

PK46X UHP Digital Pressure Switch

Certifications




Application Scenarios



Semiconductor
/Photovoltaic



UHP Special
Gases



Corrosive
Medium



Gas Distribution
System



Product Features

Sealing

9/16-18UNF,
C/W-Seal,
Flow-through

Testing

100% Helium
Leak Testing

Packaging

Vacuum Packag-
ing in Class 100
Cleanroom

Treatment

Process connec-
tion EP level:
 $Ra \leq 0.15 \mu m$

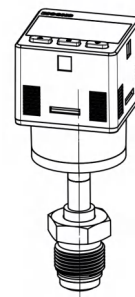
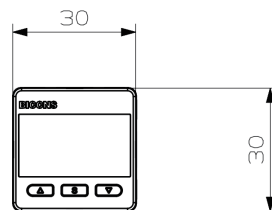
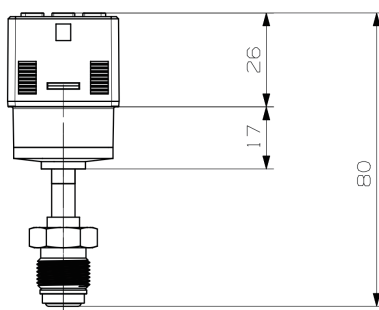
Product Description

- This product features an integrated, all-metal welded construction and can be equipped with semiconductor-grade pressure fittings. The wetted surfaces undergo 100% specialized EP treatment and are degreased and oil-free cleaned, fully meeting the requirements of semiconductor, photovoltaic, flat panel display, high-purity/ultrapure environments, and specialty gas pipelines.
- The pressure range covers -14.7–6000 psi, with customizable ranges available to meet specific customer requirements.
- Each unit undergoes 100% leak testing to comply with industry sealing standards, preventing the risk of leakage of flammable, explosive, corrosive, or toxic media.
- Manufacturing is carried out entirely in a Class 100 cleanroom, with 100% cleaning and vacuum packaging, ensuring compliance with SEMI standards.

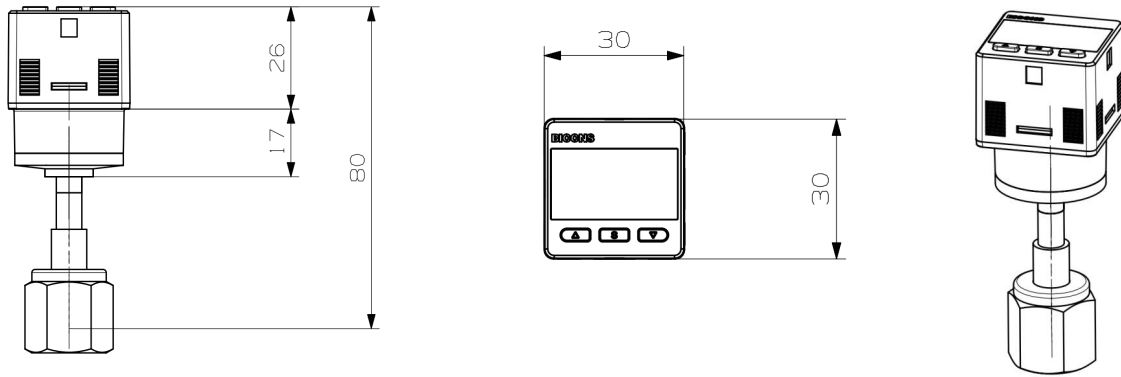
Technical Specifications

Application Scenarios	Gauge, Absolute, Negative Pressure
Measurement Range	-14.7.....0.....6000psi
Accuracy (@25°C)	±0.5%FS (< 160psi: ±0.75%FS)
Over Pressure	Max: the rated pressure × 3
Medium Temperature	-40.....125°C
Ambient Temperature	-20.....85°C
Temp Coefficient(-20~85°C)	Zero: <0.1%FS/10K; Span: <0.1%FS/10K
Supply Voltage	DC24V (10...30 V DC)
Output Signal	4...20mA , 1...5V
Process Connection	9/16-18UNF (1/4"VCR)
Connection Material	SUS316L
Diaphragm Material	316L VIM/VAR/Nickel based alloy/Hastelloy alloy
Stability Performance	Typical: 0.25%FS/Year
Repeatability	≤0.1%
Zero Adjustable	-10...+10% of Full Range
Roughness	Ra: <0.15μm
Leak Rate	≤1X10 ⁻¹⁰ Pa.m ³ /s
Packaging	Double-layer vacuum packaging, compliant with SEMI E49.6

Specifications and Dimensions (Unit: mm)



Top digital display 9/16-18UNF Male



Top digital display 9/16-18UNF Female

Range Code Table					
Code	Negative Range (kPa)	Code	Gauge Range (kPa)	Code	Absolute Range (kPa)
BG200K	(-100 ~ 200)	G200K	(0 ~ 200)	A200K	(0 ~ 200)
BG300K	(-100 ~ 300)	G300K	(0 ~ 300)	A300K	(0 ~ 300)
BG500K	(-100 ~ 500)	G500K	(0 ~ 500)	A500K	(0 ~ 500)
BG700K	(-100 ~ 700)	G700K	(0 ~ 700)	A700K	(0 ~ 700)
BG1000K	(-100 ~ 1000)	G1000K	(0 ~ 1000)	A1000K	(0 ~ 1000)
Code	Negative Range (MPa)	Code	Gauge Range (MPa)	Code	Absolute Range (MPa)
BG02M	(-0.1 ~ 0.2)	G02M	(0 ~ 0.2)	A02M	(0 ~ 0.2)
BG03M	(-0.1 ~ 0.3)	G03M	(0 ~ 0.3)	A03M	(0 ~ 0.3)
BG05M	(-0.1 ~ 0.5)	G05M	(0 ~ 0.5)	A05M	(0 ~ 0.5)
BG07M	(-0.1 ~ 0.7)	G07M	(0 ~ 0.7)	A07M	(0 ~ 0.7)
BG1M	(-0.1 ~ 1)	G1M	(0 ~ 1)	A1M	(0 ~ 1)
BG2M	(-0.1 ~ 2)	G2M	(0 ~ 2)	A2M	(0 ~ 2)
BG3.5M	(-0.1 ~ 3.5)	G3.5M	(0 ~ 3.5)	A3.5M	(0 ~ 3.5)
BG5M	(-0.1 ~ 5)	G5M	(0 ~ 5)	A5M	(0 ~ 5)
BG10M	(-0.1 ~ 10)	G10M	(0 ~ 10)	A10M	(0 ~ 10)
BG20M	(-0.1 ~ 20)	G20M	(0 ~ 20)	A20M	(0 ~ 20)
Code	Negative Range (bar)	Code	Gauge Range (bar)	Code	Absolute Range (bar)
BG2B	(-1 ~ 2)	G2B	(0 ~ 2)	A2B	(0 ~ 2)
BG3B	(-1 ~ 3)	G3B	(0 ~ 3)	A3B	(0 ~ 3)
BG5B	(-1 ~ 5)	G5B	(0 ~ 5)	A5B	(0 ~ 5)
BG7B	(-1 ~ 7)	G7B	(0 ~ 7)	A7B	(0 ~ 7)
BG10B	(-1 ~ 10)	G10B	(0 ~ 10)	A10B	(0 ~ 10)
BG20B	(-1 ~ 20)	G20B	(0 ~ 20)	A20B	(0 ~ 20)
BG35B	(-1 ~ 35)	G35B	(0 ~ 35)	A35B	(0 ~ 35)
BG50B	(-1 ~ 50)	G50B	(0 ~ 50)	A50B	(0 ~ 50)
BG100B	(-1 ~ 100)	G100B	(0 ~ 100)	A100B	(0 ~ 100)
BG200B	(-1 ~ 200)	G200B	(0 ~ 200)	A200B	(0 ~ 200)
Code	Negative Range (psi)	Code	Gauge Range (psi)	Code	Absolute Range (psi)
PUM	(-14.7 ~ 30psi)	PUG	(0 ~ 30psi)	PUA	(0 ~ 30psi)
PTM	(-14.7 ~ 60psi)	PTG	(0 ~ 60psi)	PTA	(0 ~ 60psi)
PSM	(-14.7 ~ 100psi)	PSG	(0 ~ 100psi)	PSA	(0 ~ 100psi)
PRM	(-14.7 ~ 160psi)	PRG	(0 ~ 160psi)	PRA	(0 ~ 160psi)
PNM	(-14.7 ~ 250psi)	PNG	(0 ~ 250psi)	PNA	(0 ~ 250psi)
PMM	(-14.7 ~ 350psi)	PMG	(0 ~ 350psi)	PMA	(0 ~ 350psi)
PHM	(-14.7 ~ 500psi)	PHG	(0 ~ 500psi)	PHA	(0 ~ 500psi)
PEM	(-14.7 ~ 750psi)	PEG	(0 ~ 750psi)	PEA	(0 ~ 750psi)
PDM	(-14.7 ~ 1000psi)	PDG	(0 ~ 1000psi)	PDA	(0 ~ 1000psi)
PCM	(-14.7 ~ 1500psi)	PCG	(0 ~ 1500psi)	PCA	(0 ~ 1500psi)
PBM	(-14.7 ~ 2000psi)	PBG	(0 ~ 2000psi)	PBA	(0 ~ 2000psi)
PAM	(-14.7 ~ 3000psi)	PAG	(0 ~ 3000psi)	PAA	(0 ~ 3000psi)
P4M	(-14.7 ~ 4000psi)	P4G	(0 ~ 4000psi)	P4A	(0 ~ 4000psi)
P5M	(-14.7 ~ 5000psi)	P5G	(0 ~ 5000psi)	P5A	(0 ~ 5000psi)
P6M	(-14.7 ~ 6000psi)	P6G	(0 ~ 6000psi)	P6A	(0 ~ 6000psi)

Dimensions are for reference only. Actual product dimensions may vary.

Range

See Range Code Table

YY Customized

Display Mode

- H Top Display
- V Side View

Output

- 420 4-20mA
- 105 1-5V

Switching Signal

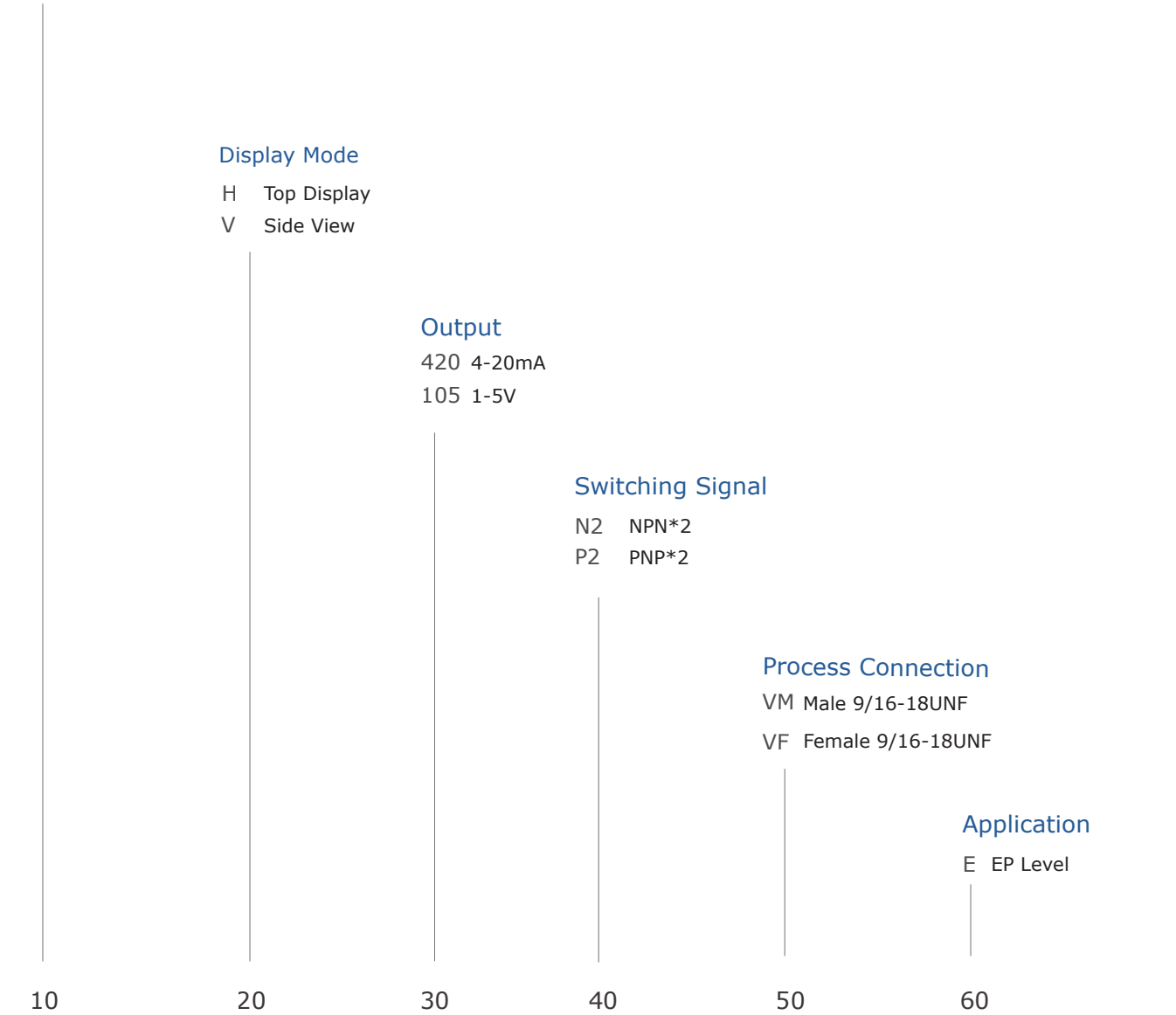
- N2 NPN*2
- P2 PNP*2

Process Connection

- VM Male 9/16-18UNF
- VF Female 9/16-18UNF

Application

- E EP Level



PK46X UHP Digital Pressure Switch

Selection Example:

Requirement: 4-20mA Output + PNP*2, -0.1~0.5MPa, Top Display, 9/16-18UNF male, EP Level

Selected Model: PK46X-BG05MH420P2VME