

SmartProbe® Bottle System Key-coded Connector

SmartProbe connectors support pressure assist or pump dispense of chemicals with misconnect prevention

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

APPLICATIONS

- SmartProbe connectors provide indirect pressure assist or pump delivery of chemical using the NOWPak liner-based bottle system



SmartProbe SP series dispense connector

FEATURES & BENEFITS

- Key-coded system helps prevent dispensing the wrong material
- Self-centering keyed retainer ensures perfect alignment of the connector with the SmartCap closure
- Sealed delivery system ensures safe chemical delivery and helps prevent external contamination

SPECIFICATIONS

Dispense method	Pump dispense with pressure assist			
Operation	Operating pressure	34 kPa (5.0 psig)*		
	Pressure relief valve	48 kPa (7.0 psig)**		
Materials of construction	Wetted	Probe	PTFE	
		Liquid outlet fitting	PFA	
		Probe O-ring seals	EPDM, Chemraz®, or Kalrez®	
	Nonwetted	Connector body	Polypropylene	
		Gas inlet fitting	Stainless steel	
		Gas inlet nozzle O-ring seals	EPDM	
		Keyed retainer	Delrin® or Noryl®	
Manufacturing standards	Fabricated and tested in a Class 5 Cleanroom as per International Standard ISO 14644-1:1999 Cleanrooms and associated controlled environments – Part 1: Classification of air cleanliness.			
Cleanliness	Connector to be free from lubricants and other extraneous foreign materials consistent with Entegris' processes and procedures.			

*Maximum for up to two minutes' duration on the NOWPak bottle

**Nominal cracking pressure

SPECIFICATIONS (CONTINUED)

Tube connections

	OPTIONS	PFA FITTING TYPE	CONNECTS TO TUBING SIZE (OUTER DIAMETER)	SUPPORTED SMARTPROBE CONFIGURATIONS
Liquid outlet	A	Elbow, Quickgrip®, low profile	1/4"	SD, SM, SP, SR
	B	Elbow, Super Type Pillar®	1/4"	SM, SP, SR
	C	Elbow, Super Type Pillar	6 mm	SM, SP, SR
	D	Elbow, Super Type Pillar, thinwall tube	1/4"	SM, SP, SR
	K	Elbow, Flowell™ 60 Series, low profile	1/4"	SM only
	L	Elbow, Super Type Pillar	8 mm	SM only
	P	Union, PFA 3/8 x 1/8 FNPT	1/8"	SP only
	OPTIONS	DESCRIPTION		
Gas inlet for SP and SR type connectors <i>(Note that SD type connectors do not have a gas inlet)</i>	A	Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem		
	B	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)		
	C	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) Quick Connect body, M5 x 0.8" thread, New-Machine Quick Connect fitting, M5 x 0.8", 3.2 mm OD tube		
	D	Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem Quick Connect stem, 1/8" NPT, 1/8" tube, Swagelok® Quick Connect body, 1/8" OD tube, Swagelok		
	E	Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem Quick Connect stem, 1/8" NPT, 1/8" tube, Swagelok		
	F	Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem Quick Connect body, 1/4" OD tube, Swagelok Quick Connect stem, 1/8" NPT, 1/4" tube, Swagelok		
	H	Reducer 1/8" OD tube Quick Connect to 5/32" diameter tube stub, SMC		
	X	Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem Connector, 1/8" NPT to 1/4" OD tube, Swagelok		

SPECIFICATIONS (CONTINUED)

Tube connections (continued)

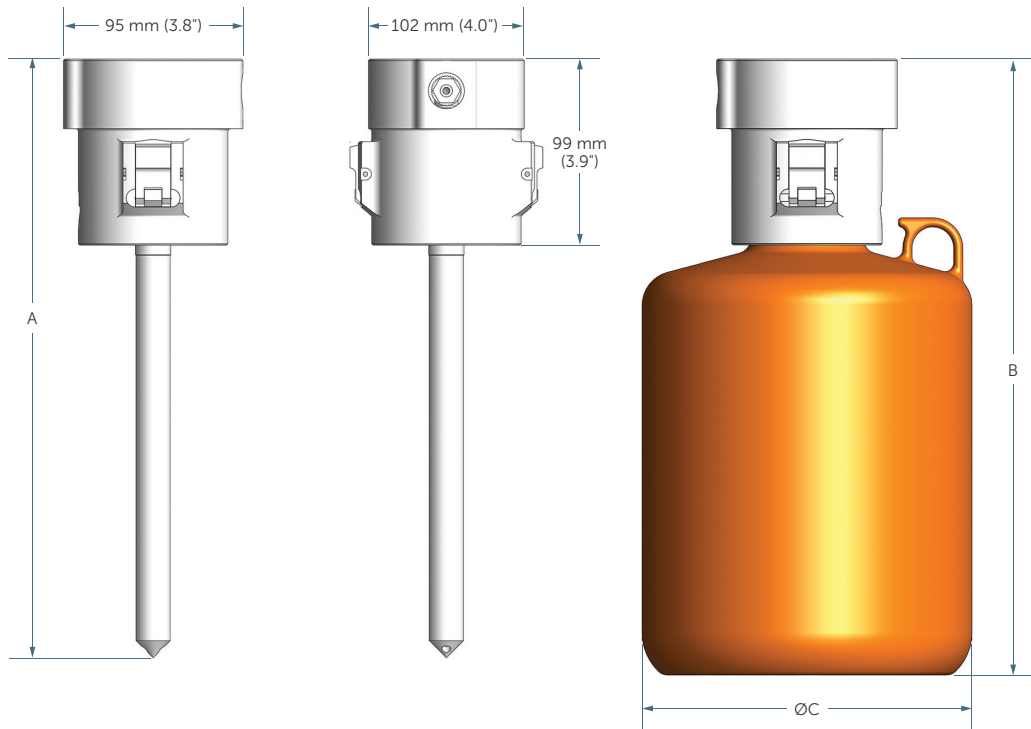
	OPTIONS	DESCRIPTION
Gas inlet for SM type connectors <i>(Note that SD type connectors do not have a gas inlet)</i>	B	Elbow, 5/32" OD tube Quick Connect to 5/32" OD tube Quick Connect Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem 1/8" New-Machine Quick Connect stem (part number CA-00MP NPT 1/8)
	C	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) Elbow, 5/32" OD tube Quick Connect to 5/32" OD tube Quick Connect Quick Connect body, M5 x 0.8" thread, New-Machine Quick Connect fitting, M5 x 0.8", 3.2 mm OD tube
	F	Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem Elbow, 5/32" OD tube Quick Connect to 5/32" OD tube Quick Connect Quick Connect body, 1/4" OD tube Quick Connect stem, 1/8" NPT, 1/4" tube
	G	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) Pressure relief valve, 1/8" NPT 5 psi Coupling, hex 1/8" FNPT to 1/8" FNPT

Proximity sensor

ITEM	OUTPUT TYPE	
	NPN	PNP
Operation mode	Normally open	
Supply voltage	12 – 24 VDC (Voltage limit including ripple 10-38 VDC)	
Maximum load current	200 mA	
Current consumption (no load)	10 mA (3 mA typical)	
Wire gauge	24 AWG	
PVC cable configuration	Brown = positive supply voltage Blue = negative supply voltage Black = signal lead	
Connector options	Tyco® Electronics (formerly AMP) connector	No connector
	Molex connector	—
	No connector	—

DIMENSIONS

SD Type SmartProbe Connector

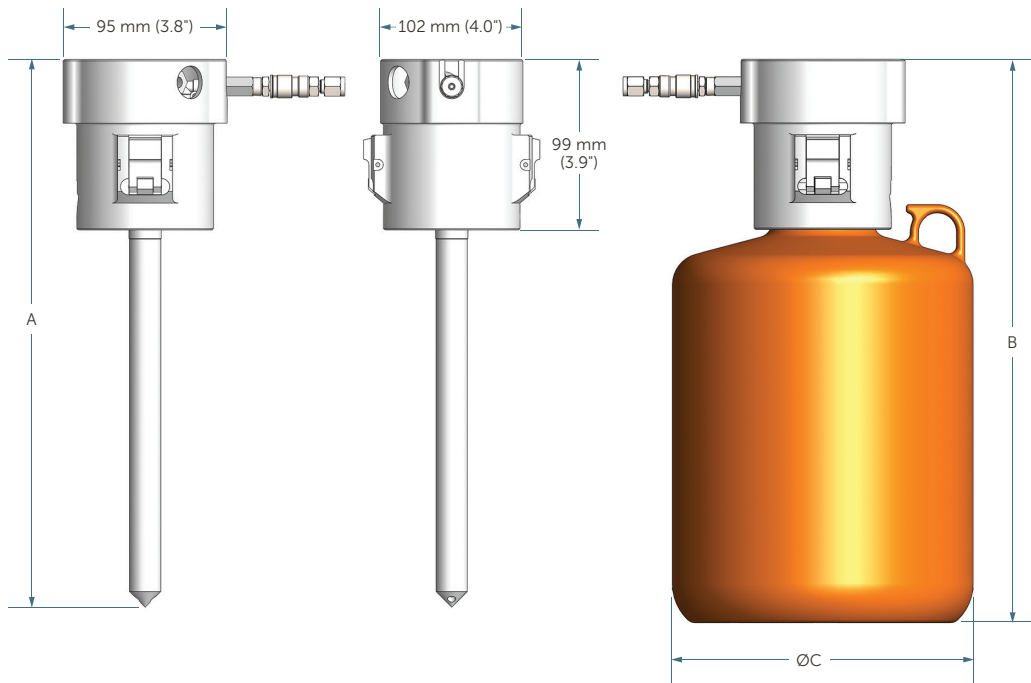


SD connector type

Probe size option	Container size	A	B	C
2	1 L	289 mm (11.4")	299 mm (11.8")	99 mm (3.9")
2	2.5 L	289 mm (11.4")	297 mm (11.7")	149 mm (5.9")
4	4 L	318 mm (12.5")	327 mm (12.9")	175 mm (6.9")
5	10 L	399 mm (15.7")	407 mm (16.0")	230 mm (9.1")
6	20 L	457 mm (18.0")	469 mm (18.5")	305 mm (12.0")

DIMENSIONS (CONTINUED)

SP Type SmartProbe Connector

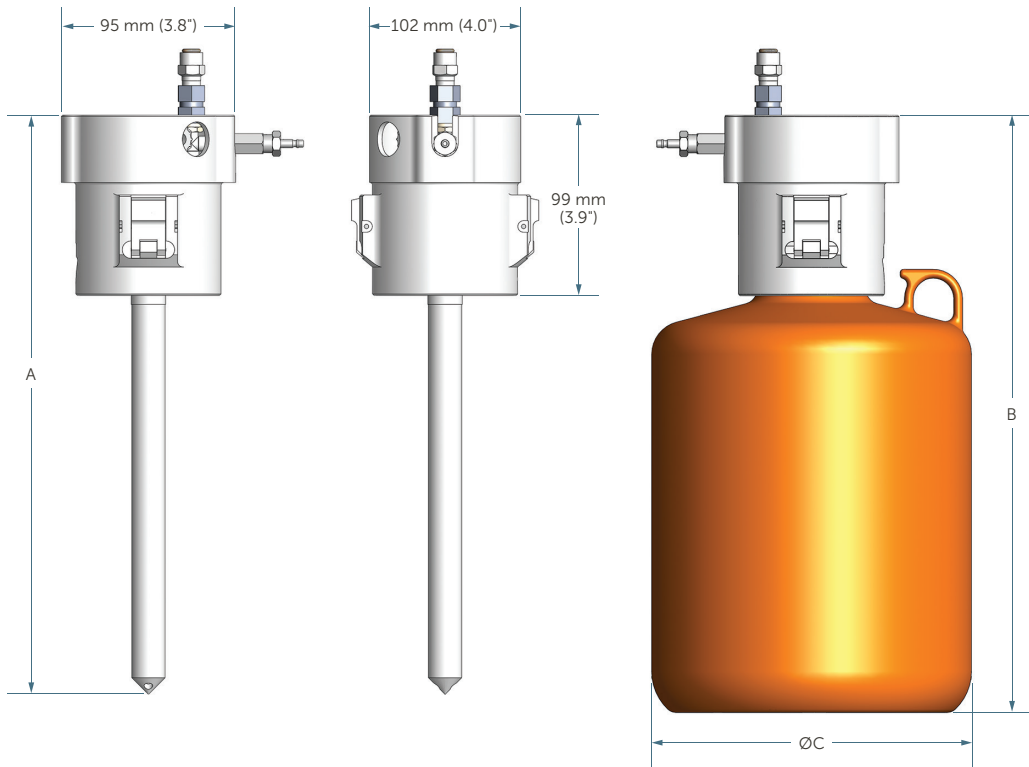


SP connector type

Probe size option	Container size	A	B	C
2	1 L	289 mm (11.4")	299 mm (11.8")	99 mm (3.9")
2	2.5 L	289 mm (11.4")	297 mm (11.7")	149 mm (5.9")
4	4 L	318 mm (12.5")	327 mm (12.9")	175 mm (6.9")
5	10 L	399 mm (15.7")	407 mm (16.0")	230 mm (9.1")
6	20 L	457 mm (18.0")	469 mm (18.5")	305 mm (12.0")

DIMENSIONS (CONTINUED)

SR Type SmartProbe Connector

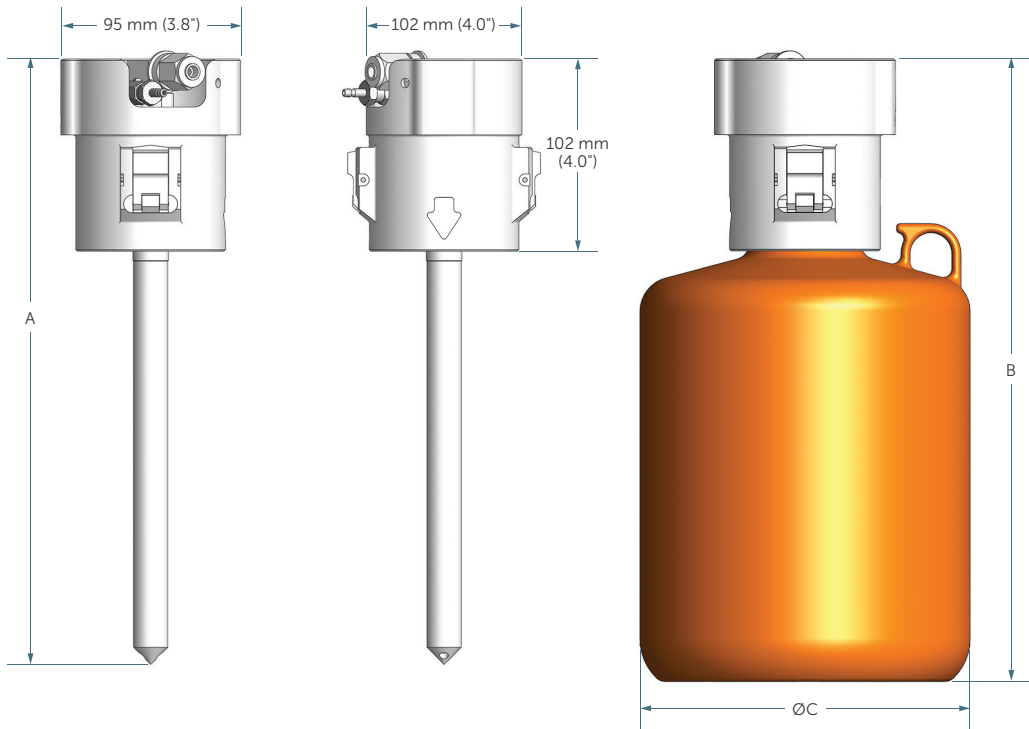


SR connector type

Probe size option	Container size	A	B	C
2	1 L	289 mm (11.4")	299 mm (11.8")	99 mm (3.9")
2	2.5 L	289 mm (11.4")	297 mm (11.7")	149 mm (5.9")
4	4 L	318 mm (12.5")	327 mm (12.9")	175 mm (6.9")
5	10 L	399 mm (15.7")	407 mm (16.0")	230 mm (9.1")
6	20 L	457 mm (18.0")	469 mm (18.5")	305 mm (12.0")

DIMENSIONS (CONTINUED)

SM Type SmartProbe Connector



SM connector type

Probe size option	Container size	A	B	C
2	1 L	292 mm (11.5")	302 mm (11.9")	99 mm (3.9")
2	2.5 L	292 mm (11.5")	300 mm (11.8")	149 mm (5.9")
4	4 L	321 mm (12.6")	330 mm (13.0")	175 mm (6.9")
5	10 L	402 mm (15.8")	410 mm (16.1")	230 mm (9.1")
6	20 L	460 mm (18.1")	472 mm (18.6")	305 mm (12.0")

SHIPPING INFORMATION

Labeling

Each connector is labeled with the part number, batch number/serial number, and date of manufacture. Each shipping carton is labeled with the part number, batch number, quantity of connectors, and date of manufacture.

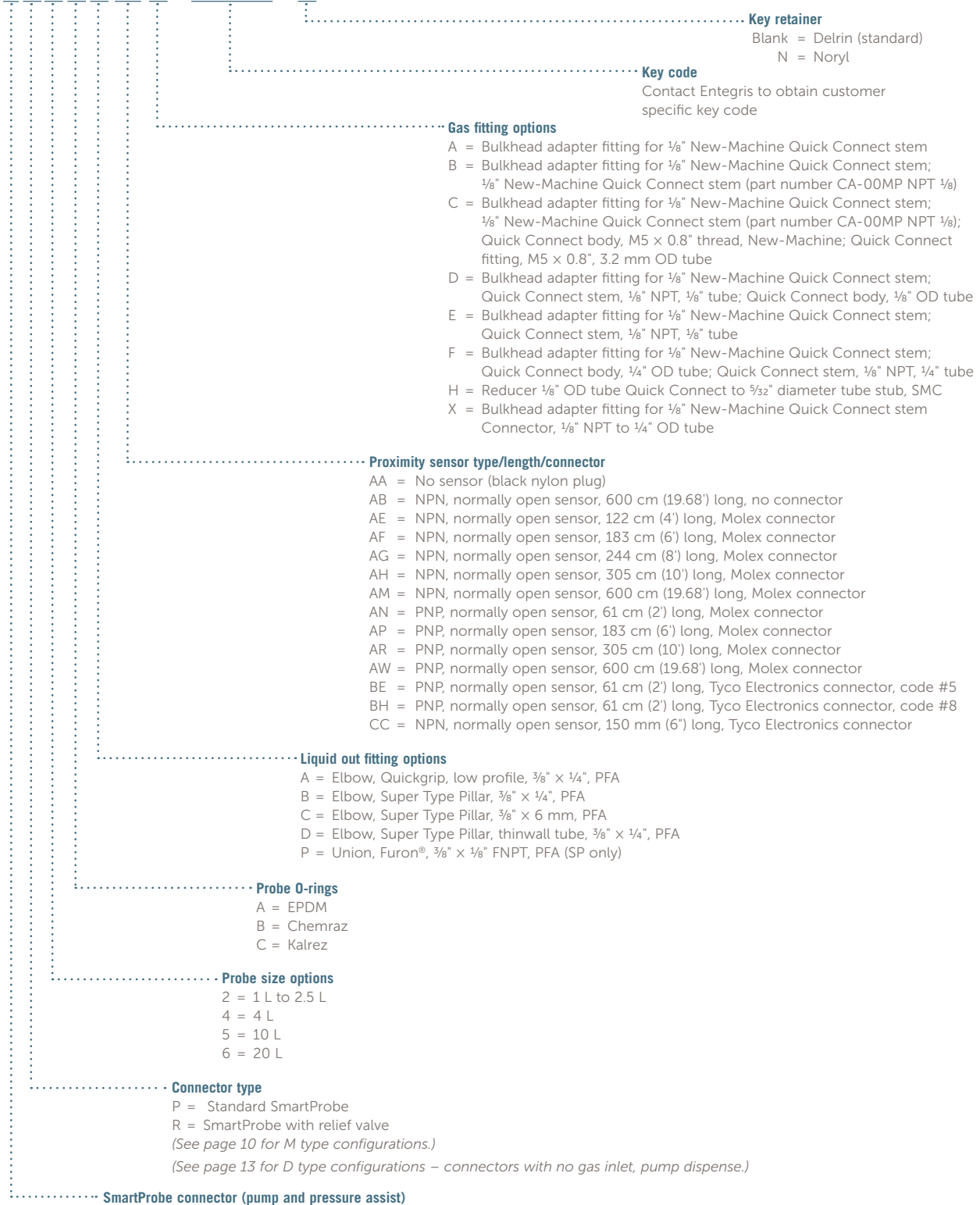
Packaging

Each connector is double bagged (cleanroom processed and heat sealed in a PE inner bag; then heat sealed in a PE outer bag), then packaged in a corrugated shipping carton, lined on top and bottom with bubble wrap.

ORDERING INFORMATION

SmartProbe SP and SR Type Connectors: part number

S



ORDERING INFORMATION (CONTINUED)

SmartProbe SM Type Connectors: part number

S M

Key retainer

Blank = Delrin (standard)
N = Noryl

Key code

Contact Entegris to obtain customer specific key code

Gas fitting options

- B = Elbow, 5/32" OD tube Quick Connect to 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)
- C = 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); Elbow, 5/32" OD tube Quick Connect to 5/32" OD tube Quick Connect; Quick Connect body, M5 x 0.8" thread, New-Machine; Quick Connect fitting, M5 x 0.8", 3.2 mm OD tube
- F = Bulkhead adapter fitting for 1/8" New-Machine Quick Connect stem; Elbow, 5/32" OD tube Quick Connect to 5/32" OD tube Quick Connect; Quick Connect body, 1/4" OD tube; Quick Connect stem, 1/8" NPT, 1/4" tube
- G = 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); Pressure relief valve, 1/8" NPT 5 psi; Coupling, hex 1/8" FNPT to 1/8" FNPT

Proximity sensor type/length/connector

- AA = No sensor (black nylon plug)
- AB = NPN, normally open sensor, 600 cm (19.68') long, no connector
- AE = NPN, normally open sensor, 122 cm (4') long, Molex connector
- AF = NPN, normally open sensor, 183 cm (6') long, Molex connector
- AG = NPN, normally open sensor, 244 cm (8') long, Molex connector
- AH = NPN, normally open sensor, 305 cm (10') long, Molex connector
- AM = NPN, normally open sensor, 600 cm (19.68') long, Molex connector
- AN = PNP, normally open sensor, 61 cm (2') long, Molex connector
- AP = PNP, normally open sensor, 183 cm (6') long, Molex connector
- AR = PNP, normally open sensor, 305 cm (10') long, Molex connector
- AW = PNP, normally open sensor, 600 cm (19.68') long, Molex connector
- BE = PNP, normally open sensor, 61 cm (2') long, Tyco Electronics connector, code #5
- BH = PNP, normally open sensor, 61 cm (2') long, Tyco Electronics connector, code #8
- CC = NPN, normally open sensor, 150 mm (6") long, Tyco Electronics connector

Liquid out fitting options

- A = Elbow, Quickgrip, low profile, 3/8" x 1/4", PFA
- B = Elbow, Super Type Pillar, 3/8" x 1/4", PFA
- C = Elbow, Super Type Pillar, 3/8" x 6 mm, PFA
- D = Elbow, Super Type Pillar, thinwall tube, 3/8" x 1/4", PFA
- K = Elbow, Flowell 60 Series, 3/8" x 1/4", PFA (SM configurations only)
- L = Elbow, Super Type Pillar, 3/8" x 8 mm, PFA (SM configurations only)

Probe O-rings

- A = EPDM
- B = Chemraz
- C = Kalrez

Probe size options

- 2 = 1 L to 2.5 L
- 4 = 4 L
- 5 = 10 L
- 6 = 20 L

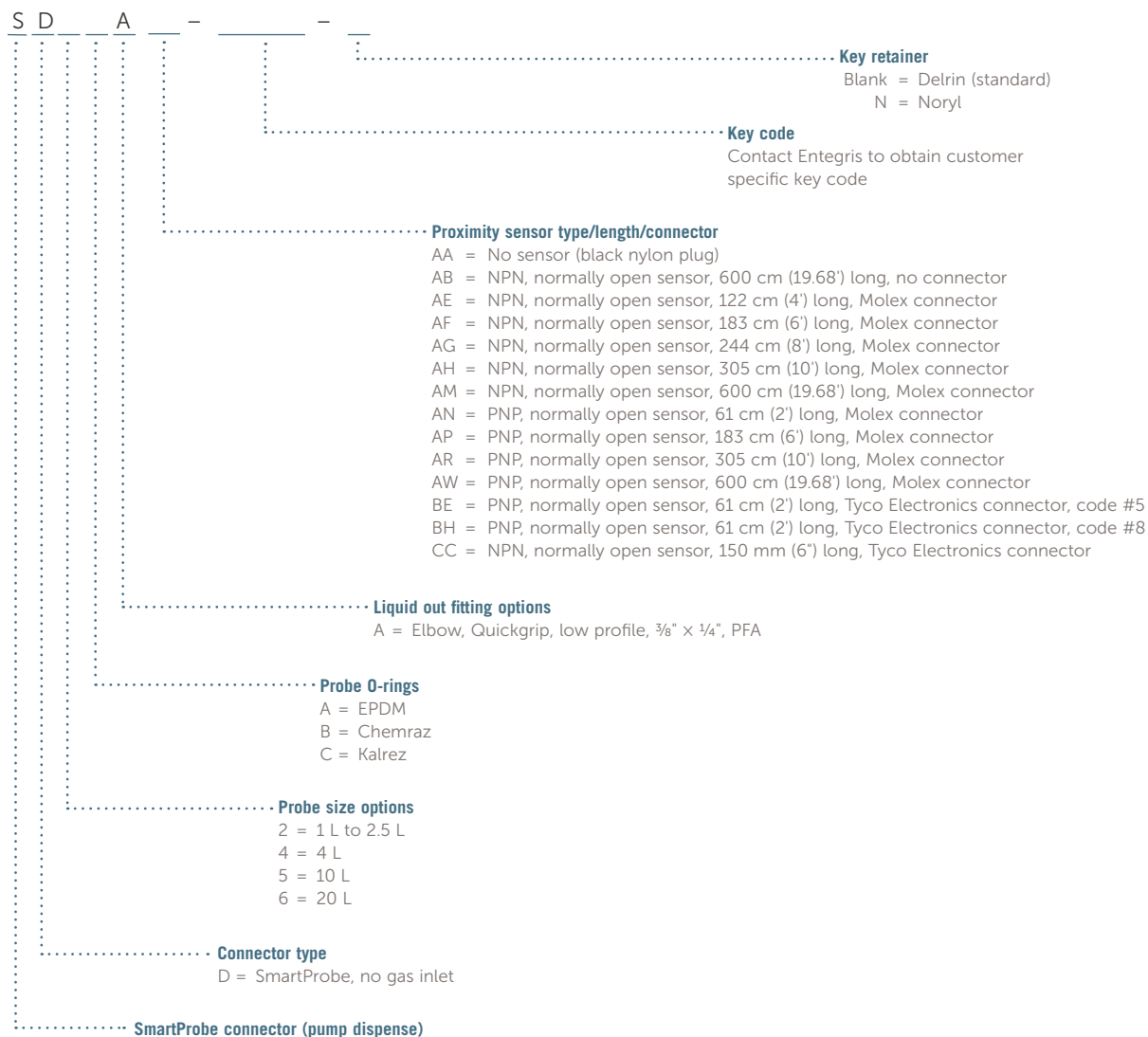
Connector type

M = SmartProbe with in-line ports
(See page 9 for P and R type configurations.)
(See page 13 for D type configurations – connectors with no gas inlet, pump dispense.)

SmartProbe connector (pump and pressure assist)

ORDERING INFORMATION (CONTINUED)

SmartProbe SD Type Connectors: part number



ORDERING INFORMATION (CONTINUED)

SmartProbe dispense connector accessories

Part number	Description
NA-125-XXYYZZ*	Kit, retainer only, Delrin
NA-126-XXYYZZ*	Kit, retainer only, Noryl
SKR-A-XXYYZZ*	Kit, SmartProbe Delrin keyed retainer, with EPDM probe O-ring, hardware, and nozzle O-ring
SKR-B-XXYYZZ*	Kit, SmartProbe Delrin keyed retainer, with Chemraz probe O-ring, hardware, and nozzle O-ring
SKR-C-XXYYZZ*	Kit, SmartProbe Delrin keyed retainer, with Kalrez probe O-ring, hardware, and nozzle O-ring
SKR-Z-XXYYZZ*	Kit, SmartProbe Delrin keyed retainer, with hardware and nozzle O-ring (does not contain probe O-ring)
SKN-CZ-XXYYZZ*	Kit, SmartProbe Noryl keyed retainer, with Kalrez probe O-ring, hardware, and nozzle O-ring
SKN-ZN-XXYYZZ*	Kit, SmartProbe Noryl keyed retainer, with hardware, nozzle, and nozzle O-ring
SKN-ZZ-XXYYZZ*	Kit, SmartProbe Noryl keyed retainer, with hardware and nozzle O-ring
NA-47	SmartCap tear tab removal tool
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 inlet and strain relief.
NA-117-CZ	Upgrade kit, converts SmartProbe to ErgoNOW connector. Contains connector body with release lever, nozzle, and fittings. (ErgoNOW gas inlet option C).
NA-117-EA	Upgrade kit, converts SmartProbe to ErgoNOW connector. Contains connector body with release lever, nozzle, and fittings. (ErgoNOW gas inlet option E).

*XXYYZZ refers to the customer-specific key code. Please contact an Entegris Customer Service representative for assistance with obtaining customer-specific key codes.

LIMITED WARRANTY

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