

Technical Data for Alicat **LC & LCR** Liquid Flow Controllers

0 – 0.5 ccm Full Scale through 0 – 10 lpm Full Scale

Alicat LC and LCR-Series water flow controllers display liquid flow, liquid temperature and pressure.

Standard Specifications (Contact Alicat for available options.)

Performance	LC Controllers	LCR Controllers
Available Ranges	0.5 ccm to 500 ccm	1 lpm to 10 lpm
Accuracy at calibration conditions after tare	± 2% Full Scale	
Repeatability	± 2% Full Scale	
Zero Shift and Span Shift	0.02% Full Scale / °C / Atm	
Operating Range / Turndown Ratio	2% to 100% Full Scale / 50:1 Turndown	
Maximum Flow Rate	102.4% FS Controllable	
Typical Response Time	100 ms (Adjustable)	
Warm-up Time	< 1 Second	

Operating Conditions	LC Controllers	LCR Controllers
Operating Temperature	Non-Freezing -10° to +60 °C	
Maximum Internal Pressure	100 psig	
Proof Pressure	200 psig	
Mounting Attitude Sensitivity	None	Mount with valve cylinder vertical & upright
Valve Type	Normally Closed	
Ingress Protection	IP40	
Wetted Materials	LC: 430FR, 302, 303, & 316L Stainless Steel, Viton®, FFKM. LCR: 302,303, 304, 316 & 410 SS, Viton, FFKM, PTFE If your application demands a different material, please contact Alicat.	

Communication / Power	LC Controllers	LCR Controllers
Monochrome LCD or Color TFT Display with integrated touchpad	Simultaneously displays Flow, Temperature and Gauge Pressure	
Digital Communications Options ¹	RS-232 Serial / RS-485 Serial / Modbus RTU / PROFIBUS / EtherNet/IP / DeviceNet / Modbus TCP/IP / EtherCAT	
Analog Input / Output Signal ² Options	0-5 Vdc / 1-5 Vdc / 0-10 Vdc / 4-20 mA	
Optional Secondary Output Signal ²	0-5 Vdc / 1-5 Vdc / 0-10 Vdc / 4-20 mA	
Electrical Connection Options	8-Pin Mini-DIN / 9-pin D-sub (DB9) / 15-pin D-sub (DB15) / 6-pin locking / 8-pin M12	
Supply Voltage	12-30 Vdc (15-30 Vdc for 4-20 mA outputs)	24-30 Vdc
Supply Current	0.250 Amp	0.750 Amp

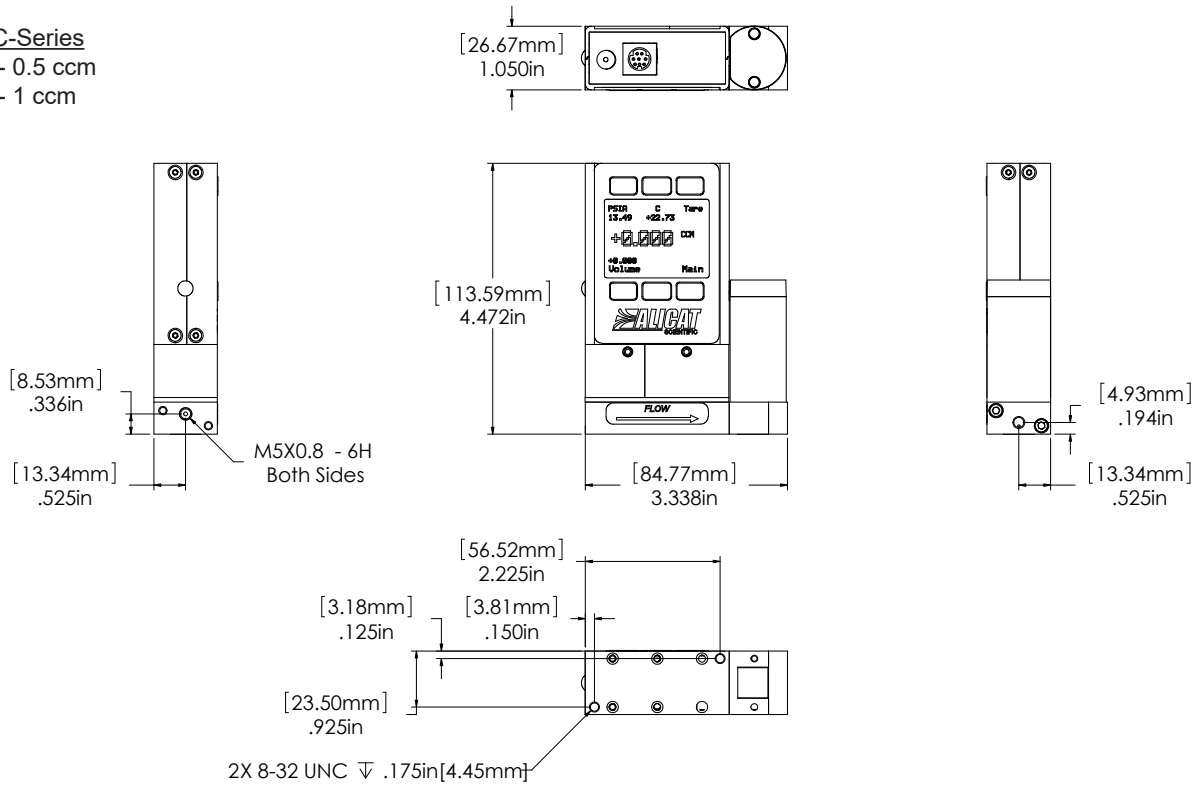
1. The **Digital Output Signal** communicates Flow and Temperature (optional Pressure sensor available)
2. The **Analog Output Signal** and **Optional Secondary Analog Output Signal** communicate your choice of Flow or Temperature

Range Specific Specifications

Full Scale Flow	Pressure Drop ¹ at FS Flow (PSID)	Mechanical Dimensions ²	Process Connections ³
LC Controllers			
0.5 ccm to 1 ccm		4.4"H x 3.4"W x 1.1"D	M5 (10-32) Female Thread⁴
2 ccm		4.6"H x 3.6"W x 1.1"D	1/8" NPT Female
5 ccm to 100 ccm	5.0		
200 ccm to 500 ccm	7.5		
LCR Controllers			
1 lpm to 2 lpm	4.0	5.7"H x 7.7"W x 2.3"D	1/4"NPT Female
5 lpm	10.0		
10 lpm			

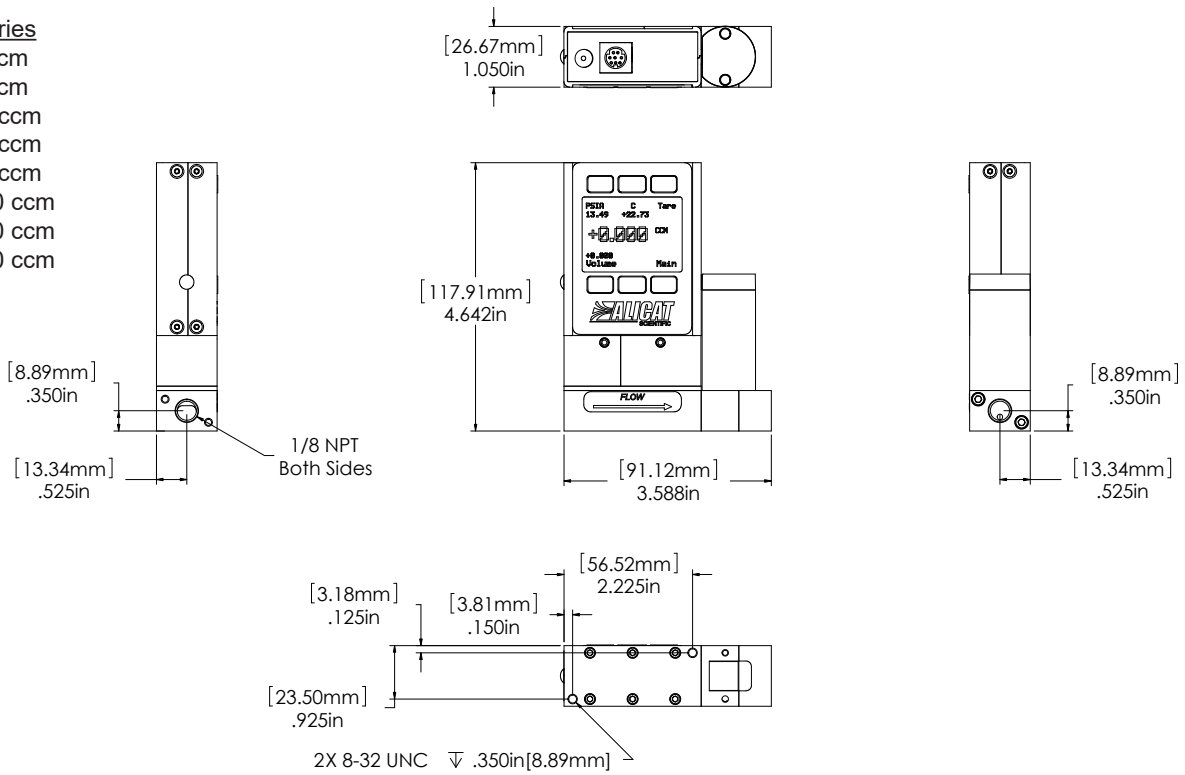
1. Lower Pressure Drops Available, please contact Alicat.
2. See drawings for metric equivalents.
3. Compatible with Swagelok® tube, Parker®, face seal, push connect and compression adapter fittings. VCR and SAE connections upon request.
4. Shipped with M-5 (10-32) Male Buna-N O-ring face seal to 1/8" Female NPT fittings.

LC-Series
 0 - 0.5 ccm
 0 - 1 ccm



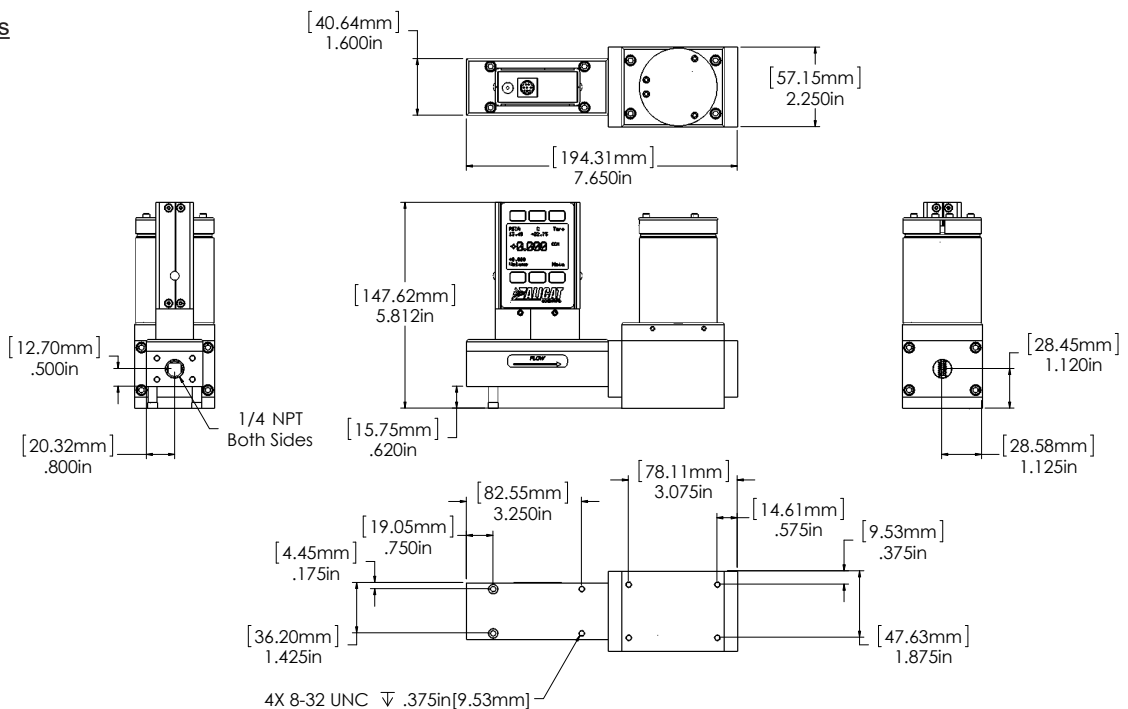
0.5 ccm to 1 ccm approximate shipping weight: 1.1 lb.

LC-Series
 0 - 2 ccm
 0 - 5 ccm
 0 - 10 ccm
 0 - 20 ccm
 0 - 50 ccm
 0 - 100 ccm
 0 - 200 ccm
 0 - 500 ccm



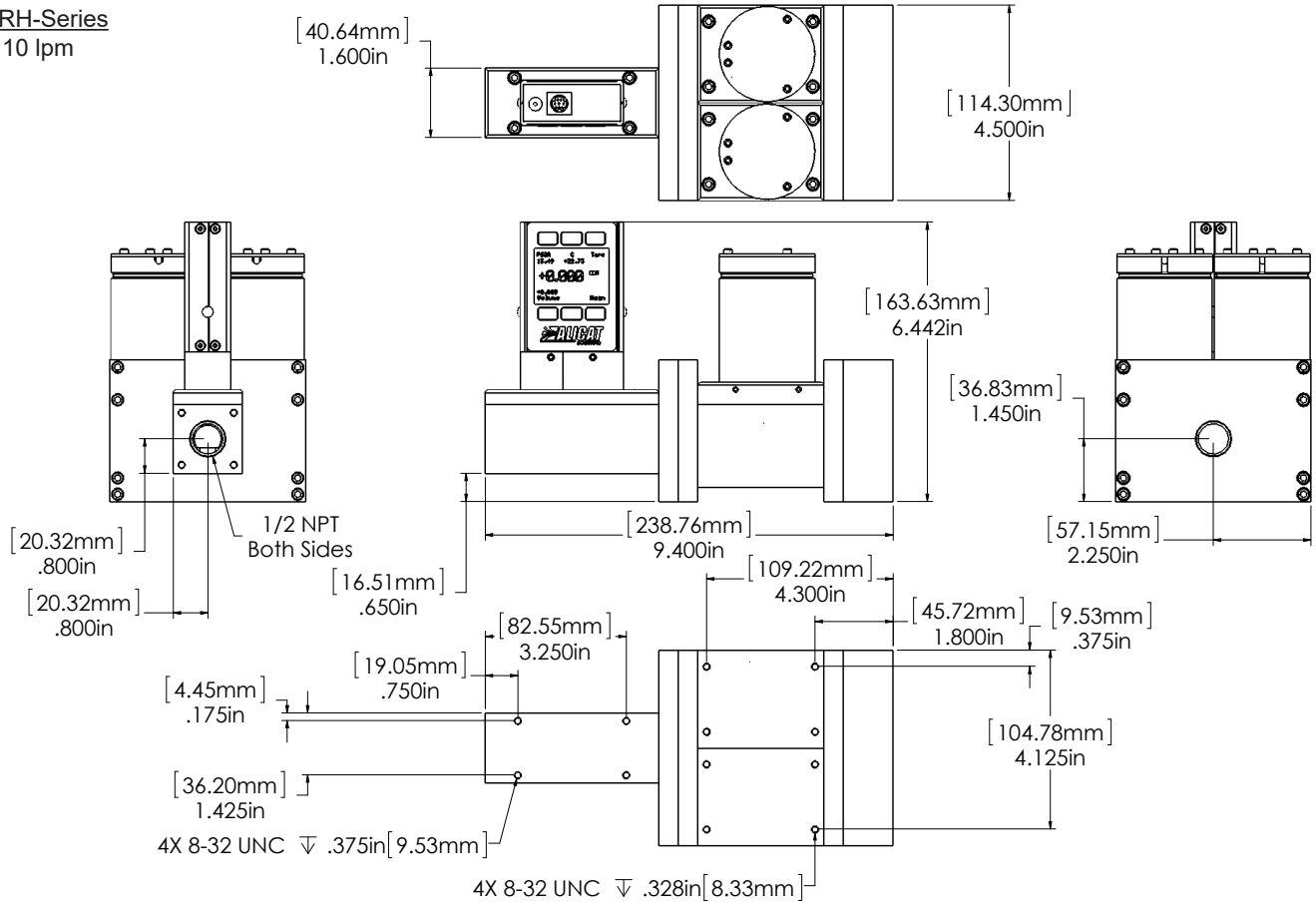
5 ccm to 500 ccm approximate shipping weight: 1.1 lb.

LCR-Series
 0 - 1 lpm
 0 - 2 lpm
 0 - 5 lpm



1 lpm to 5 lpm approximate weight: 9.0 lb.

LCRH-Series
0 - 10 lpm



10 lpm approximate weight:26.0 lb.