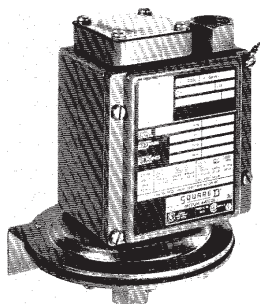


Vacuum Switches

Ingress Protection IP66 □ (IEC 144)

Type GAW Diaphragm Actuated Vacuum Switches



9012 GAW

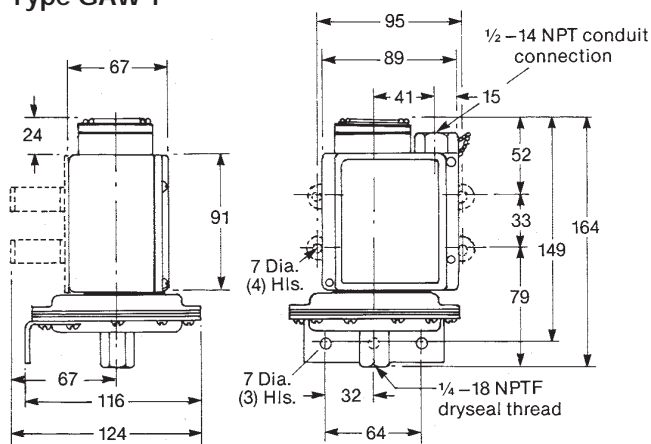
Single Pole – Double Throw Contacts (1NO+1NC)

Range (Millibars)	Differential (Millibars)	Maximum allowable Positive Pressure PSIG	Order Class 9016 Type ...
996.0	27–305*	100	GAW-1
966.0	44–312# 169–678	100	GAW-2

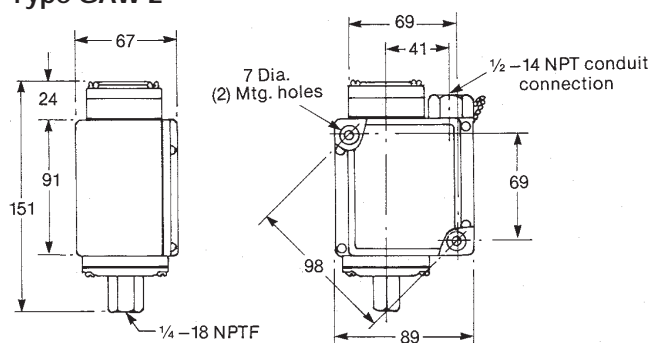
* At low vacuum
At high vacuum

Dimensions

Type GAW 1



Type GAW 2



Technical Data Pages 3b6 and 3b7
Modification Data Page 3b5

Ordering Instructions
State... Class and Type
Eg: Class 9016 Type GAW-1

□ When fitted with suitable cable gland or adequately sealed conduit entry.

Accessories, Replacement Parts and Modification Data

For use with	Description	Order Class 9998 Type...
Replacement Parts Kit		
GAWM 1.21 GDWM 1.21	Diaphragm Assembly	PC265
GAWM 2.22 GDWM 2.22	Diaphragm Assembly	PC266
GAWM 4.24 GDWM 4.24	Diaphragm Assembly	PC267
GAWM 5.25 GDWM 5.25	Actuator Assembly	PCM268
GAWM 6.26 GDWM 6.26	Actuator Assembly	PCM269
GBWM 1.21 GEWM 1.21	Actuator Assembly	PCM177
GBWM 2.22 GEWM 2.22	Actuator Assembly	PCM178
GCWM 1.21 GFWM 1.21	Piston Assembly	PCM270
GCWM 2.22 GFWM 2.22	Piston Assembly	PCM271
GCWM 3.23 GFWM 3.23	Piston Assembly	PCM272
GCWM 4.24 GFWM 4.24	Piston Assembly	PCM273
All single pole type switches	Snap Switch Kit	PC 339
All double pole type switches	Snap Switch Kit	PC 340
All types	Gasket Kit	PC 184
All types 1-6 and 21-26	Lamp unit - 24V 125V 250V (specify voltage)	PC 185
	NOTE - Replacement lamp unit only.	
Accessories		
All types 1-6 and 21-26	Pilot Light Kit - 24V Pilot Light Kit - 125V Pilot Light - 250V	PC 276 PC 278 PC 279
Modifications #		
GAWM GDWM GAW	Omit .060 pulsation plug	Form *P2
GAWM GDWM GBWM GEWM	Ethylene propylene diaphragm and seal. Type 316 stainless steel connector and pulsation plate.	Form *Q3
GAWM GDWM GBWM GEWM	VITON● diaphragm and seal. Type 316 stainless steel connector and pulsation plate (Minimum differential increases by 100%)	Form *Q4
GCWM GFWM	Ethylene propylene diaphragm and seal. Type 440 stainless steel piston in Type 303 or 431 stainless steel housing. Steel retainer - PTFE. Pulsation plug - brass.	Form *Q5
All Types	Range Scale Window	Form V1
All Types	S.P.D.T snap switch fitted, rated 1.1 amps at 125V DC. (Note:- stated differential figures are doubled.)	Form H3
<p># Add Form No. to Switch Type No. E.g. Class 9012 Type GCWM-6 Form H3</p> <p>● Registered trade mark of Du Pont</p> <p>* If one of these form designations appears on the pressure switch nameplate, the 9998 PC number for the replacement parts kit must be completed with that same FORM designation.</p> <p>Example: 9012 GAWM-2 takes diaphragm No. 9998 PC-266 9012 GAWM-2 Form Q3 takes diaphragm No. 9998 PC-266 Form Q3.</p> <p>Ordering Instructions State... Class and Type Eg: Class 9998 Type PCM 270</p>		

3b

Technical Data

Type G Pressure Switches

Include diaphragm and piston actuated versions, available with adjustable or non-adjustable differentials.

Piston Actuated Devices

Whilst the piston operated switches are compatible with air or water, it should be noted that a small amount of lubrication is necessary in the operating media to ensure long service life from the switch. Dry operating media can reduce the service life of the device, through lack of piston seal lubrication. The extent of reduction depends greatly on frequency of operation.

Use on Steam Systems

Do not use directly on steam system in excess of 1 bar (14.5 psig). Indirect use may be accomplished by attaching a minimum of ten feet of capillary tubing between the steam source and the actuator. This permits the use of steam up to 17 Bars (245 psig) subject to the maximum allowable pressure rating and the maximum temperature rating of the switch.

Use with Incompatible Pressure Media

For applications where the pressure medium is not compatible with, or corrosive to the standard actuator, diaphragms and seals in alternative materials are available in stainless steel housings.

Enclosure

The Type G switch is housed in a die cast enclosure and fitted with nitrile rubber gaskets to comply with the requirements of BS 5420/IEC 144 degree of protection IP 66.

The switch also meets U.L. rain-tight requirements, NEMA 4 water-tight and dust-tight indoor and outdoor specifications, NEMA 13 oil-tight and dust-tight indoor specifications and C.S.A. enclosure 4 requirements.

For hazardous locations, devices in cast iron enclosures, which meet NEMA 7 and 9 specification, are available. Please contact local Field Office for details.

Actuators – Construction and Materials

The Type G switch utilises diaphragm and piston actuators which have maximum allowable ratings in excess of 200% of the adjustable range.

The materials in contact with the pressure medium on standard switches are as follows:

1. Diaphragm Actuated Devices

Types GAWM and GDWM
Housing: Steel, copper brazed, zinc plated and passivated.
Diaphragm: nitrile rubber.
Pulsation Plug: brass

Types GBWM and GEWM
Connector and Pulsation Plate: steel, zinc plated and passivated.
Diaphragm and Seal: nitrile rubber.

2. Piston Actuated Devices

Types GCWM and GFWM
Housing:
Stainless Steel, Type 303 - on Low Pressure Types 1, 2, 21, & 22.
Stainless Steel Type 431 - on High Pressure Types 3, 4, 23 & 24.
Piston: Stainless Steel Type 440
Diaphragm and Seal: Viton*
Seal Retainer: P.T.F.E.
Pulsation Plug: Stainless Steel.

Adjustments

Removal of the cover permits access to the setting adjustment and, on adjustable differential types, to the differential adjustment. Changes to both may be made with a screwdriver.

Surge and Pulsation Dampening

All Type G switches are furnished with pulsation plugs to dampen pressure surges. If further surge dampening is required, a surge reducer is recommended.

Although the diaphragm will withstand wide pressure changes on each operating cycle, the pressure applied to the diaphragm during the normal operating cycle should never exceed the maximum value listed in the "Range" column in the catalogue listing. Life will be considerably reduced if regularly cycled above this pressure.

Surges which exceed the maximum range value may occasionally occur, especially on the start-up of the machine. The switch will withstand these occasional surges if they are within the maximum allowable pressure rating of the switch. However, frequently applying this higher pressure will greatly reduce the life of the switch.

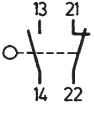
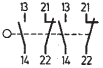
Service Temperature Limitations

Ambient: Min	-25°C (-13°F)	Max. +85°C (+185°F)
Pressure Media: Min.	-25°C (-13°F)	Max. +120°C (+250°F)

*Registered Trade Mark of Du Pont.

Technical Data

Electrical Contact Ratings

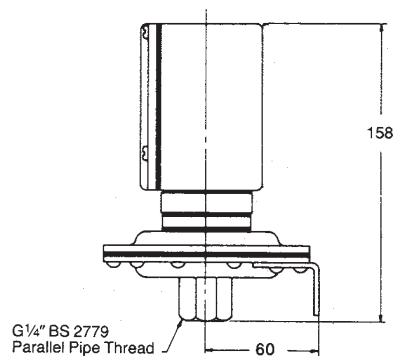
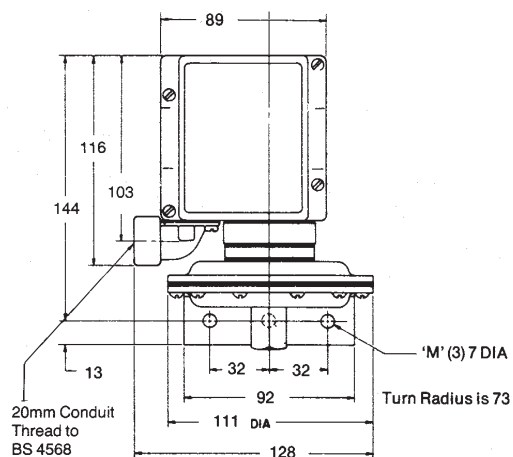
Type	Contact Arrangement	AC Ratings					DC Ratings		
			120V	240V	415V	600V		125V	250V
Single Pole, double throw. One circuit normally open and one circuit normally closed. Each circuit must be used on the same polarity.		Max Make Current A	60	30	17	12	Max Make & Break Current A	0.22	0.11
		Max Break Current A	6	3	1.7	1.2			
		Continuous Rating A	10	10	10	10			
Double Pole, double throw. Each pole is electrically separate from the other and may be used on opposite polarities. The contacts on each pole are single pole double throw. Each circuit must be used on the same polarity.		Max Make Current A	60	30	17	12	Max Make & Break Current A	0.11	0.05
		Max Break Current A	6	3	1.7	1.2			
		Continuous Rating A	10	10	10	10			

3b

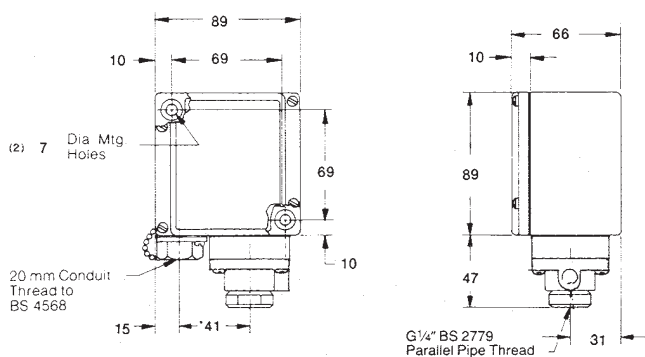
Dimensions

Class 9012 GAWM-1, 21 Class 9012 GDWM-1, 21

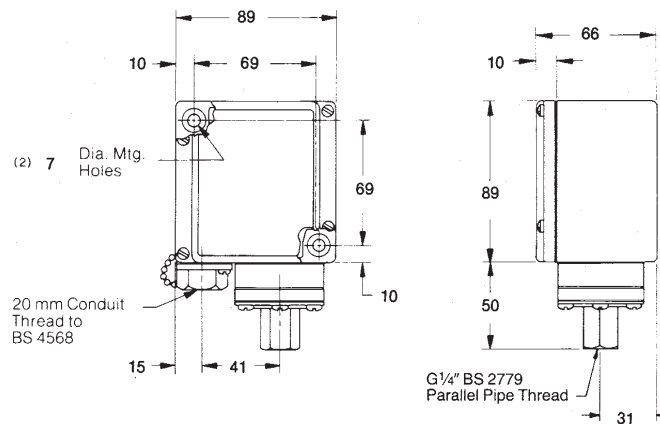
Weight 1.473 kg.



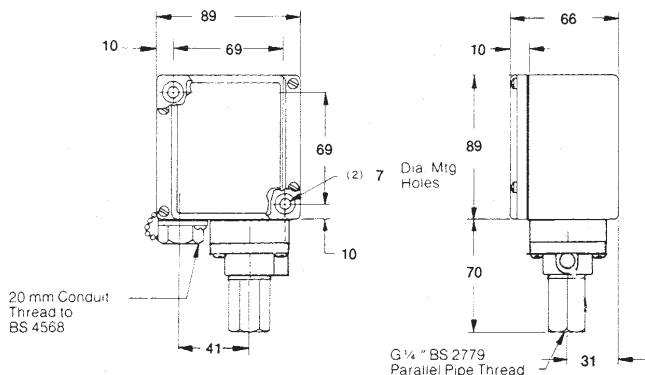
Class 9012 Type GBWM-1, 2, 21, 22 Class 9012 Type GEWM-1, 2, 21, 22



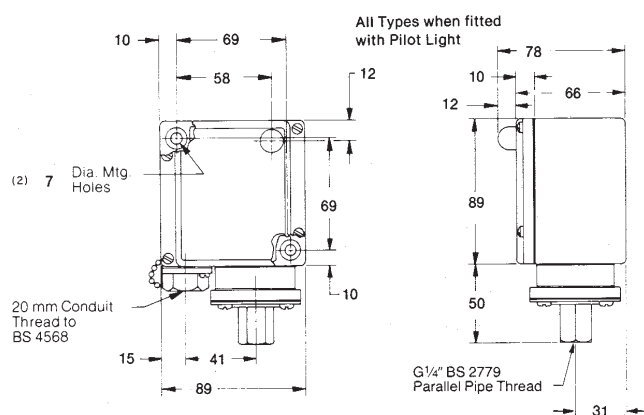
Class 9012 Type GAWM-5, 6, 25, 26 Class 9012 Type GDWM-5, 6, 25, 26



Class 9012 Type GCWM, GFWM



Class 9012 Type GAWM-2, 4, 22, 24 Class 9012 Type GDWM-2, 4, 22, 24



Dimensions in mm
Net Weight 0.82kg

All Dimensions in mm