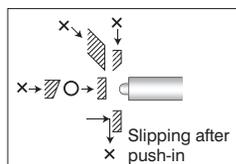


Metrol Precision Limit Switches

High-Vacuum Resistance Switches

- 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 Switches Selection Chart										
Part Number	Price	Actuator/Head Type*	Barrel Type	Barrel Diameter/Thread	Stroke	Output Mode	Repeatability	Contact Force	Connection Type	Drawing Link
High-Vacuum Resistance Switches										
<u>GN-BP5MA</u>		Angled touch	Threaded	M5x0.5	1.0 mm [0.039 in]	N.O.	0.01 mm [0.00039 in]	1N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5 m [1.6 ft] core wire, AWG 30	PDF
<u>GN-BP5MA-R</u>		Angled touch	Threaded	M5x0.5	1.0 mm [0.039 in]	N.O.	0.01 mm [0.00039 in]	1N	Cable direction: 90° Polytetrafluoroethylene (PTFE) 0.5 m [1.6 ft] core wire, AWG 30	PDF
<u>GN-PT5M3A</u>		Straight touch Ø 1.5 mm [0.059 in] plunger SR 2mm [0.079 in]	Threaded	M5x0.5	1.5 mm [0.059 in]	N.O.	0.003 mm [0.00012 in]	0.5 N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5 m [1.6 ft] core wire, AWG 30	PDF
<u>GN-PT5M3B</u>		Straight touch Ø 1.5 mm [0.059 in] plunger SR 2mm [0.079 in]	Threaded	M5x0.5	1.5 mm [0.059 in]	N.C.	0.003 mm [0.00012 in]	0.5 N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5 m [1.6 ft] core wire, AWG 30	PDF
<u>GN-BP161B</u>		Angled touch	Threaded	M16x1	2.9 mm [0.114 in]	N.C.	0.01 mm [0.00039 in]	1.5 N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5 m [1.6 ft] core wire, AWG 30	PDF
<u>GN-CSK141B</u>		Straight touch	Threaded	M14x1	5mm [0.197 mm]	N.C.	0.01 mm [0.00039 in]	0.8 N	Cable direction: straight Polytetrafluoroethylene (PTFE) 0.5 m [1.6 ft] core wire, AWG 30	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 Switches

High-Vacuum Resistance 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]
Oscillation	10–55Hz total amplitude 1.5 for X, Y, Z each direction
Impact	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	10mm [0.39 in] / 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, 2x30AWG
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.)

