminum
<b>Dimensions</b>	2.3" x 0.4" x 1.1" (58 mm x 11 mm x 28 mm)

## Dimensions



3D models available upon request.

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