Ultra-high purity pressure switch
Equipped with reed switch contacts
Model: PG845,PG847

Fig. left: Model PG845 with 1 contact Fig. right: Model PG847 with 2 contacts

PG845 and PG847 are Bourdon tube pressure gauges equipped with reed switch contacts, which are applicable to various occasions requiring high-purity applications such as for gases and liquids.
The switch points can be easily adjusted by removing the glass cover and placing the marker pointer at the desired value on the circumference of the dial.
The pressure gauges have undergone helium leak detection tests, and their internal components have been electropolished so as to optimally meet the purity standards. They comply with the standards of SEMATECH and SEMI, which can ensure to the greatest extent that the quality required by your applications is met.

Applications

- For gaseous and liquid, also aggressive media for demanding high purity applications, also in aggressive ambience
- Semiconductor and ffat panel industry
- Medical and pharmaceutical industry, biotechnology industry, production of active ingredients
- For high requirements to keep media contamination-free

Features

- Up to 2 Reed contacts, SPDT
- Switch points adjustable on site
- Wetted parts from stainless steel 316L and face seal process connections
- Electropolished internals and case, internal surface ffnish up to Ra < 0.25 µm [Ra < 10 µin]
- Scale ranges from -30 inHg ... +4000 psi

Specifications

Design
Bourdon tube pressure gauges that comply with ASME B40.100

Dial size(mm)
50mm

Accuracy class
■Indication: ±2.5 % of measuring span according to ASME B40.100 (Grade A)
■Switch: ±5 % of measuring span at switch point

Scale Range
-30 inHg ... +4000 psi
Or all other equivalent vacuum or compound pressure and vacuum ranges

Permissible temperature
Ambient-40 ... +104 °F [-40 ... +40 °C]
Medium≤ 212 °F [≤ 100 °C]

Temperature effect
When deviating from the reference conditions of the measurement system:
≤ ±0.04% of full scale per °C (reference temperature: 20 °C)
≤ ±0.4% of full scale per °F (reference temperature: 68 °F)

Pressure limitation
Steady: 3/4x full scale value
Fluctuation: 2/3x full scale value
Short Time: 1x full scale value

Add: No.527 Yangming Road, Yuyao City, Zhejiang Province, China Tel:(+86)0574-62678518 Fax:(+86)0574-62677718

Model: PG845,PG847

Specifactions

Process connection
- Face seal fittings compatible with VCR
- Female thread for face seal: stainless steel 316
- Male thread for face seal: stainless steel 316L

Pressure element
Stainless steel 316L
C-type or helical type

Movement
Stainless steel

Dial
Aluminium, white, black lettering with pointer stop pin

Ingress protection
IP20 ,Comply with IEC/EN 60529 standard

Level of cleanliness
- Clean for semiconductor applications in accordance with SEMI / SEMATEC
- Cleaned and packaged in class 100/10 cleanroom
- Packaged in two bags
- Purged with nitrogen
- Protective cap over threaded connection

Pointer
Aluminium, black

Case
Stainless steel 304, electropolished

Window
Polycarbonate, (rotatable)

Material of wetted parts
Stainless steel 316L, electropolished

Surface roughness of wetted parts
Ra ≤ 0.25 μm [10 μin]
For process connection ¼ NPT male: Ra ≤ 0.5 μm [20 μin]

Process connection location
- Bottom mount(radial)
- Back mount(axial)

Add: No.527 Yangming Road, Yuyao City, Zhejiang Province, China Tel:(+86)0574-62678518 Fax:(+86)0574-62677718

Model: PG845,PG847

Electrical data

Design
Reed switch contact

Electrical rating
Switching voltage:≤ AC 24 V / DC 24V
Switching current:≤ 0.5 A
Switching power: ≤ 10 VA/W

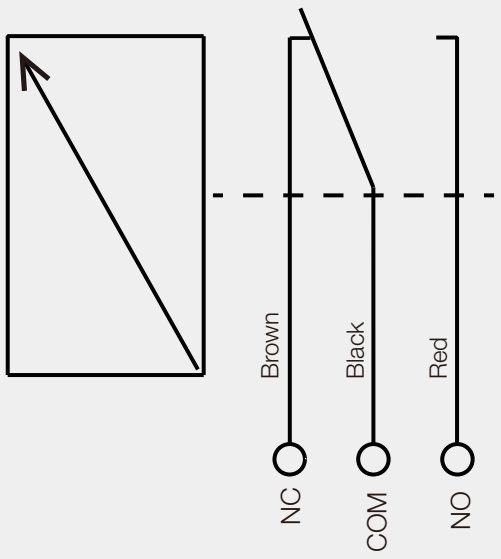
Switching function
Fig. left: model PG845 with 1 contact
Fig. right: model PG847 with 2 contacts

Electrical connection
Cable gland M8 x 1.25, with 3 m (cable long (10 ft), wire cross section 0.14 mm² (26 AWG) with ffying leads

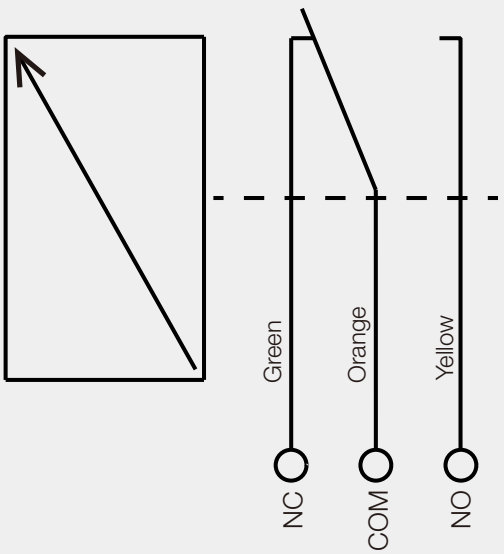
Switch point setting
■The instrument should be disconnected from the monitoring device and the window unscrewed
■The switch is set via the mark pointer on the dial‘s circumference
■The set value of the switch point is adjustable up to 80% of the scale range
■15% from low end and 5% from high end of scale

Wiring diagram

Low pressure or single switch contact (SP1)



High pressure switch contact (SP2)



Legend:
NC Normally closed
COM Common contact
NO Normally open

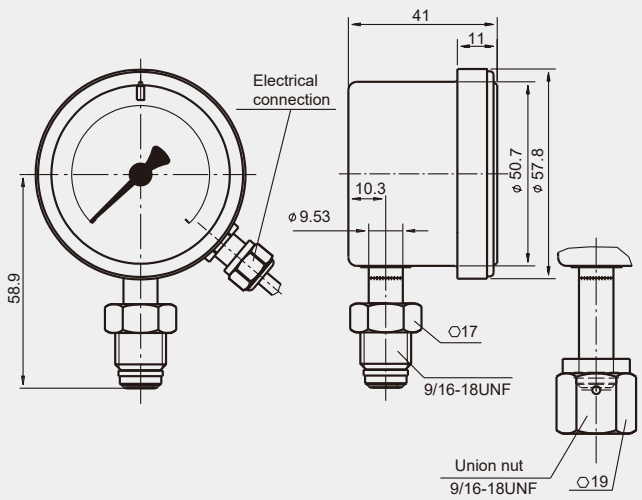
Add: No.527 Yangming Road, Yuyao City, Zhejiang Province, China Tel:(+86)0574-62678518 Fax:(+86)0574-62677718

Model: PG845,PG847

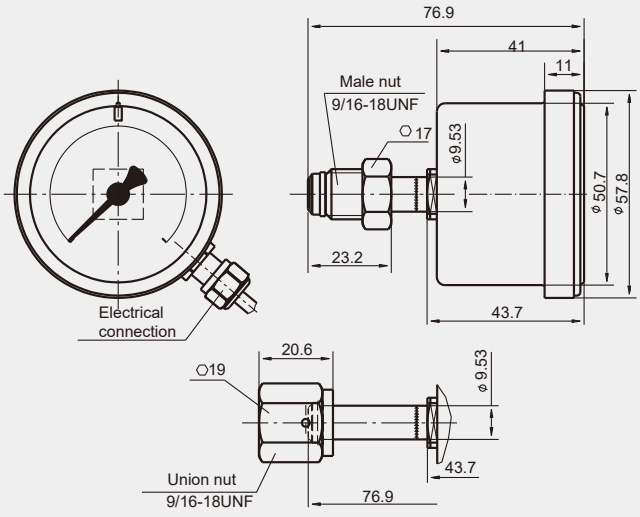
Dimensions in mm

Model: PG845,PG847

(L) Bottom mount(radial)



(B) Back mount(axial)



Add: No.527 Yangming Road, Yuyao City, Zhejiang Province, China Tel:(+86)0574-62678518 Fax:(+86)0574-62677718

Model: PG845,PG847

ORDERING CODE

Model
PG845 with 1 contact
PG847 with 2 contacts

Dial size(mm)
(50) -50mm

Process connection location
(L)-Bottom mount(radial)
(B)-Back mount(axial)

Purity grade
(UHP)-Ultra high purity application

Process connection sizes
(SM)-Male swivel 9/16 -18 UNF(Compatible with 1/4 VCR®)
(10)-R ¼,male thread
(06)-¼ NPT,male thread
(SF)-Female swivel 9/16 -18 UNF(Compatible with 1/4 VCR®)

Option
(N/A) -" "

Scale Range(coding examples only, see range table on page 6 for all standard ranges)

0.3BR=0...0.3bar	N=Vaccum range
0.3KG=0...0.3kg/cm^2	N1/3BR="-1...3bar"
6KP=0...6kPa	
0.6MP=0...0.6MPa	
30#=0...30psi	

Add: No.527 Yangming Road, Yuyao City, Zhejiang Province, China Tel:(+86)0574-62678518 Fax:(+86)0574-62677718

Model: PG845,PG847

Pressure range selection table

Scale ranges		
Bar	**Psi**	**MPa**
N1/4BR	N30HG&60#	N0.1/0.4MP
N1/6BR	-	N0.1/0.6MP
N1/10BR	N30HG&150#	N0.1/1MP
-	N30HG&200#	-
N1/15BR	-	-
-	-	N0.1/1.6MP
N1/20BR	N30HG&300#	-
-	-	N0.1/2.5MP
4BR	60#	0.4MP
6BR	-	0.6MP
-	100#	-
10BR	150#	1MP
-	200#	-
16BR	-	1.6MP
-	300#	-
25BR	-	2.5MP
-	500#	-
40BR	600#	4MP
60BR	-	6MP
-	1000#	-
100BR	1500#	10MP
-	2000#	-
160BR	-	16MP
-	3000#	-
250BR	4000#	25MP

Add: No.527 Yangming Road, Yuyao City, Zhejiang Province, China Tel:(+86)0574-62678518 Fax:(+86)0574-62677718