

PRODUCT OVERVIEW

- > Full featured, fully programmable, automated air displacement pipette with automatic detection of liquid levels and tip blockage
- > Prevention of cross contamination and carryover during sample transfer and reagent aliquoting
- > Eliminate tubing and priming normally required for liquid handling

FEATURES

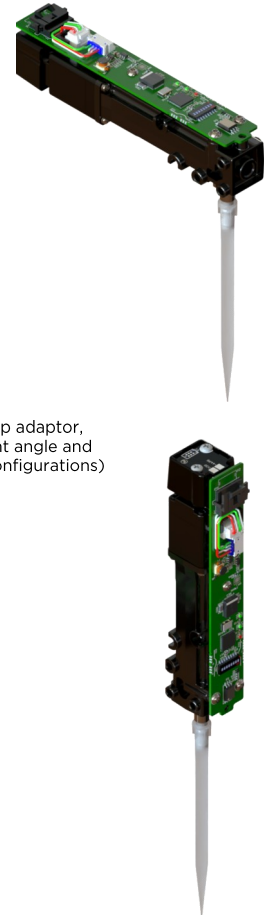
- > High resolution encoder for dependable step loss detection
- > Pressure-based liquid level detection (pLLD)
- > Real time pressure data for aspirate and dispense verification and blocked tip detection
- > Optional mounting configurations with horizontal or vertical orientations
- > Configurable for single unit operation or address up to 16 pumps individually
- > Functional status feedback with LED indicators
- > Optional PCBA cover
- > Available in 1000 μL and 250 μL volumes
- > Optional tip adaptor and disposable tips
- > Allows custom tip adaptors in orientations and sizes to fit your instrument design

CONFIGURED OPTIONS

Disposable Tip Sizes	1000 μL , 200 μL , 50 μL clear tips with or without filter barrier
Accessory Items	Optional tip adapter for up to 1000uL

BASE MODELS

- > 1000 μL
- > 250 μL



(shown with optional tip adaptor, disposable tip, and right angle and inline port mounting configurations)

AIR-Z FLEX PRODUCT SPECIFICATIONS

Drive Design	Stepper motor driven linear actuator with high resolution encoder for step loss detection
Dispense Speed	Pump volume 1000 μ L: 1 μ L/ second up to 1800 μ L/second Pump volume 250 μ L: 1 μ L/second up to 450 μ L/second
Volume Resolution	Pump volume 1000 μ L: 0.301 μ L/half step increment with 3700 increments/full stroke Pump volume 250 μ L: 0.075 μ L/half step increment with 3500 increments/full stroke
Communication Interfaces	RS485 or CAN (using industry specific communication protocols)
Addressing	Maximum of 16 pumps individually
Operating Noise	<60 dBA, Indoor use only
Operating Temperature and Humidity	15°C to 40°C (59°F to 104°F) and 20% to 95% RH at 40°C (104°F) non-condensing
Non-Operating Temperature and Humidity	-20°C to 65°C (-4°F to 149°F) and 30% to 85% RH, non-condensing
Media Temperature	15°C to 40°C (59°F to 104°F)
Overall Dimensions (H x W x D) (with tip adaptor and without disposable tip)	Vertical orientation: 5.66in. [143.8 mm] X 1.25 in. [31.8 mm] X .83 in. [21.0 mm] Horizontal orientation: 2.14 in. [54.4 mm] X 4.77 in. [121.1 mm] X .83 in. [21.0 mm]
Weight	100 g
Fluid Contact Materials (in case of accidental fluid aspiration)	1000 μ L & 250 μ L— Polycarbonate, PTFE, Silicone lubricant, Silicone, PPS, TPE, Borosilicate glass, Viton and Stainless steel

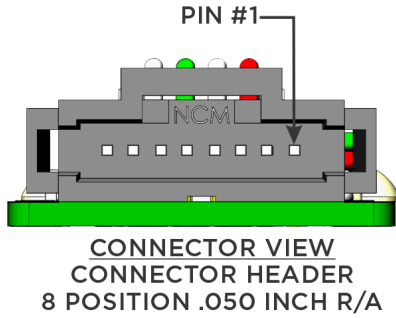
FUNCTIONAL PARAMETERS WITH FULL ELECTRONICS *

Imprecision (full volume) in 50 μ L, 200 μ L, 1000 μ L Tips	\leq 0.75% CV
Inaccuracy (full volume)	\leq 1% Tip volume
10% Tip volumes Imprecision Inaccuracy	\leq 1% CV \leq 2%
Power requirement	24VDC, 500 mA
Power rating	<500 mA (peak)

*Specifications were determined gravimetrically using a precision balance, an automated robotic handling system with optimized pump protocol, and tightly controlled environmental conditions; test temperature 23C \pm 2C, relative humidity 35% \pm 5%, pump and test liquid (distilled water) temperature \leq \pm 1 C of room temperature. Results may vary in other environmental conditions, with other liquids, with disposable tips used, and depending on pump handling methods.

Mechanical Envelope and Interface

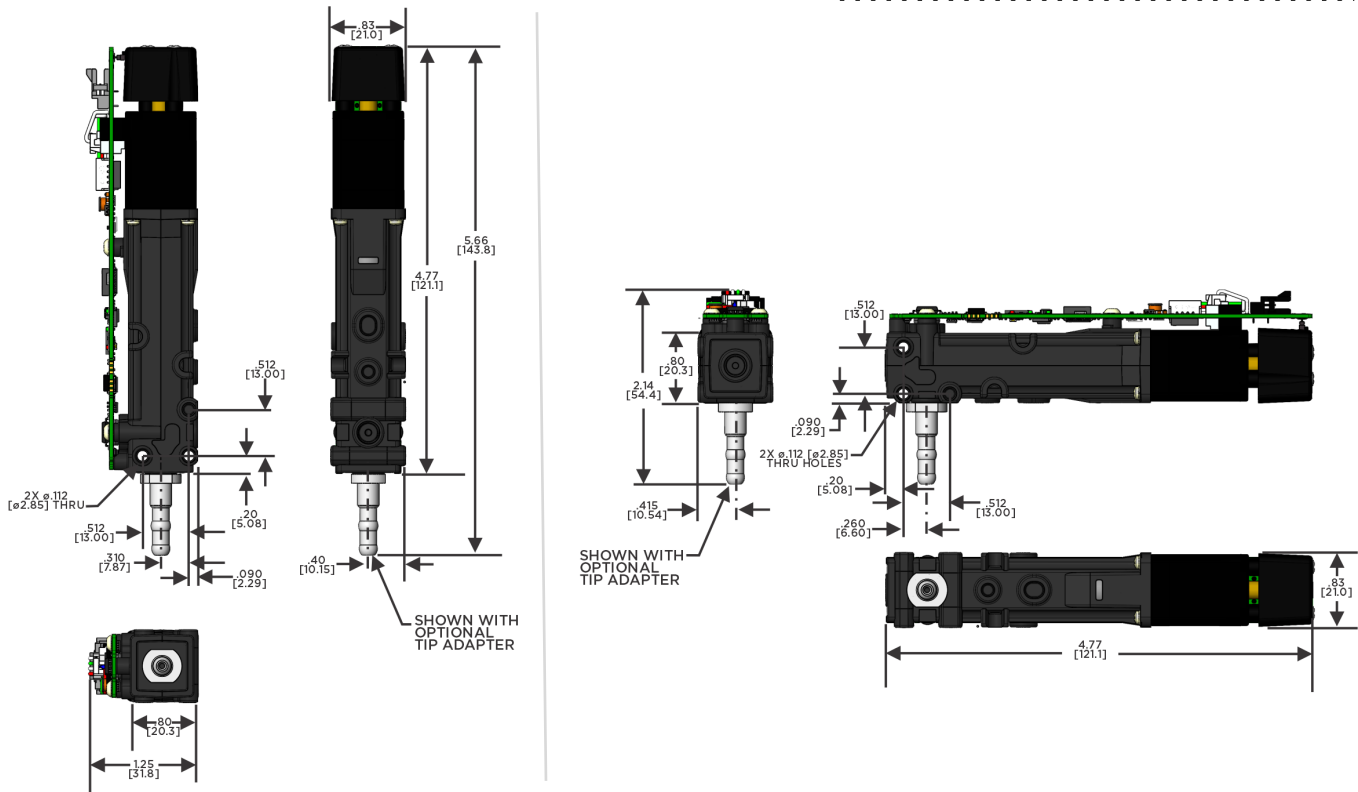
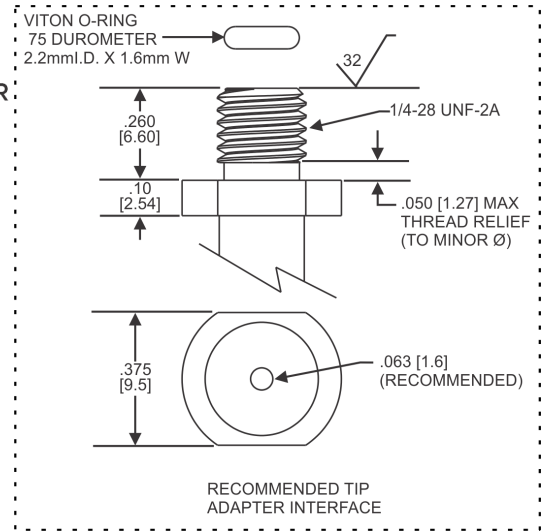
(Dimensions reference only)



CONNECTOR PINOUT INFORMATION FOR CUSTOMER CABLE INTERFACE TO PCBA

PIN	FUNCTION
1	+ 24 VDC
2	GND
3	RS485A
4	RS485B
5	I/O-1
6	I/O-2
7	CAN +
8	CAN -

Notes: TE/AMP 6-104074-0



Note: Dimensions in inches [mm] unless otherwise specified.

Optional Configuration Mechanical Envelope and Interface

(Dimensions reference only)

Actuator Motor Connector Pinout

PIN#	FUNCTION
1	Phase B-
2	Phase B+
3	Phase A+
4	Phase A-

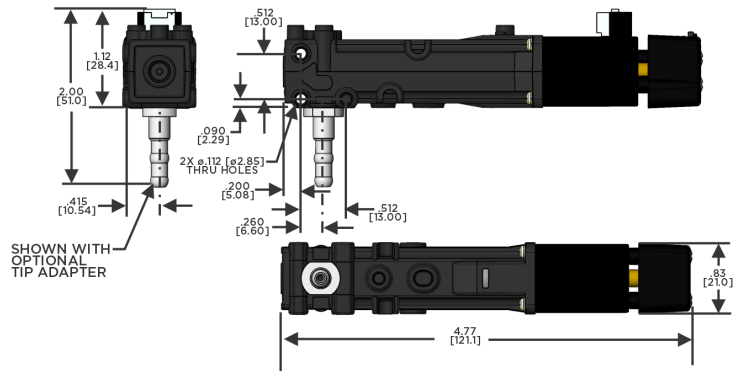
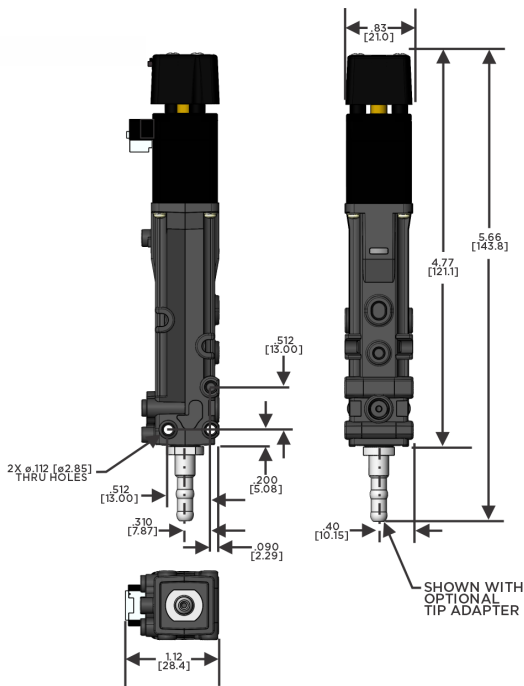
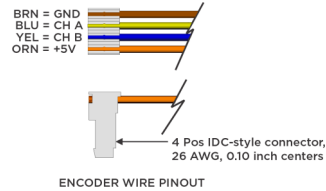
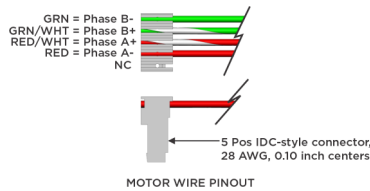
Encoder Connector Pinout

PIN#	FUNCTION
1	GND
2	CH-B
3	GND
4	CH-A
5	GND
6	+5 VCC

Notes: Mating connector housing – JST ZER-04V-S

Notes: Mating connector housing – JST SHR-06V-S

WIRE CONNECTIONS FOR OPTIONAL EVALUATION CABLES



Note: Dimensions in inches [mm] unless otherwise specified.

LIQUID HANDLING SOLUTIONS FOR OEMS WORLDWIDE

tricontinent.com



Americas
Tricontinent
Scientific, Inc.

12740 Earhart Ave
Auburn, CA 95602
USA
Tel: +1 800 937 4738 or +1 530 273 8888
liquidhandling.tcs@irco.com

Asia Pacific
Gardner Denver Thomas Pneumatic
Systems (Wuxi), Co., Ltd.
No. 1 New Dong An Road,
Shuofang Town
Wuxi, Xinwu District
Jiangsu 214142 China
Tel: +86 510 6878 2258
tricontinent.cn@irco.com

EMEA
(HEADQUARTERS)
Gardner Denver Thomas GmbH

Livry-Gargan-Str. 10
82256 Fürstenfeldbruck
Germany
Tel: +49 8141 2280 0
thomas.de@irco.com

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