



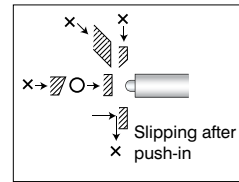
Precision Limit Switches

High-Vacuum Resistance Limit Switches

Features

- Can be used in 10⁻⁵ PA high-vacuum environments
- Switch body made using low outgassing material and adhesive

High Vacuum Resistance



O indicates correct target approach and orientation.

X indicates approach and orientation that should be avoided.

High-Vacuum Resistance Limit Switches Selection Chart

Part Number	Price	Actuator/Head Type*	Barrel Type	Barrel Diameter/Thread	Stroke	Output Mode	Repeatability	Contact Force	Connection Type	Drawing Link
<u>GN-BP5MA</u>	\$04vzc:	Angled touch ball plunger SR 3mm	Threaded	M5x0.5	1.0mm [0.039in]	(1) N.O.	0.01mm [0.00039in]	1N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5m [1.6ft] core wire, 27 AWG	PDF
<u>GN-BP5MA-R</u>	\$04vzd:	Angled touch ball plunger SR 3mm	Threaded	M5x0.5	1.0mm [0.039in]	(1) N.O.	0.01mm [0.00039 n]	1N	Cable direction: 90° Polytetrafluoroethylene (PTFE) 0.5m [1.6ft] core wire, 27 AWG	PDF
<u>GN-PT5M3A</u>	\$-045i0:	Straight touch Ø 1.5mm plunger SR 2mm	Threaded	M5x0.5	1.5mm [0.059in]	(1) N.O.	0.003mm [0.00012in]	0.5N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5m [1.6ft] core wire, 27 AWG	PDF
<u>GN-PT5M3B</u>	\$-045i1:	Straight touch Ø 1.5mm plunger SR 2mm	Threaded	M5x0.5	1.5mm [0.059in]	(1) N.C.	0.003mm [0.00012in]	0.5N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5m [1.6ft] core wire, 27 AWG	PDF
<u>GN-BP161B</u>	\$;004vze:	Angled touch Ø 2mm plunger SR 4mm	Threaded	M16x1	2.9mm [0.114in]	(1) N.C.	0.01mm [0.00039in]	1.5N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5m [1.6ft] core wire, 27 AWG	PDF
<u>GN-CSK141B</u>	\$;004vz9:	Straight touch Ø 12mm plunger SR 4mm	Threaded	M14x1	5mm [0.197mm]	(1) N.C.	0.01mm [0.00039in]	0.8N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5m [1.6ft] core wire, 27 AWG	PDF

* Ø = diameter, SR = surface radius



GN-BP5MA



GN-BP5MA-R



GN-PT5M3A



GN-PT5M3B



GN-BP161B



GN-CSK141B



Precision Limit Switches

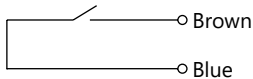
High-Vacuum Resistance Limit Switches Specifications	
Series	GN
Environmental	
Compatible Vacuum	10 ⁻⁵ PA
Degree of Protection	IP40
Temperature Range	120°C [248°F] (allowable baking temperature)
Mechanical Ratings	
Enclosure Material	304 Stainless Steel
Pretravel	0mm [0in]: (GN-PT5M3B, GN-CSK141B) * 0.2 mm [0.0079 in]: (GN-BP161B) 0.3 mm [0.0118 in]: (GN-BP5MA, GN-BP5MA-R, GN-PT5M3A)
Torque (for nuts on threaded barrels, set screws on smooth barrels)	1 N•m [0.73 lb•ft] GN-PT5M3A, GN-PT5M3B, GN-BP5MA 10 N•m [7.37 lb•ft] GN-CSK141B 12 N•m [8.85 lb•ft] GN-BP161B
Vibration	10–55Hz total amplitude 1.5 for X, Y, Z each direction
Shock	300 m/s ² for X, Y, Z each direction
Electrical Ratings	
Contact Life	3 million operations
Repeat Accuracy**	Both On-Off, Off-On: See Selection Table
Recommended Minimum Operating Speed	50mm [1.96in] / minute
Contact Voltage	5-24 VDC
Steady Current Rating	10mA or less
Max In-rush Current Rating	20mA
Connection Type	0.5 m [19.69 in] Polytetrafluoroethylene (PTFE) core wire, 27AWG
Indicating	N/A

* Adjust the installed location of the switch by the signal switching point.

** At operating speed 50-200 mm/minute. Operating speed slower than 10 mm/min is not recommended.

Circuit Diagrams

Normally open (N.O.)



Normally closed (N.C.)

