Air-Z Premier

TRICONTINENT®
An Ingersoll Rand Business

PRODUCT OVERVIEW

> Full featured, fully programmable, automated air displacement pipette with integrated tip ejection and 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

> Multiple liquid level detection options: pressure, capacitive, and hybrid

> Real time pressure data for aspirate and dispense verification and blocked tip detection

> Integrated tip-on and tip-loss detection

> Integrated tip ejector

> Configurable for single unit operation or address up to 16 pumps individually

> Functional status feedback with LED indicators

> Pump volume: 1000 µL

> Tip volume availability: 50 µL, 200 µL, 1000 µL

> Lightweight, compact, and maintenance free

> Optional cover kit and disposable tips

CONFIGURED OPTIONS

Disposable Tip Sizes	50 µL, 200 µL, 1000 µL in clear or capacitive (black) styles & with or without filter barrier
Accessory Items	Cover Kit

BASE MODEL

> 1000 µL

(shown with optional cover and disposable tip)

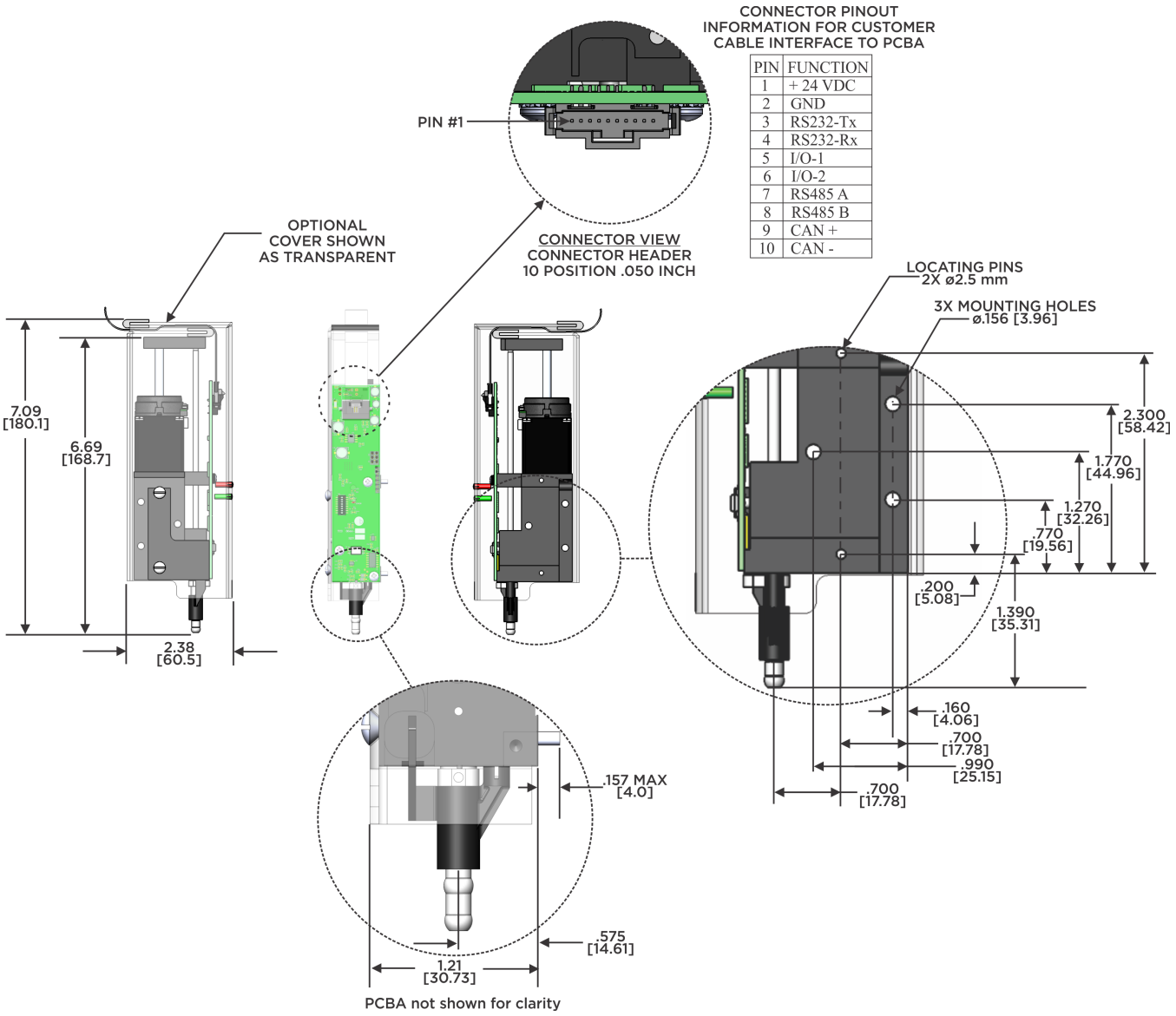
AIR-Z PREMIER PRODUCT SPECIFICATIONS	
Drive Design	Stepper motor driven lead screw with high resolution optical encoder for step loss detection
Dispense Speed	1 µL/second up to 3000 µL/second
Liquid Level Detection	Pressure based (pLLD), capacitive (cLLD), hybrid (hLLD)
Volume Resolution	Standard mode 0.382 µL/step with 3000 increments/full stroke High-Resolution mode 0.024 µL/step with 48000 increments/full stroke
Communication Interfaces	RS232, 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) (without cover, not including disposable tip)	6.69 in. [168.7 mm] x 2.38 in. [60.5 mm] x 1.17 in. [29.7 mm]
Weight	300 gm
Fluid Contact Materials (in case of accidental fluid aspiration)	Aluminum, PTFE, Nylon, Silicone lubricant, Silicone, PPS, Neoprene, Borosilicate glass and Stainless steel

FUNCTIONAL PARAMETERS *	
Imprecision (full volume) in 50 µL, 200 µL, 1000 µL Tips	≤0.75% CV
Inaccuracy (full volume)	≤1% Tip volume
10% Tip volumes Imprecision Inaccuracy	 ≤1% CV ≤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 ±2C, relative humidity 35% ±5%, pump and test liquid (distilled water) temperature ≤ ±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)



PIN	FUNCTION
1	+ 24 VDC
2	GND
3	RS232-Tx
4	RS232-Rx
5	I/O-1
6	I/O-2
7	RS485 A
8	RS485 B
9	CAN +
10	CAN -

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

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