

# ErgoNOW™ Bottle System Key-coded Connector

*ErgoNOW™ connectors support pressure, pressure assist, or pump dispense of chemicals with misconnect prevention and an ergonomic design for ease of use*

The ErgoNOW™ dispense connector offers mechanical and electronic misconnect prevention. It is designed for use with the NOWPak® Liner-based bottle system or PDMPak® bottle system for pressurized applications. Used in conjunction with the SmartCap™ or IntelliCap™ closure, it snaps into place only when the connector and closure key codes match.



## APPLICATIONS

- PL type ErgoNOW connectors provide indirect pressure assist or pump delivery of chemical using the NOWPak liner-based bottle system.
- PD type ErgoNOW connectors provide indirect pressure dispense using the PDMPak bottle system or NOWPak canister system.

## FEATURES & BENEFITS

- Key-coded system helps prevent dispensing the wrong material
- Snap on/easy release design provides easy installation and removal of the connector
- Self-centering keyed retainer ensures perfect alignment of the connector with the SmartCap closure
- LED provides visual indication that the connector is installed correctly (for connectors with the sensor option)
- Standard pressure relief valve provides safer system operation
- Safety interlock mechanism prevents connector from accidental release during pressure dispense operation
- Sealed delivery system ensures safe chemical delivery and helps prevent external contamination

## SPECIFICATIONS

<b>Dispense method</b>	PLXXXXXXXXXX-KEY CODE PDXXXXXXXXXXX-KEY CODE	Pump Dispense with Pressure Assist Pressure Dispense	
<b>Operation</b>		<b>PL ErgoNOW Connector</b>	<b>PD ErgoNOW Connector</b>
	Operating pressure	34 kPa (5.0 psig)*	101 kPa (14.7 psig)
	Pressure relief valve	48 kPa (7.0 psig)**	138 kPa (20.0 psig)**
<b>Materials of construction</b>	Wetted parts	Probe	PTFE
		Liquid outlet fitting	PFA
		Probe O-ring seals	Kalrez®, Chemraz®, or Perfrez®
	Nonwetted parts	Connector body	Polypropylene
		Gas inlet fitting	Stainless steel
		Gas inlet nozzle O-ring seals	EPDM, Viton®, or FKM
		Keyed retainer	Delrin®, Noryl®, or Ultem® 1000
		Strain relief	Nylon and polypropylene (not preassembled by Entegris)
<b>Manufacturing standards</b>	Fabricated and tested in a Class 5 Cleanroom as per International Standard ISO 14644-1:*** Cleanrooms and associated controlled environments – Part 1: Classification of air cleanliness. 100% pressure decay tested using high-purity nitrogen.		
<b>Cleanliness</b>	Connector to be free from lubricants and other foreign materials consistent with Entegris' processes and procedures.		
<b>Labeling</b>	Each connector body is labeled with the part number, batch number for traceability, and optionally, a customer-specified chemical description as determined by the SmartCap key code. The PE inner bag is labeled with the part number, the batch number, the quantity and the date of manufacture. The carton is labeled with the part number, the batch number, the quantity and the date of manufacture.		
<b>Packaging</b>	Each connector is double bagged (heat-sealed, cleanroom processed, PE inner bag, heat-sealed, PE outer bag), then packaged in a corrugated shipping carton.		
<b>Shipping information</b>	Box quantity	1	
	Box dimensions	673 mm L x 203 mm W x 146 mm H (26.5" L x 8" W x 5.75" H)	

\*Maximum, up to 2 minutes duration on the NOWPak bottle.

\*\*Nominal cracking pressure.

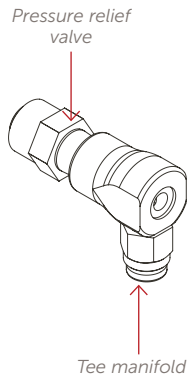
\*\*\*ISO standard certification is kept up to date as necessary to remain current and effective to be able to demonstrate compliance with up-to-date ISO requirements.

## Tube Connections

	OPTIONS	PFA FITTING TYPE	CONNECTS TO TUBING SIZE (OUTER DIAMETER)
<b>Liquid outlet</b>	A	Elbow, Super 300 Type Pillar® thinwall tube	1/4"
	B	Elbow, Flowell™ 60 series, low profile	1/4"
	C	Elbow, Entegris Flaretek® (use strain relief option T or Z)	1/4"
	D	Elbow, Super 300 Type Pillar, thinwall tube	3/8"
	E	Elbow, Super Type Pillar	3/8"
	F	Elbow, Entegris Flaretek (no strain relief)	3/8"
	J	Elbow, Flowell 60 series (no strain relief)	3/8"
	K	Elbow, Flowell 60 series, low profile	6 mm
	L	Elbow, Super Type Pillar	1/4"
	M	Elbow, Flowell 60 series, molded version (use strain relief option T or Z)	1/4"
	OPTIONS	DESCRIPTION	
<b>Gas inlet</b>	A	5/32" tube Quick Connect and gas fitting kit (see page 4 for additional gas fitting kit information)	
	B	1/4" tube Quick Connect (no gas fitting kit)	
	C	1/8" tube Quick Connect (no gas fitting kit)	
	D	1/4" tube Swagelok® fitting (no gas fitting kit)	
	E	1/8" FNPT thread with Quick Connect stem (no gas fitting kit)	
	F	1/8" FNPT thread (no Quick Connect stem, no gas fitting kit)	
	Z	No gas inlet fitting (only the tee fitting with PRV installed)	

## Gas Inlet Fitting Options

**TEE MANIFOLD WITH  
PRESSURE RELIEF VALVE  
(ALL GAS FITTING TYPES)**

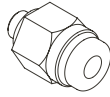


**GAS INLET  
FITTING  
OPTION\***

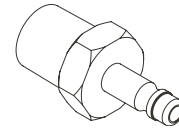
**GAS INLET FITTING**

**ADDITIONAL PARTS INCLUDED –  
GAS FITTING KIT**

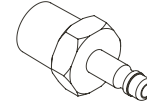
A



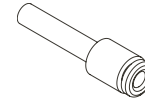
5/32" OD tube Quick Connect



Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem

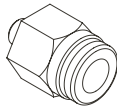


1/8" New-Machine Quick Connect stem (part number CA-00MP NPT 1/8)



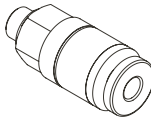
Reducer for 1/8" tube

B



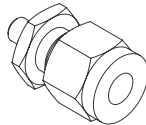
1/4" OD tube Quick Connect

C



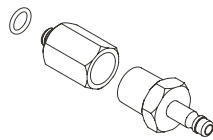
1/8" OD tube Quick Connect

D



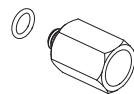
1/4" OD tube, Swagelok

E



1/8" OD FNPT thread with Quick Connect stem

F



1/8" OD FNPT thread

Z

No gas inlet fitting (only the tee fitting with PRV installed)

\* Reference ordering information on page 8.

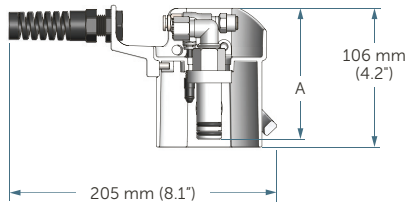
## Proximity Sensor

Item	OUTPUT TYPE	
	NPN	PNP
<b>Operation mode</b>	Normally open	Normally open
<b>Supply voltage</b>	12-24 VDC (Voltage limit including ripple 10-38 VDC)	12-24 VDC (Voltage limit including ripple 10-38 VDC)
<b>Maximum load current</b>	200 mA	200 mA
<b>Current consumption (no load)</b>	10 mA (3 mA typical)	10 mA (3 mA typical)
<b>Wire gauge</b>	24 AWG	24 AWG
<b>PVC cable configuration</b>	Brown = positive supply voltage Blue = negative supply voltage Black = signal lead	Brown = positive supply voltage Blue = negative supply voltage Black = signal lead
<b>Connector options</b>	Tyco® Electronics (formerly AMP) connector, Part Numbers 4-1473562-3 (connector) and 5-1473571-3 (junction box)  Molex® connector, Part Number 50-57-9403  No connector	No connector
<b>CE compliant</b>	Yes	Yes

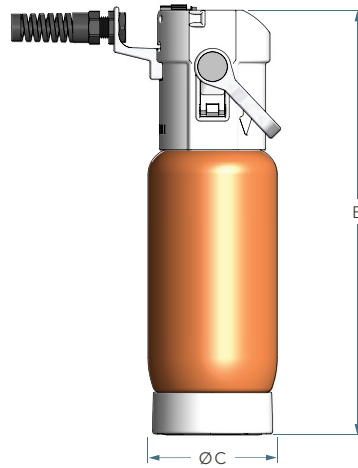
## DIMENSIONS

### PD (Pressure Dispense) Connector

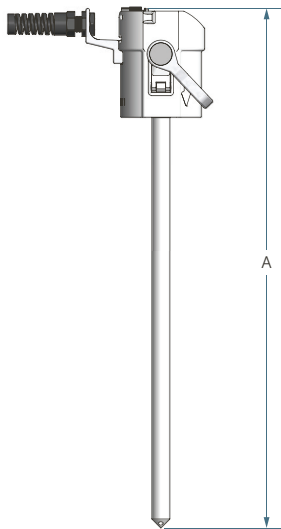
#### Side View Probe Size 00



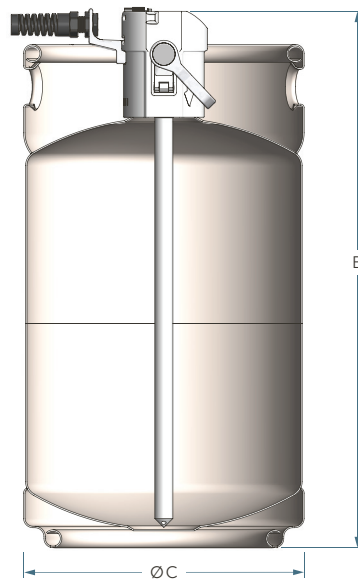
#### ErgoNOW Connector on a 1-liter PDMPak Bottle



#### Side View Probe Sizes 04 and 20



#### ErgoNOW Connector on a 20-liter NOWPak Canister



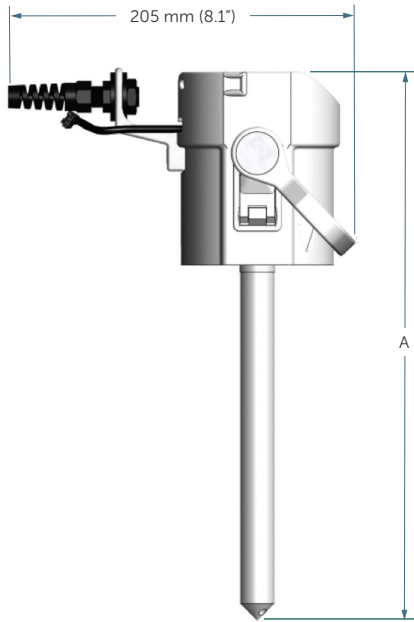
Connector type	Container	Probe size option	Container size	Dimension A height (top of connector to bottom of probe)	Dimension B height (top of connector to bottom of container)	Dimension C width (container diameter)
PD (pressure dispense)	PDMPak bottle	00	1 L	100 mm (4.0")	324 mm (12.8")	99 mm (3.9")
		04	4 L	347 mm (13.6")	368 mm (14.5")	175 mm (6.9")
	Canister (Modified buttress 63 mm thread)	20	20 L	521 mm (20.5")	539 mm (21.2")	282 mm (11.1")

Note: Unless otherwise indicated, all numeric values are nominal.

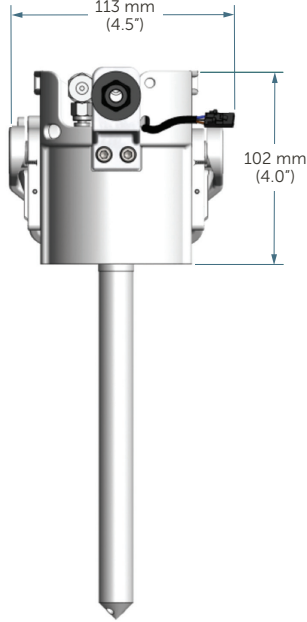
## DIMENSIONS

### PL (Pump Dispense) Connector

#### Side View



#### Front View



### ErgoNOW Connector on a 1-liter NOWPak Bottle



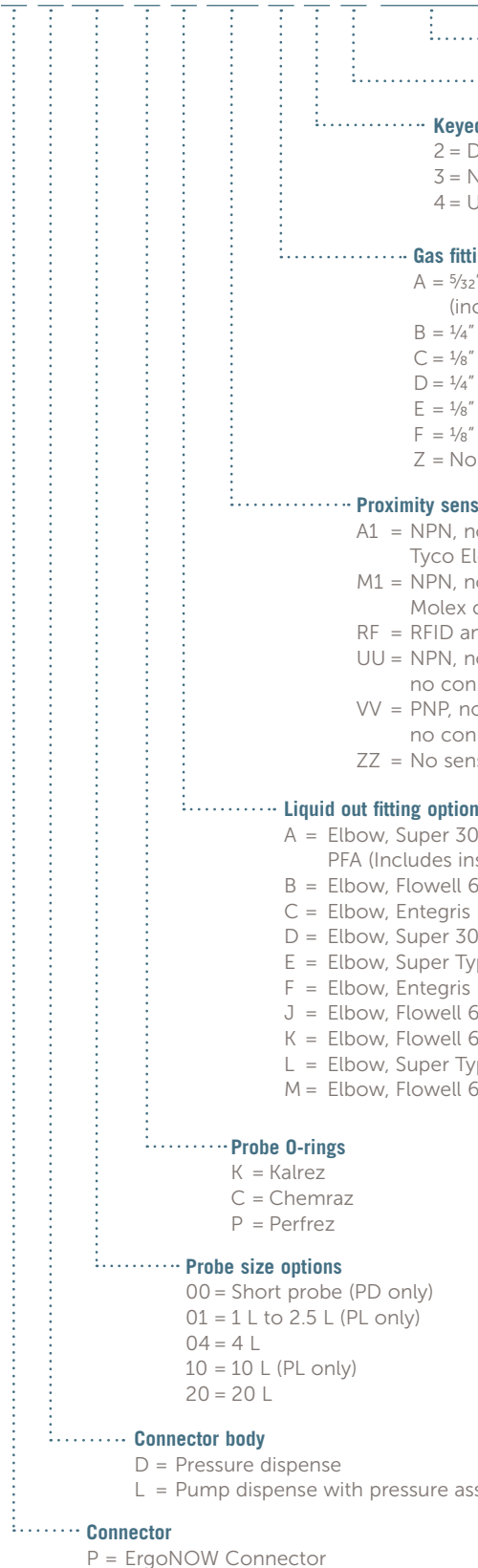
Connector type	Container	Probe size option	Container size	Dimension A height (top of connector to bottom of probe)	Dimension B height (top of connector to bottom of bottle)	Dimension C width (container diameter)
PL (pump dispense)	NOWPak bottle	01	1 L	291 mm (11.5")	304 mm (12.0")	99 mm (3.9")
		01	2.5 L	291 mm (11.5")	303 mm (11.9")	149 mm (5.9")
		04	4 L	320 mm (12.6")	332 mm (13.1")	175 mm (6.9")
		10	10 L	401 mm (15.8")	412 mm (16.2")	230 mm (9.1")
		20	20 L	459 mm (18.1")	474 mm (18.7")	304 mm (12.0")

Note: Unless otherwise indicated, all numeric values are nominal.

## ORDERING INFORMATION

ErgoNOW Connector: part number

P



### Key code

Contact Entegris to obtain customer-specific key code

### Strain relief options

- A = Standard strain relief
- C = NA-118 strain relief
- Y = Short strain relief
- T = Tall strain relief (for use with liquid out options C or M)
- Z = No strain relief

### Keyed retainer material

- 2 = Delrin
- 3 = Noryl
- 4 = Ultem 1000

### Gas fitting options\*

- A = 3/32" OD tube Quick Connect and gas fitting kit (includes gas fitting kit)
- B = 1/4" OD tube Quick Connect (no gas fitting kit)
- C = 1/8" OD tube Quick Connect (no gas fitting kit)
- D = 1/4" OD tube Swagelok fitting (no gas fitting kit)
- E = 1/8" OD FNPT thread with Quick Connect stem (no gas fitting kit)
- F = 1/8" OD FNPT thread (no Quick Connect stem, no gas fitting kit)
- Z = No gas inlet fitting (only the tee fitting with PRV installed)

### Proximity sensor type/length/connector options

- A1 = NPN, normally open sensor, 150 mm (6") long, Tyco Electronics Connector
- M1 = NPN, normally open sensor, 150 mm (6") long, Molex connector
- RF = RFID antenna
- UU = NPN, normally open sensor, 6 m (19.68') long, no connector
- VV = PNP, normally open sensor, 5 m (16.4") long, no connector
- ZZ = No sensor (black PE plug)

### Liquid out fitting options

- A = Elbow, Super 300 Type Pillar thinwall tube, 3/8" x 1/4", PFA (Includes insert sleeve for 1/4" non-thinwall tube)
- B = Elbow, Flowell 60 series, 3/8" x 1/4", low profile, PFA
- C = Elbow, Entegris Flaretek, 3/8" x 1/4", PFA (use strain relief option T or Z)
- D = Elbow, Super 300 Type Pillar, 3/8" x 3/8", PFA
- E = Elbow, Super Type Pillar, 3/8" x 3/8", PFA
- F = Elbow, Entegris Flaretek, 3/8" x 3/8", PFA (no strain relief)
- J = Elbow, Flowell 60 series, 3/8" x 3/8", PFA (no strain relief)
- K = Elbow, Flowell 60 series, 3/8" x 6 mm, low profile, PFA
- L = Elbow, Super Type Pillar, 3/8" x 1/4", PFA
- M = Elbow, Flowell 60 series, 3/8" x 1/4", PFA, molded version (use strain relief option T or Z)

### Probe O-rings

- K = Kalrez
- C = Chemraz
- P = Perfrez

### Probe size options

- 00 = Short probe (PD only)
- 01 = 1 L to 2.5 L (PL only)
- 04 = 4 L
- 10 = 10 L (PL only)
- 20 = 20 L

### Connector body

- D = Pressure dispense
- L = Pump dispense with pressure assist

### Connector

- P = ErgoNOW Connector

\*See page 4 for additional gas fitting information.



## ErgoNOW accessories and replacement parts:

Part number	Description
PA-12-XXYYZZ	Kit, retainer only, Delrin
PA-13-XXYYZZ	Kit, retainer only, Noryl
PA-14-XXYYZZ	Kit, retainer only, Ultem 1000
LKR-AA-XXYYZZ	Kit, keyed retainer, Delrin (contains keyed retainer, hardware, retaining clip, and nozzle O-ring)
NA-47	SmartCap and IntelliCap tear tab removal tool
NA-47-SS	SmartCap and IntelliCap tear tab removal tool, stainless steel
NA-27	O-ring removal tool kit
NA-51-A-XXYYZZ	Torque tool for SmartCap with keyed insert. Contains NA-51 torque tool body, and NA-51-XXYYZZ keyed insert; NA-51 and NA-51-XXYYZZ are also available for purchase separately
NA-117*	Upgrade kit, converts SmartProbe to ErgoNOW connector; does not include gas inlet or strain relief
NA-117-AA*	Upgrade kit, converts SmartProbe to ErgoNOW connector with gas fitting option A (see pages 3-4 for gas fitting options) and strain relief
NA-117-EA*	Upgrade kit, converts SmartProbe to ErgoNOW connector with gas fitting option E (see pages 3-4 for gas fitting options) and strain relief

Part number	Description
NA-117-FA*	Upgrade kit, converts SmartProbe to ErgoNOW connector with gas fitting option F (see pages 3-4 for gas fitting options) and strain relief
PA-09-A	Gas fitting kit — contains: – Tee fitting with pressure relief valve – Nozzle compression spring – ½" OD FNPT thread with Quick Connect stem – EPDM nozzle O-ring – Stainless steel shouldered nozzle – Viton® O-ring
PA-09-AX	Gas inlet fitting assembly option A, for ErgoNOW connector
PA-09-CX	Gas inlet fitting assembly option C, for ErgoNOW connector
PA-09-E	Gas inlet fitting assembly option E (no tee), for ErgoNOW connector
PA-06	Kit, Kalrez O-ring, quantity of 2
400765-C	Gas fitting component, stainless steel bulkhead adaptor fitting for ¼", New-Machine, cleaned
401209-C	Replacement, stainless steel shouldered nozzle

\* Note: When upgrading a SmartProbe connector to an ErgoNOW connector, both the NA-117 upgrade kit of choice and an ErgoNOW replacement keyed retainer must be ordered. The ErgoNOW PA-12-XXYYZZ (Delrin), PA-13-XXYYZZ (Noryl), or PA-14-XXYYZZ (Ultem 1000) keyed retainer should be ordered to match the key code of the original SmartProbe connector or intended chemistry. SmartProbe and ErgoNOW keyed retainers are not interchangeable.

### FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](http://entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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