

Dispensing

Monitoring Systems

State-of-the-art detection systems allow real time process monitoring of dispense cycles. Whether you are looking to determine the presence of adhesive via fluorescence detection, or the amount of adhesive dispensed for an individual dispense nozzle, Henkel Corporation has the system that will get the job done with a high degree of precision and reliability.

Loctite® Fluorescence Detector, Item 98083

Designed for the detection of fluorescent adhesives on automated assembly lines, the Loctite® Fluorescence Detector connects to an in-house power supply and PLC for monitoring the presence of fluorescent adhesives and sealants on assembled devices. Three interchangeable lenses are available for various detection distances (lenses sold separately). A 100,000 hour LED life ensures consistent and long-term process monitoring.

Features

- 100,000 hours LED life
- 250 microseconds maximum response time between detection points
- 3 lens options (sold separately) allow for various detection distances
- Common light output and fluorescence detection path
- Equipped with a learn mode feature, allowing the programming of part detection with minimal effort
- PNP and NPN output capability, allowing easy interface

Theory of Operation

An internal Light Emitting Diode (LED) illuminates adhesives and sealants that contain fluorescent additives. When adhesive is not detected on the illuminated part, an analog or digital signal is transmitted to indicate an insufficient amount. The Loctite® Fluorescence Detector is designed for easy interface with most analog or PNP and NPN digital detection systems.

Technical Specifications

Size:	3.1" L x 2.3" W x 1.2" D
Weight:	.68 lbs.
Input Voltage:	10 to 30 volts DC current (80-300) ma
Output Voltage:	Analog Output 0-5.5 volts into 2.2 kohms
NPN/PNP:	10 kohms Pull up/down resistance
Response Time:	250 microseconds max.
Switching Frequency:	2 khz
Light Source:	LED 100,000 hours life
Spot Size:	9 mm Lens 1 mm Spot, 28 mm Lens 10 mm Spot, 50 mm Lens 12 mm Spot



List of Loctite® Brand Parts Supplied

- (1) Fluorescence Detector (Lenses Sold Separately)
- (1) 4-Conductor Cable with M12 Connector
- (1) Manual

Loctite® Lens Options

9 mm Lens 98102

28 mm Lens 98103

50 mm Lens 98101



Spare Parts

986091

Loctite® 4-Conductor Cable with M12 connector

In-Line Flow Monitor, Item 97211

The Loctite® In-Line Flow Monitor, Item 97211, when integrated with the Loctite® Single Channel Automatic Controller, Item 97123, can provide an economical approach to adhesive dispense monitoring. Pressure changes due to air entrapment, broken or blocked nozzles, or substrate contact can be effectively monitored by the system with a high degree of accuracy and repeatability. A choice of 3 pre-set tolerance ranges can be selected or customized from 1-99%. All out of tolerance dispense cycles result in error messages being displayed on the controller display, that must be acknowledged by the user. PLC or PC interface is also possible to view dispense characteristics for SPC data analysis.

Features (When integrated with the Loctite® Single Channel Controller – 97123)

Effective dispense monitoring to detect:

- Air bubbles
- Clogged or broken dispense tips, or tip-substrate contact
- Changes in amount of adhesive dispensed
- 3 pre-set dispense tolerances or customizable from 1-99%
- PLC or PC integration to provide SPC data analysis

Technical Specifications

Power Input/Output: 24 VDC/1-10 VDC
 Dimensions: 3" W x 5.5" H x 2.25" D
 Weight: .5 lbs.



Options

982720, 982723	Loctite® Bond-A-Matic Reservoirs w/Low Level Sensors
982720, 982723	Loctite® Bond-A-Matic Reservoirs
98009	Loctite® Light Cure Dispense Valve
98006	Loctite® Cyanoacrylate Dispense Valve
98006	Loctite® Stationary Applicator Valves

System Requirements	Item #	Description
Single Channel Automatic Controller	97123	Provides dispense control and tolerance monitoring
Sensor Cable	8965008	Pressure sensing cable for dispense valve interface
Valve Adapters	97200	Valve body adapter for Loctite® Dispense Valves (98009, 98013)
	97295	Valve body adapter for Loctite® Dispense Valves (97113, 97114)

Fluid Waveform Analyzer, Signature Series (Custom Equipment)

Loctite® Fluid Waveform Analyzers are state-of-the-art fluid detection systems for use where high quality production and data inspection is desired. Available through the Henkel Custom Equipment group, these dispense inspection systems use conclusive "real time" data acquisition to detect plugged and broken dispense nozzles, nozzle voids, no dispense, low pressure (under-sized beads), high pressure (over-sized beads), and air bubbles. The resulting output is a pressure waveform, which when compared to a pre-programmed standard waveform, determines whether the process is in or out of control. Data acquisition can be stored locally or to a LAN. The custom configured fluid waveform analyzers are available in a range of price and performance options to meet your specific dispensing process requirements.

Features

Detection of:

- Plugged and broken dispense tips
- Dispense tip voids
- No dispense
- Low pressure – under-sized beads
- High pressure – over-sized beads
- Air bubbles

Types of Fluids Handled

Any fluids ranging from water-thin liquids to thick pastes

Availability

Loctite® Fluid Waveform Analyzers are available through our Custom Equipment group in a range of price and performance options, custom configured to meet your specific requirements. For more information, contact the Technical Information Department at 1-800-LOCTITE (562-8483).



Loctite® Signature Series 1

Designed to monitor a single dispense point, the Loctite® Signature Series 1 is ideal for analyzing "drop" and Rotospray® dispense cycles up to 3 seconds. Includes one dry-contact pass/fail output relay. An optional remote display monitor is available separately. Not capable of internal data storage.



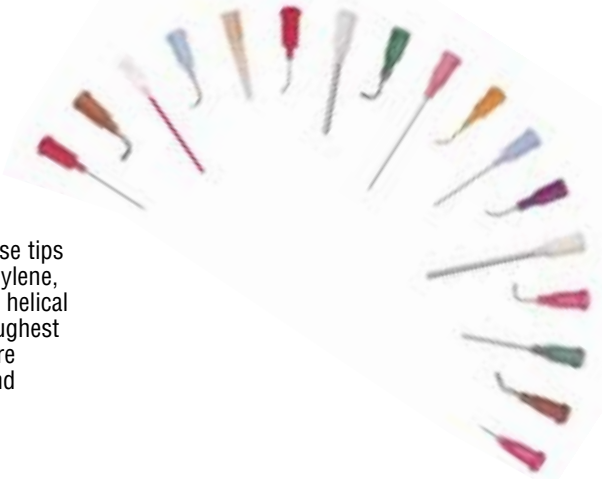
Loctite® Signature Series 4

Designed to monitor 1-4 dispense points simultaneously, the Loctite® Signature Series 4 is ideal for analyzing bead or drop dispense cycles up to 40 seconds. This ethernet-ready, industrial PC-based system comes standard with a hard drive for data storage. Capable of saving multiple dispense profiles, and can perform SPC analysis on data acquired.

Dispensing

Dispense Tips

Henkel offers a comprehensive line of Loctite® brand dispense tips which include high precision stainless steel, tapered polyethylene, and flexible polypropylene tips. All feature a positive locking helical thread design to ensure the tip will stay intact during the toughest applications. For your less critical applications, we offer more economical general purpose tips that still provide reliable and consistent dispensing shot after shot.



High Precision Stainless Steel Dispense Tips

1/4" Stainless Steel Tips Helical Thread

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98196	98197	Green/18
98198	98199	Pink/20
98200	98201	Purple/21
98114	98115	Yellow/32

5/16" Stainless Steel Tips Helical Thread

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98194	98195	Olive/14
98202	98203	Red/25
98204	98205	Clear/27
98206	98207	Lavender/30

1/2" Stainless Steel Tips Helical Thread

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98396	98397	Amber/15
98398	98399	Green/18
98400	98401	Pink/20
98424	98425	Purple/21
98402	98403	Blue/22
98404	98405	Red/25
98104	98105	Lavender/30

1" Stainless Steel Tips Helical Thread

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98216	98217	White/14
98218	98219	Amber/15
98222	98223	Green/18
98224	98225	Pink/20
98226	98227	Purple/21
98228	98229	Blue/22
98230	98231	Orange/23
98232	98233	Red/25
98234	98235	Light Grey/27

1 1/4" Stainless Steel Tips Helical Thread

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98163	98164	White/14
98165	98166	Amber/15
98167	98168	Green/18
98169	98170	Pink/20
98171	98172	Purple/21
98173	98174	Blue/22
98175	98176	Orange/23
98177	98178	Red/25
98179	98180	Light Grey/27

45 Degree x 1/2" Stainless Steel Tips - Helical Thread

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98236	98237	White/14
98240	98241	Amber/15
98244	98245	Green/18
98248	98249	Pink/20
98252	98253	Purple/21
98256	98257	Blue/22
98260	98261	Orange/23
98264	98265	Red/25
98268	98269	Light Grey/27

90 Degree x 1/2" Stainless Steel Tips - Helical Thread

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98238	98239	White/14
98242	98243	Amber/15
98246	98247	Green/18
98250	98251	Pink/20
98254	98255	Purple/21
98258	98259	Blue/22
98262	98263	Orange/23
98266	98267	Red/25
98270	98271	Light Grey/27

Tapered Dispense Tips

1 1/4" Polyethylene Tapered Tips Helical Thread & UV Light Block Additive

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98385	98386	White/14
98387	98388	Grey/16
98389	98390	Green/18
98391	98392	Pink/20
98393	98394	Blue/22

Flexible Dispense Tips

1 1/2" Flexible Polypropylene Tips Helical Thread

50 pack Item #	1000 pack Item #	Hub Color/Gauge
97229	98069	Amber/15
97230	98070	Green/18
97231	98071	Pink/20
97232	98082	Red/25

Additional Dispense Tips and Accessories



Loctite® Showcase Needle Variety Kit contains 10 each of an assortment of General Purpose 1/2" Stainless Steel, Tapered, and Flexible Dispense Tips.

Item # 98044

General Purpose Dispense Tips

1/2" Stainless Steel Tips

50 pack Item #	1000 pack Item #	Hub Color/Gauge
98208	98209	Olive/14
97225	98065	Amber/15
97226	98066	Green/18
97227	98067	Pink/20
98210	98211	Purple/21
98100	98080	Blue/22
98212	98213	Orange/23
97228	98068	Red/25
98214	98215	Clear/27

1 1/4" Polyethylene Tapered Tips

50 pack Item #	1000 pack Item #	Tip Color/Gauge
98272	98273	Tan/14
97221	98061	Grey/16
97222	98062	Green/18
97223	98063	Pink/20
97224	98064	Blue/22

Item #	Description
97238/98073	SS, PTFE Lined, 25 Gauge, 50/1000 pk
97233	Luer-Lok Adapter Kit, 20 Luer-Loks & 5 Adapters
97509/97510	Formable Dispense Tip, 21 Gauge, 50/1000 pk
97248	Tip Caps, 50 pk
97261/98074	High Density Polyethylene, 15 Gauge, White, 50/1000 pk
998390	Vari-Drop™ Applicator Brushes, 10 pk
97262	2 each of a variety of Helical Threaded 1/2" SS, Taper Tip, and Polypropylene Tips



Loctite® Brand Dispensing Spare Parts and Accessories

PARENT PRODUCT	Item #	Description	Package Quantity
39635	39633	400 ml mix nozzle, stepped 8 mm end	6
97001	993163	Replacement Tubing	1
	993174	Replacement Nozzle	1
97006, 98021	97201	Replacement foot switch for 97006	1
	984621	Replacement foot switch for 98021	1
97007, 97010, 97017, 97020	97251	Replacement rupture disc	1
	8900064	Tank feed line fitting	1
	8950210	Replacement reservoir lid o-ring	1
97111, 97112, 97116	97220	3/8" feed line conversion kit	1
	97233	Luer-Lok adapter kit	20 Luer-Lok, 5 adapters
	97234	Replacement finger lever for 97111	1
	97235	Replacement actuator for 97112	1
	97236	Replacement actuator for 97116	1
	97999	Replacement valve assembly, all applicators	1
97113, 97114	97239	Replacement shut-off valve assembly, 97113	1
	97240	Replacement shut-off valve assembly, 97114	1
	97242	Mounting bracket	1
	97291	Replacement actuator assembly	1
97123	97120	Air filter and regulator	1
	97960	Pneumatic tubing, 4 mm O.D.	1
	97973	Pneumatic tubing, 6 mm O.D.	1
	8950450	Threaded fitting for Pneumatic Supply and Reservoir	1
	8951124	Threaded fitting dispensing valves and Advancing Slide	1
97130	97902	Repair Kit for LV hand held valve	
97132	97249	Vari-Drop™ applicator repair kit	1
	998390	Vari-Drop™ applicator brushes	10
97135, 97136	97254	Diaphragm Valve- Actuator Replacement	1
	97268	Diaphragm Valve- Shut-off -2mm replacement	1
	97269	Diaphragm Valve- Shut-off -3mm replacement	1
	97271	Diaphragm Replacement Kit	10
98009, 98013	984129	Mounting bracket	1
	984684	Valve rebuild kit, 98009	1
	984685	Valve rebuild kit, 98013	1
98011	984280	Pneumatic foot switch	1
	984281	Vertical stand	1
98022	984826	Replacement sleeve kit	1
	984832	Fitting, 1/4" NPT x 1/4" tube, black plastic	10
	984833	Fitting, 1/4" NPT x 3/8" tube, black plastic	10
98023	984720	Replacement foot switch assembly	1
98024	984691	Advancing Slide, 2' stroke	1
	984720	Replacement foot switch assembly	1
	984727	2-Hand Anti-Tie-Down switch set	1
98079	98126	Foot pedal w/fitting and tubing	1
	986264	Solenoid valve, 4 way	1
98084	98091	Micro Needle Valve Rod Replacement Kit	
98085	97132	Vari-Drop™ w/o tubing and guards	1
	97249	Vari-Drop™ repair kit	1
	993247	Nut and sleeve sub-assembly	1
	997569	Silicone grease, 6 gram tube	1
98090	98094	Toggle valve - 3 way	1
	98129	Pressure regulator	1
	98130	Pressure gauge	1
	983055	Reservoir lid o-ring for acetone based primers	1
	984687	Anti-bubbler kit	2
	992641	Pressure safety relief valve	1
	997312	Replacement reservoir lid o-ring	1
98359	98360	Pressure safety relief valve	1
	98361	Pressure regulator	1
	98362	Pressure gauge	1
	98363	Reservoir lid gasket: material: Buna N	1
	98375	Reservoir lid gasket: material: EPR	1
98431	988414	6" Rigid Extension	1
98432	988402	18" High Pressure Hose	1
98433	988403	Charger	1
	988404	30" High Pressure Hose	1
	988434	Battery	1

Loctite® Brand Dispensing Spare Parts and Accessories (Continued)

PARENT PRODUCT	Item #	Description	Package Quantity
982719, 982722	97132	Vari-Drop™ applicator	1
	97249	Vari-Drop™ applicator repair kit	1
	981880	Reservoir lid o-ring	1
	982450	200 g gel tube kit	1
982720, 982723, 982726, 982727, 982721, 982724	981880	Replacement reservoir lid o-ring	1
	982450	200 g gel tube kit	1
	982716	Replacement 110 VAC sensor, 982721, 982724 only	1
	982732	Replacement 24 VDC sensor, 982720, 982723 only	1
982880	982702	24 VDC sensor	1
	982881	Replacement reservoir body	1
983330	983116	Replacement actuator assembly	1
	983117	Replacement pump assembly	1
986000	983255	Pump replacement	1
	986025	Nozzle, .025" diameter	1
	986035	Nozzle, .035" diameter	1
	986060	Nozzle, .060" diameter	1
	986300	Replacement poppet valve	1
986300	986025	Nozzle, .025" diameter	1
	986035	Nozzle, .035" diameter	1
	986060	Nozzle, .060" diameter	1
	986301	Valve rebuilt kit	1
998400	983095	Tube adapter	1
	998402	Pump rebuild kit	1
	998425	Replacement turret	1
	998426	Replacement cap - 1 liter bottle	1
Cartridge Accessories	97215	Cartridge-Syringe Adapter for 10, 30, 55 ml syringe barrels	3 pack
	98128	Cartridge Dispense Tip	10 pack
	98181	Cartridge Tube Fitting Adapter for tube fittings. Use w/ 984832 or 984833	3 pack
	98371	Cartridge-Needle Luer-Lok Adapter for dispense needle attachment	5 pack
	982644	Fishbach Cartridge Adapter 1/4" NPT for 98022	1
	984832	Tube Fitting: 1/4" male NPT x 1/4" feed tube	10 pack
984833	Tube Fitting: 1/4" male NPT x 3/8" feed tube	10 pack	
Tubing	97970	3/8" black PTFE lined feed tube	33 feet
	97972	1/4" black PTFE lined feed tube	33 feet
	981821	1/4" clear polyethylene feed tube	33 feet
	981866	3/8" clear polyethylene feed tube	33 feet
	981994	1/4" clear nylon feed tube for Pump-A-Bead™	33 feet
	984688	Silicone tubing for dispense valve purging	25