



Type GAW—Sensitive Control Applications

9016GAW vacuum switches are provided with double throw contacts; normally open and normally closed circuits allow these controls to be used for standard or reverse action applications.

Standard devices can be mounted from the front with the bracket provided. Two mounting screws are required for a firm attachment to any smooth, flat surface. Allowance must be made for flange projection. Controls with Form F modification include two mounting feet with 9/32" mounting holes on 3-3/4" centers. Range and Differential adjustments are internal and exposed by removal of the front cover.

Maximum allowable positive pressure: 100 psig.

Diaphragms are oil resistant, nitrile butadiene (Buna N) rubber.

Electrical Ratings and Temperature Limitations—See page 22-14 for Type G machine tool.

Dimensions—See page 22-17.

Table 22.45: Class 9016, Diaphragm Actuated

Range on Decreasing Vacuum (In. of Hg)	Adjustable Differential Adds to Range ^[1] (In. of Hg)	Contact Arrangement	Pipe Tap (NPTF)	Enclosure	
				NEMA 4, 4X & 13	NEMA 7 & 9 ^[2]
				Type	Type
0–28.7	At Minimum Range: 0.8–9 At Mid-Range: 1.3–7.4	1 N.O., 1 N.C.	1/4"-18	GAW1	GAR1
0–25	5–20	1 N.O., 1 N.C.	1/4"-18	GAW2	N/A
0–28.3	At Minimum Range: 1–9 At Mid-Range: 1.7–7.4	2 N.O., 2 N.C.	1/4"-18	GAW21	GAR21
0–25	5–20	2 N.O., 2 N.C.	1/4"-18	GAW22	N/A

Table 22.46: Available Modifications

Description	Form
Mounting feet (GAW1 and GAW21 only)	F
Range scale window	V1
1/4"-18 NPT external thread pressure connection	Z
1/2"-14 NPT external thread, 1/4"-18 NPTF internal thread pressure connection (standard actuator only)	Z16



File E12443 Haz Loc
File E12158
File E12158

CCN NOWT G*R
CCN NKPZ G*W
CCN NHTH Marine Use, G*W



File LR25490 Type GAW only
File LR26817 Type GAR only
(NEMA 7 and 9 Haz Loc)

Type GVG—Power Circuit Applications

The 9016GVG1 vacuum switch is a companion to the 9036GG and 9037GG float switches commonly used on vacuum heating pumps. Electrical ratings of float and vacuum switch types are equal.



Class 9016 Type GVG1
Forms E, F

Table 22.47: Class 9016, Contacts Open on Increasing Vacuum

Cut-out Range (In. of Hg)	Approximate Adjustable Differential (In. of Hg)	Cut-in Range (In. of Hg)	Poles	Pressure Connection	NEMA 1 Enclosure
					Type
5–25	5–10	0–20	2	1/4"-18 NPSF	GVG1

NOTE: Maximum allowable positive pressure: 150 psig. In. of Hg = inches of mercury.

Table 22.48: Available Modifications

Description	Form
3-way lever—nameplate marked: Float only—Vacuum and Float—Continuous (factory modification only)	E
Mounting bracket (for retrofit, order 9049A53 bracket kit)	F
Reverse action—normally open contacts	R
1/4" male pipe connection (1/4"-18 NPT, external thread) (for retrofit, use 1/4" pipe nipple)	Z

Table 22.49: Electrical Ratings—9016GVG

Voltage	AC		DC
	Single Phase	Polyphase	
110 V	2 hp	3 hp	1 hp
220 V	3 hp	5 hp	1 hp
440–550 V	5 hp	5 hp	—
32 V	—	—	1/2 hp

NOTE: Control Circuit Rating: A600

Table 22.50: Vacuum Codes

Settings (In. of Hg)	Code
3–8	J09
16.5–25	J10
17–22	J11
18–23	J12
20–25	J13
Specify other setting (minimum order quantity is 4 pieces)	J99

Ordering Information: Specify Class 9016 Type G. Give vacuum settings within the limits of the listings above. **For Setting Codes,** see the table entitled Vacuum Codes above. If special features are desired, add the appropriate Form letter to the Class and Type. Arrange the Form letters in alphabetical order when ordering more than one special feature.



File E12158
CCN NKPZ



File LR25490

Dimensions page 22-16

[1] Add Differential to Range to obtain the operating point on increasing vacuum (within vacuum limitations). The differential increases linearly over its range.

[2] The minimum differential doubles with NEMA 7 & 9 enclosures.