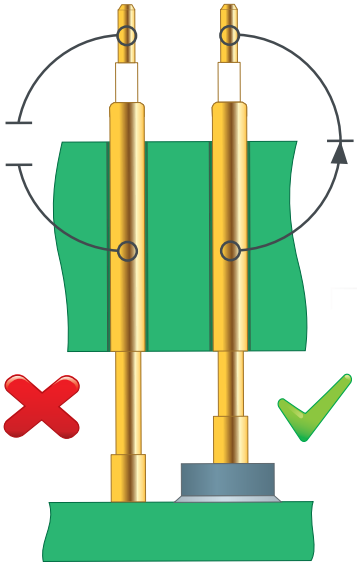
Switch Probe

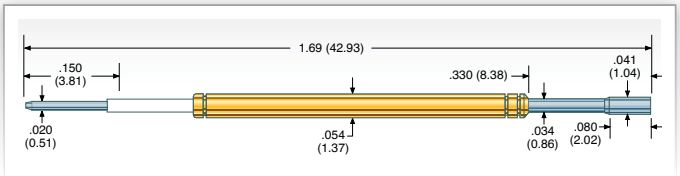
A switch probe is a spring contact probe and receptacle that is used to verify the presence of components or connectors. Without compression the switch probe remains open, and after a designated travel the switch probe closes. The most common use for switch probes is in the cable harness testing industry. The switch probe is used to verify the correct location of a terminal contact in a connector while also checking the retention force.

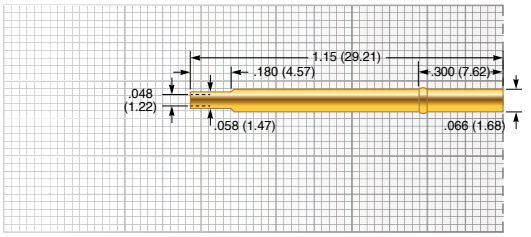
Switch probes also verify the physical presence of non-conductive components such as caps for connectors or devices on a circuit board. There are two separate current paths in a switch probe. The path from the plunger tip to the tail is normally open and closes only after the probe deflects to the designated travel. The second path, from the plunger tip to the outside of the receptacle, is always closed.



MSP-25C

100 mil (2.54 mm)





SPR-25W

Mechanical

Recommended Travel:	.085 (2.16)
Full Travel:	.125 (3.18)
Switch Point (± .012):	.030 (0.76)
Operating Temperature:	-55°C to +105°C

Spring Force in oz. (grams)

	Switch Point	Rec. Travel
Standard	6.51 (185)	7.55 (212)

Electrical (Static Conditions)

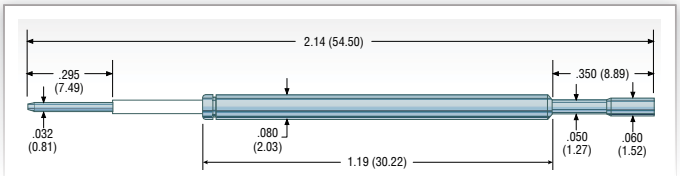
Current Rating:	3 amps
Average Probe Resistance:	<50 mOhms

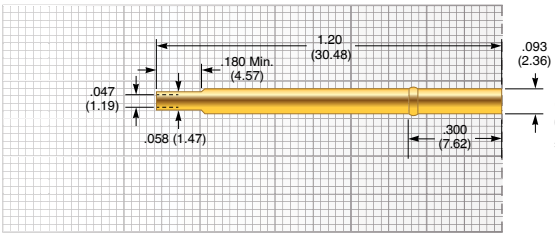
Materials and Finishes

Plunger:	BeCu, Nickel plated
Barrel:	Work hardened Phosphor Bronze, Gold plated over hard Nickel
Spring:	Music Wire, Silver plated
Insulator:	DELRIN™
Terminal:	BeCu, Silver plated

MSP-3C

125 mil (3.18 mm)





SPR-3W
Collar height = .217 (5.52)

Mechanical

Recommended Travel:	.085 (2.16)
Full Travel:	.140 (3.56)
Switch Point (± .012):	.030 (0.76)
Operating Temperature:	-55°C to +105°C

Spring Force in oz. (grams)

	Order Code	Switch Point	Rec. Travel
Standard		4.9 (138.9)	6.5 (184.3)
Alternate	- 1	23.3 (660.5)	35.0 (992)

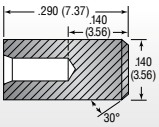
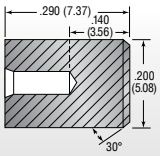
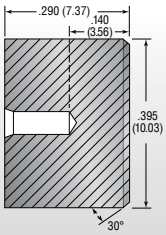
Electrical (Static Conditions)

Current Rating:	3 amps
Average Probe Resistance:	<50 mOhms

Materials and Finishes

Plunger:	BeCu, Nickel plated
Barrel:	Work-hardened Nickel Silver, Silver plated
Spring:	Stainless Steel, Silver plated
Insulator:	KEL-F™
Terminal:	BeCu, Silver plated

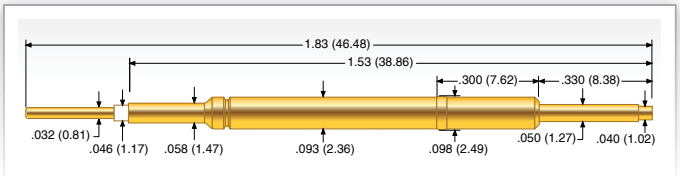
Caps for MSP-3C

PE-1	PE-2	PE-3
		

Dimensions in inches (millimeters). Specifications subject to change without notice.
Consult factory for other temperature requirements, and applications below -40°C.
Stocking Disclaimer: Stocking levels for part numbers listed in this catalog are subject to change.
Availability is based on current levels of usage and demand.

SPL-03C-069

125 mil (3.18 mm)



Mechanical

Recommended Travel:	.167 (4.24)
Full Travel:	.330 (8.38)
Switch Point (± .012):	.025 (0.64)
Operating Temperature:	-55°C to +105°C

Spring Force in oz. (grams)

	Switch Point	Rec. Travel
Standard	3.2 (91)	1.85 (52)

Electrical (Static Conditions)

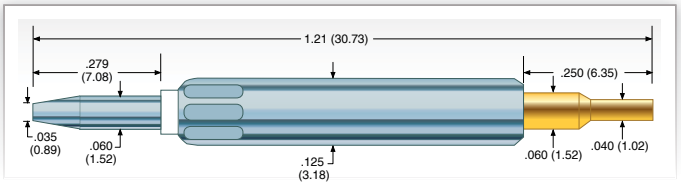
Current Rating:	3 amps
Average Probe Resistance:	<50 mOhms

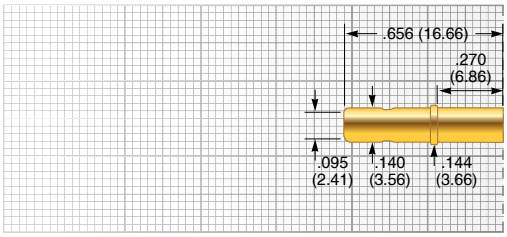
Materials and Finishes

Plunger:	BeCu, Gold plated
Barrel:	Nickel Silver, Gold plated
Spring:	Music Wire
Insulator:	DELRIN™
Terminal:	BeCu, Gold plated

SSP-5C

187 mil (4.75 mm)





SSR-5Y

Mechanical

Recommended Travel:	.100 (2.54)
Full Travel:	.150 (3.81)
Switch Point (± .012):	.025 (0.64)
Operating Temperature:	-55°C to +150°C

Spring Force in oz. (grams)

	Switch Point	Rec. Travel
Standard	2.36 (66)	4.5 (128)

Electrical (Static Conditions)

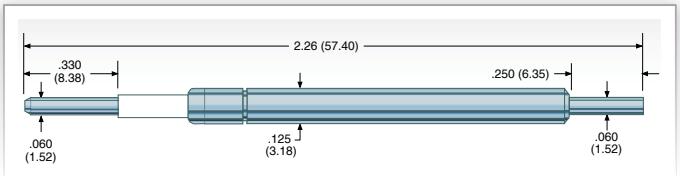
Current Rating:	5 amps
Average Probe Resistance:	<50 mOhms

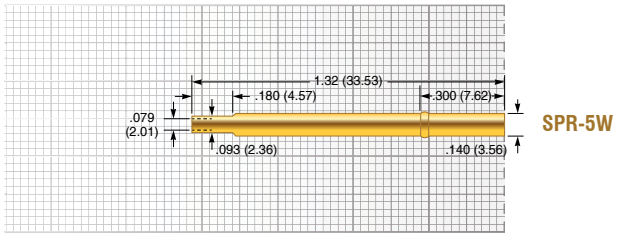
Materials and Finishes

Plunger:	BeCu, Gold plated
Barrel:	Nickel Silver, Silver plated
Spring:	Spring Steel, Silver plated
Insulator:	DELRIN™
Terminal:	BeCu, Gold plated

MSP-5C

187 mil (4.75 mm)





SPR-5W

Mechanical

Recommended Travel:	.132 (3.35)
Full Travel:	.185 (4.70)
Switch Point (± .012):	.025 (0.64)
Operating Temperature:	-55°C to +105°C

Spring Force in oz. (grams)

	Order Code	Switch Point	Rec. Travel
Standard		2.5 (70)	5.2 (146)
Alternate	- 1	26.9 (755)	35.0 (992)

Electrical (Static Conditions)

Current Rating:	5 amps
Average Probe Resistance:	<20 mOhms

Materials and Finishes

Plunger:	Brass, Nickel plated
Barrel:	Brass, Silver plated
Spring:	Stainless Steel, Silver plated
Insulator:	KEL-F™
Terminal:	Brass, Silver plated

Dimensions in inches (millimeters). Specifications subject to change without notice.
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