TWOWAY® HYDRAULICS

Pressure Switches

油電壓力開關

Patented /專利201496

TWOWAY® HYDRAULICS

- ●壓力直讀式，24VDC電晶體感應開關
  Direct Pressure Read-out, 24 VDC Transistor Sensing Switch Pressure Switch
- ●接管孔口：1/4" PT(PF,NPT)內牙
  Threaded type: 1/4" PT (PF,NPT).
- ●詳細內容請參閱頁數 1
  For details see page 1

PSA

- ●一般型，24VDC電晶體感應開關
  General Type, 24 VDC Transistor Sensing Pressure Switch
- ●接管孔口：1/4" PT (PF,NPT)內牙
  Threaded type: 1/4" PT(PF,NPT).
- ●詳細內容請參閱頁數 2
  For details see page 2

PSB

- ●貼壁壓力直讀式，24VDC電晶體感應開關
  Direct Pressure Read-out, subplate,24 VDC Transistor Sensing Pressure Switch
- ●貼壁型安裝
  Subplate mounting type
- ●詳細內容請參閱頁數 3
  For details see page 3

PSL

- ●導壓回油式
  Drain type.
- ●貼壁型安裝，上下補壓壓差小
  Subplate mounting Precision switching long mechanical life
- ●詳細內容請參閱頁數 4
  For details see page 4

PYC

- ●一般隔膜式
  General Diaphragm Type
- ●油水氣體多用途
  Applicable for oil, water and air
- ●詳細內容請參閱頁數 5
  For details see page 5

DNP

- ●壓力直讀式，標準型
  Direct Pressure Read-out, Screw-in type
- ●油路承製閥孔，直接插入安裝
  Custom manifold designed for direct mount for direct integration
- ●詳細內容請參閱頁數 6
  For details see page 6

DNC

- ●壓力直讀式，標準型
  Direct Pressure read-out, Heavy-duty microswitch
- ●依安裝需求，可當配管式或貼壁式用
  Suitable for threaded type or subplate mounting
- ●詳細內容請參閱頁數 7
  For details see page 7

DNL

油電壓力開關系列
Pressure Switch Series

●壓力直讀式，面板固定型
Direct Pressure read-out, Panel mounting type
●接管孔口：1/4" PT(PF,NPT)內牙
Threaded type: 1/4" PT (PF,NPT)
●詳細內容請參閱頁數 8
For details see page 8

DNF

●壓力直讀式，標準型
Direct Pressure Read-out, Standard type
●接管孔口：1/4" PT (PF,NPT)內牙
Threaded type: 1/4" PT (PF,NPT)
●詳細內容請參閱頁數 9
For details see page 9

DNA

●一般型
General Type
●接管孔口：1/4" PT (PF,NPT)內牙
Threaded type: 1/4" PT (PF,NPT)
●詳細內容請參閱頁數 10
For details see page 10

DNB

●一般型疊加式
Sandwich Type
●配合ISO-03, ISO-05 (CETOP 3,5)電磁閥
Operated with ISO-03, ISO-05 (CETOP 3,5) Solenoid Valves
●詳細內容請參閱頁數 11
For details see page 11

DMB

●壓力直讀式，疊加式
Direct Pressure Read-out, Sandwich Type
●配合ISO-03, ISO-05 (CETOP 3,5)電磁閥
Operated with ISO-03, ISO-05 (CETOP 3,5) Solenoid Valves
●詳細內容請參閱頁數 12
For details see page 12

DNM

●一般式
General type
●詳細內容請參閱頁數 13
For details see page 13

TC

●詳細內容請參閱頁數 14
For details see page 14

TW

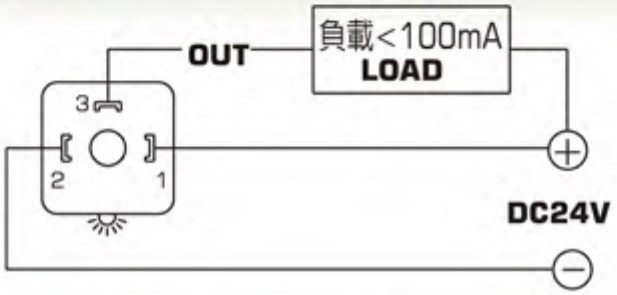
Differential Pressure Indicator

配電圖 WIRING DIAGRAM

無接點NPN電晶體感應式開關 NPN Transister Type Pressure Switches

Model: PSA, PSB, PSL

Series: PSA, PSB, PSL

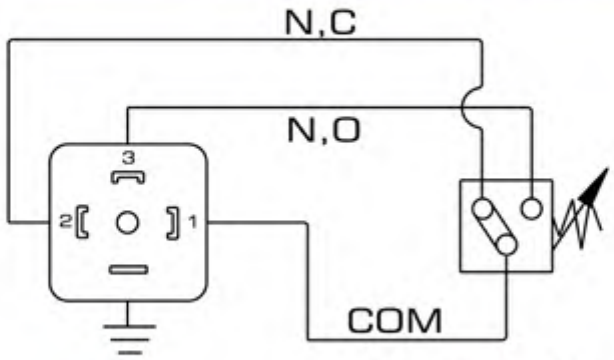


最高負載／LOAD：24VDC<100mA

電氣壽命／Electrical Life：80,000,000次

油電符號 Graphic Symbol

Model: DNA, DNB, DNF, DNL DNP, DNM, DMB.DNC



NC: clamp 1-2
NO: clamp1-3

微動開關容量 Transister Capacity

Series: PYC

負載：15A,125,250,480VAC
LOAD :1/2A,125VDC, 1/4A,250VDC
壽命／Lifetime：200,000次

Series: DNL

負載：10A-125,250VAC
LOAD :0.3A,125VDC, 0.15A,250VDC
壽命／Lifetime：200,000次

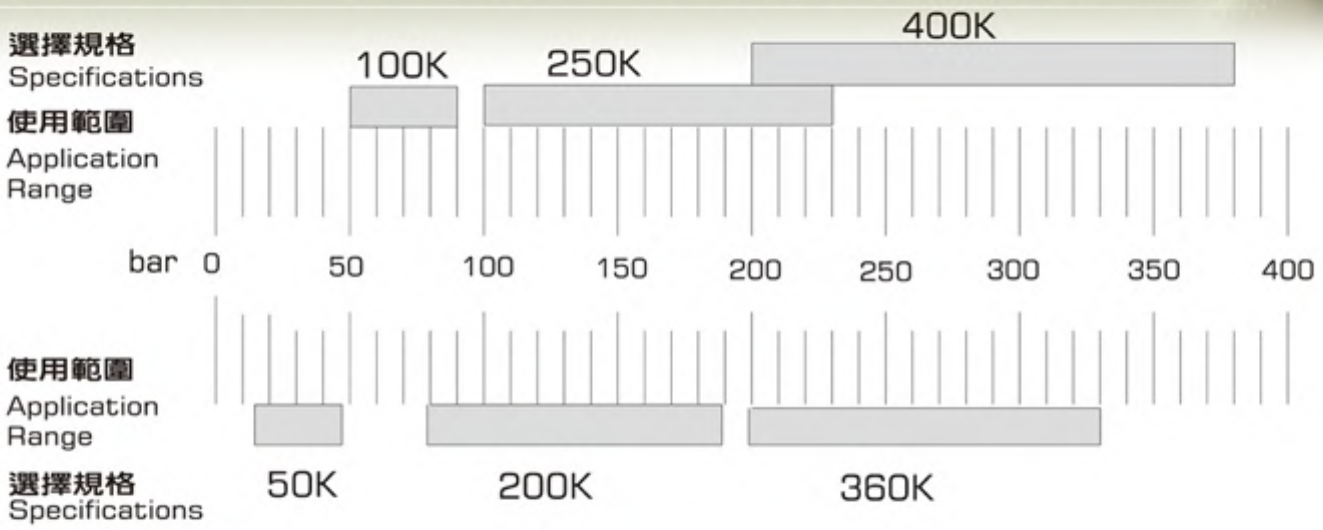
Series: DNA,DNB,DNC,DNF DNL,DNP,DNM,DMB,TC

22B負載：3A-125,250VAC
LOAD :2A,30VDC, 0.15A,125VDC
壽命／Lifetime：100,000次
06i:24-250V(DC/AC)<0.6A

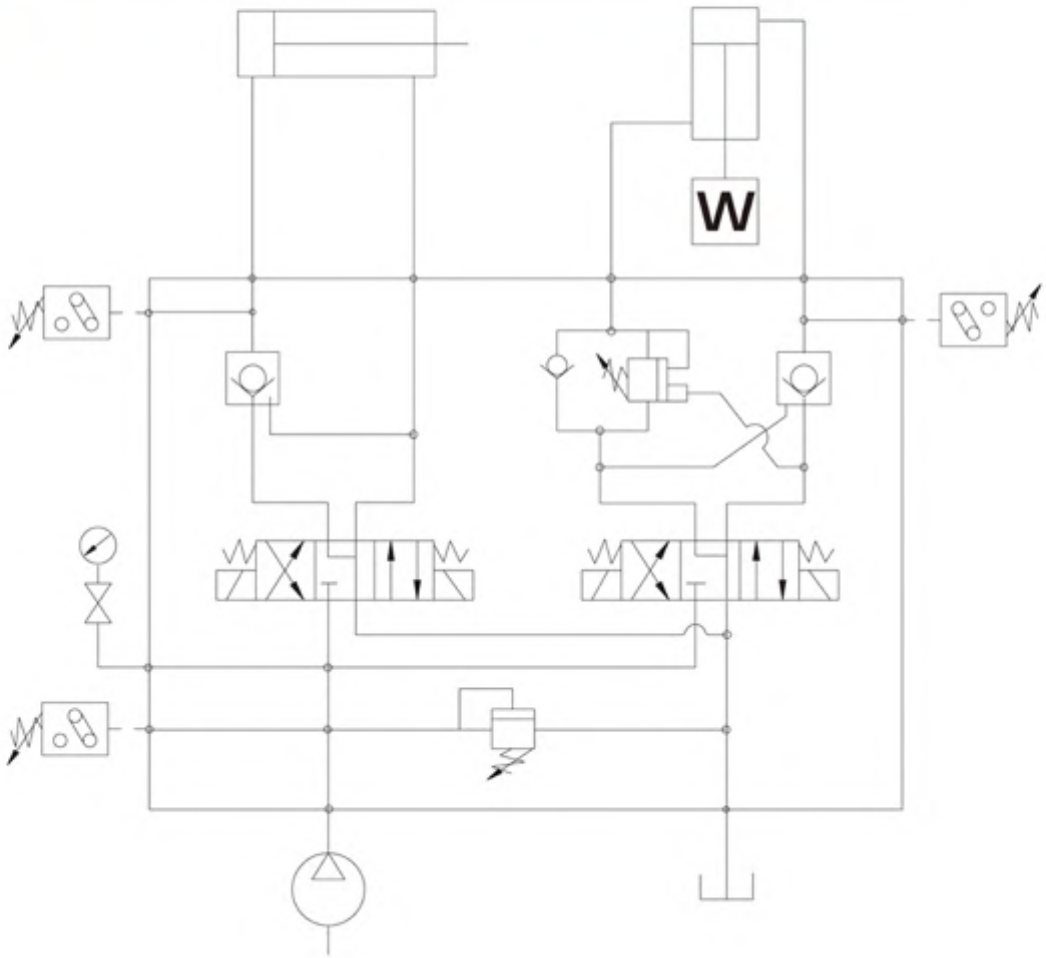
壓力範圍 PRESSURE RANGE

型式 Model	02K	08K	20K	30K	40K	50K	70K	100K	150K	200K	210K	250K	280K	360K	400K
PSA						●		●		●			●		●
PSB					●		●		●			●			
PSL						●		●		●			●		●
DNA				●	●		●	●	●			●		●	
DNB					●		●		●			●			
DNC					●		●	●	●			●			
DNF					●		●	●	●					●	
DNP	●	●	●									●			
DNM					●		●	●	●			●			
DMB					●		●		●			●			
PYC											●				
TC						●		●	●			●		●	

使用範圍及選擇規格參考表
APPLICATION RANGE AND SPECIFICATIONS SELECTION TABLES

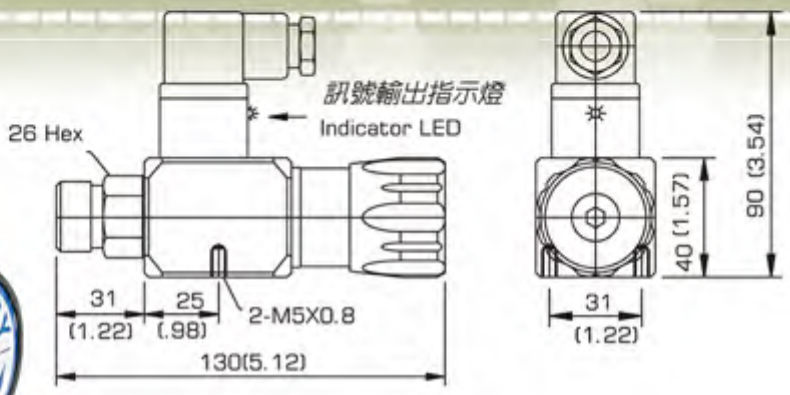


壓力開關安裝使用參考圖(僅供參考)
PRESSURE SWITCH APPLICATION CIRCUIT
(For reference only)



PSA 無接點式 油電壓力開關
NPN Pressure Switches

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

PSA-100K-21B

① ② ③

① 型式 / Model

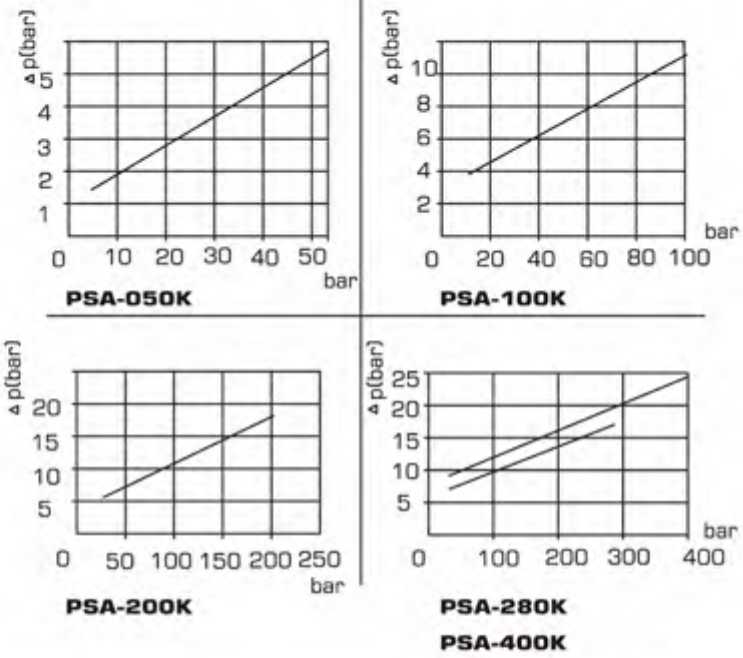
壓力直讀式，24VDC電晶體感應開關
Direct Pressure Read-out, 24VDC Transistor Sensing Pressure Switch

② 壓力範圍 / Pressure Adj. Range

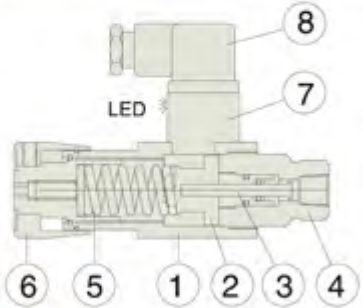
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight PSA
050K	6~50	200	25	0.8
100K	15~100	300	45	0.8
200K	30~200	300	100	0.8
280K	40~280	350	110	0.8
400K	50~400	450	180	0.8

③ 設計資料 / Design Number

性能圖 / Performance Curves

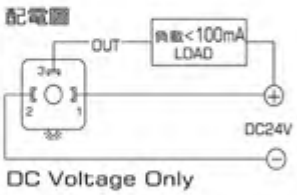


剖面圖 / Schematic Cross-Section



1	本體(鋁合金6061) Housing (Aluminum 6061)	5	彈簧 Spring
2	開關感應座 Switch Sensing Block	6	壓力調整鈕 Pressure Adj. knob
3	伺服柱塞 Servo-Piston	7	感應開關 Proximity Sensor
4	接管孔口(1/4" PT) Connection Port (1/4" PT)	8	電氣接頭 Electrical connection

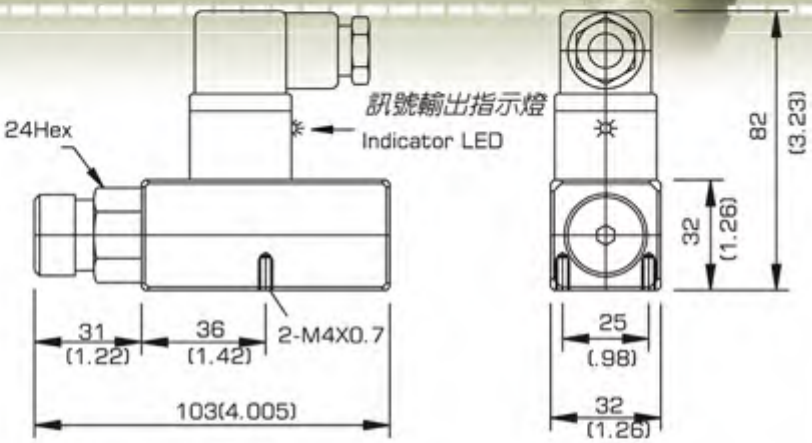
配電圖



DC Voltage Only

PSB 無接點式 油電壓力開關
NPN Pressure Switches

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

PSB-250K-21B

① ② ③

① 型式 / Model

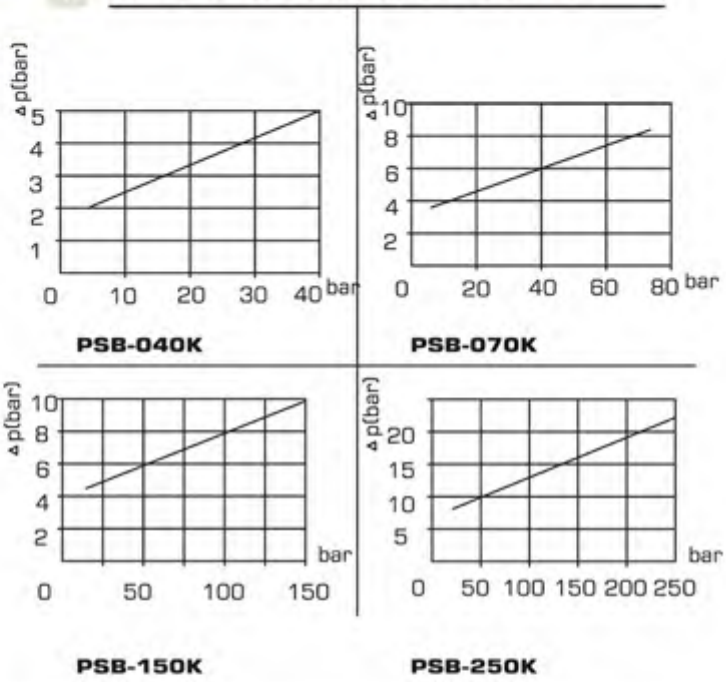
一般型，24VDC電晶體感應開關
General Type, 24VDC Transistor Sensing Pressure Switch

② 壓力範圍 / Pressure Adj. Range

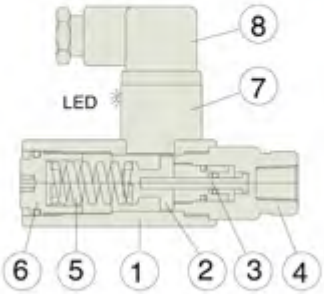
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight PSB
040K	6~40	150	20	0.6
070K	10~70	150	30	0.6
150K	20~150	250	70	0.6
250K	40~250	250	100	0.6

③ 設計資料 / Design Number

性能圖 / Performance Curves

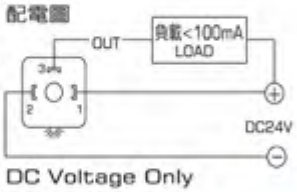


剖面圖 / Schematic Cross-Section



1	本體(鋁合金6061) Housing (Aluminum 6061)	5	彈簧 Spring
2	開關感應座 Switch Sensing Block	6	壓力調整鈕 Pressure Adj. knob
3	伺服柱塞 Servo-Piston	7	感應開關 Proximity Sensor
4	接管孔口(1/4" PT) Connection Port (1/4" PT)	8	電氣接頭 Electrical connection

配電圖

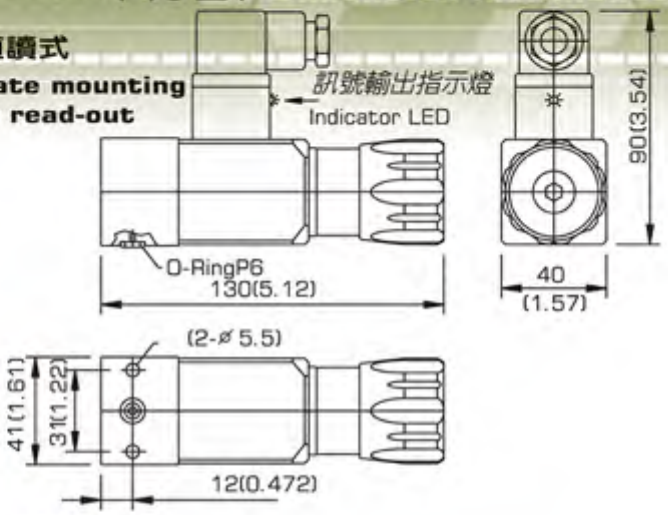


DC Voltage Only

PSL 無接點式 油電壓力開關
NPN Pressure Switches

尺寸圖 / Dimension mm(inches)

貼壁直讀式
Subplate mounting direct read-out



選購型號 / Ordering Code

PSL-100K-21B

① ② ③

① 型式 / Model

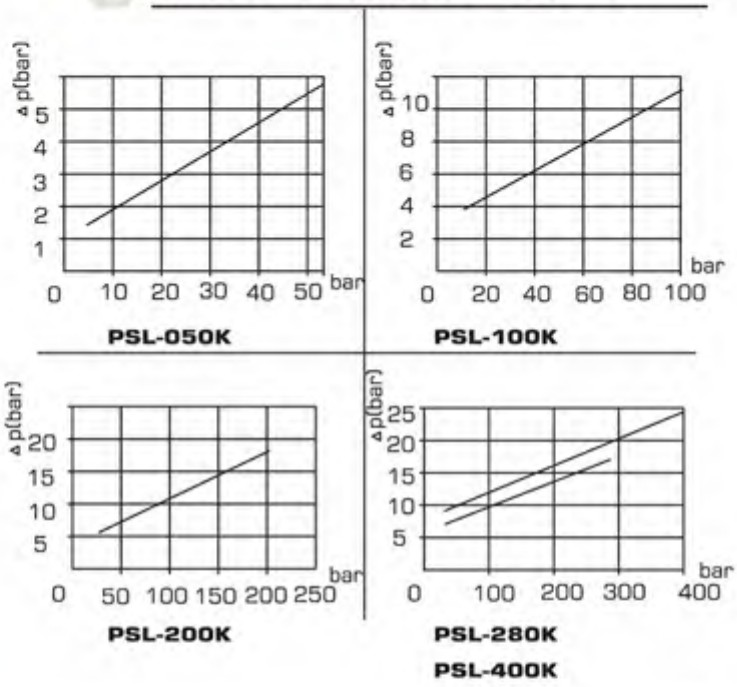
貼壁壓力直讀式，24VDC電晶體感應開關
Direct Pressure Read-out, Subplate, 24 VDC
Transistor Sensing Pressure Switch

② 壓力範圍 / Pressure Adj. Range

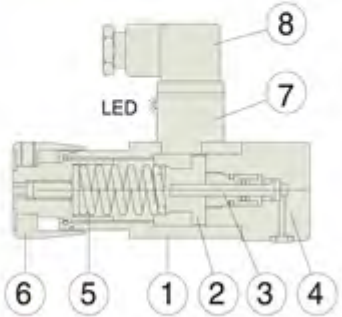
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight PSL
050K	6~50	200	25	0.8
100K	15~100	300	45	0.8
200K	30~200	300	100	0.8
280K	40~280	350	110	0.8
400K	50~400	450	180	0.8

③ 設計資料 / Design Number

性能圖 / Performance Curves

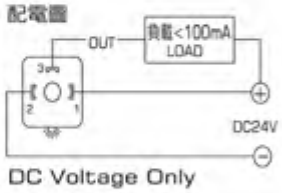


剖面圖 / Schematic Cross-Section



1	本體(鋁合金6061) Housing (Aluminum 6061)	5	彈簧 Spring
2	開關感應座 Switch Sensing Block	6	壓力調整鈕 Pressure Adj. knob
3	伺服柱塞 Servo-Piston	7	感應開關 Proximity Sensor
4	接管孔口(1/4" PT) Connection Port (1/4" PT)	8	電氣接頭 Electrical connection

配電圖

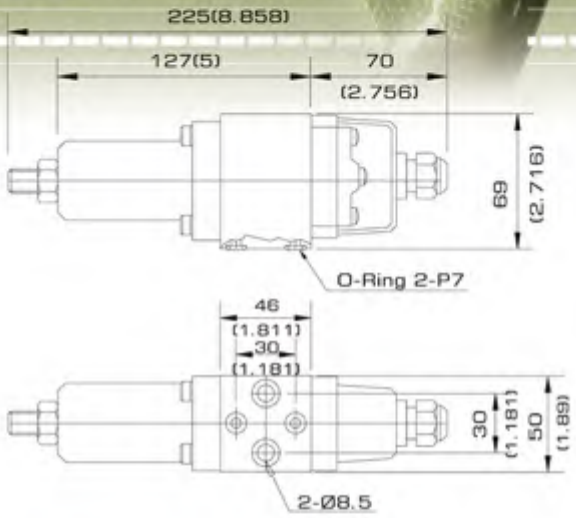


DC Voltage Only

PYC 回油式壓力開關
Drain Type Pressure Switches

最適合要求上下點,壓差小需作補壓之機械
Slight High-Low Differential Pressure Type
For pressure compensation machine application.

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

PYC-210K-21B

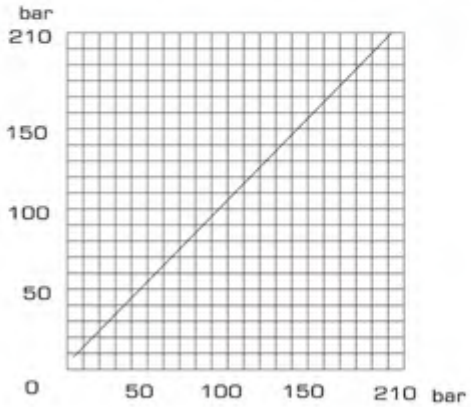
① ② ③

① **型式 / Model**
導壓回油式
Subplate mounting Precision switching long mechanical life

② **壓力範圍 / Pressure Adj. Range**
10~210 bar

③ **設計資料 / Design Letter**

性能圖 / Performance Curves

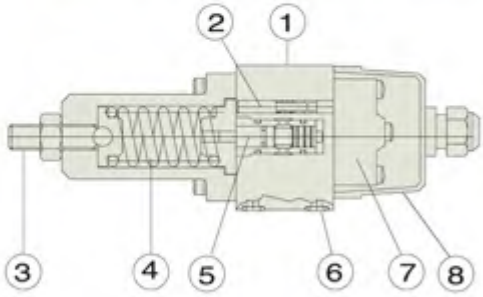


微動開關使用容量 Switching Capacity

測定壓力$_{bar}$: Set Pres. 110bar

電源 Power Source	交流 AC	直流 DC	
電壓 Volt (V)	125,250,480	125	250
電流 Amp. (A)	15	0.5	0.25

剖面圖 / Schematic Cross-Section

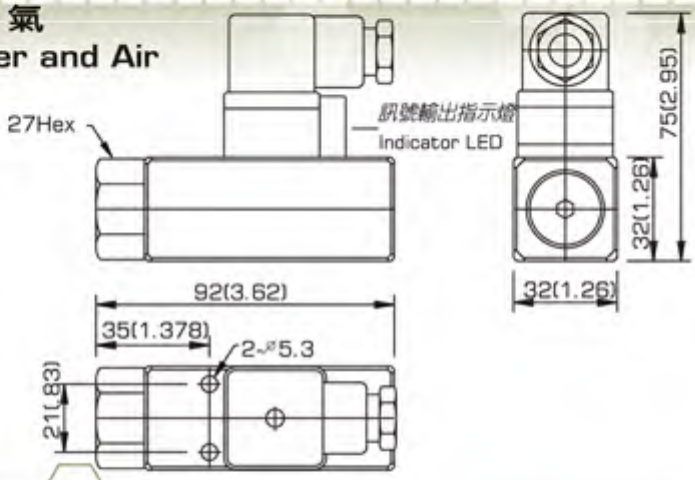


1	本體(鑄鐵) Housing (FC25)	5	伺服柱塞 Servo-Piston
2	微動開關導柱 Microswitch Guide	6	O型油封 O-Ring-P7
3	壓力調整螺絲 Pressure Adjustment Screw	7	微動開關 Microswitch
4	彈簧 Spring	8	護蓋 Cover

DNP 低壓隔膜式壓力開關
Low Pressure Diaphragm Pressure Switch

油、水、氣
Oil, Water and Air

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

DNP-08K-21B

① ② ③

① 型式 / Model

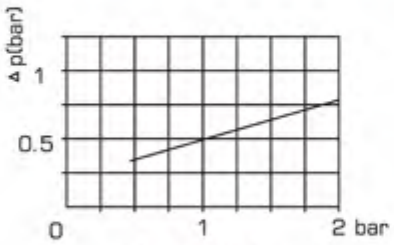
一般型隔膜式
General Diaphragm Type

② 壓力範圍 / Pressure Adj. Range

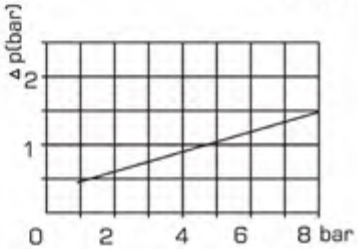
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight DNP
02K	0.5~2.0	80	1	0.2
08K	1.5~8.0	80	4	0.2
20K	2.0~2.0	80	5	0.2

③ 22B:無輸出指示燈Without indicator LED
06i:附訊號輸出指示燈With indicator LED

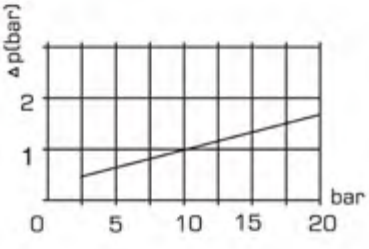
性能圖 / Performance Curves



DNP-02K

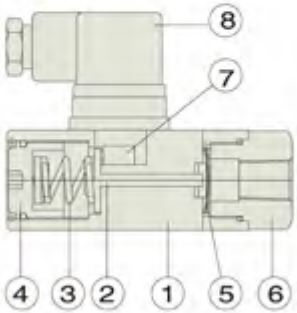


DNP-08K



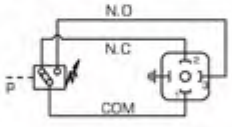
DNP-20K

剖面圖 / Schematic Cross-Section



1	本體(鋁合金6061) Housing (Aluminum 6061)	5	隔膜 Diaphragm
2	伺服柱塞 Servo-Piston	6	接管孔口(1/4" PT) Connection Port (1/4" PT)
3	彈簧 Spring	7	微動開關 Microswitch
4	壓力調整鈕 Pressure Adj. knob	8	電氣接頭 Electrical connection

油電符號表/Graphic Symbol



N.O=Normally open
N.C=Normally close

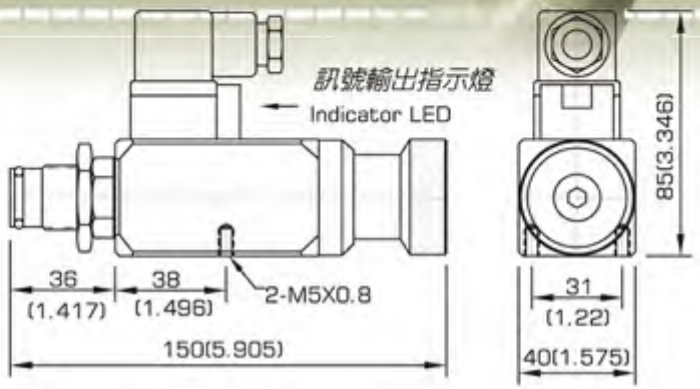
Switching capacity
微動開關容量 電阻/線圖

22B:250VAC:3A 30VDC:2A

06i:24~250V(DC/AC)<0.6A

DNC 油電壓力開關 Pressure Switches

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

DNC-250K-22B

① ② ③

① **型式 / Model**

壓力直讀式，插式型
Direct Pressure Read-out, Screw-in type

② **壓力範圍 / Pressure Adj. Range**

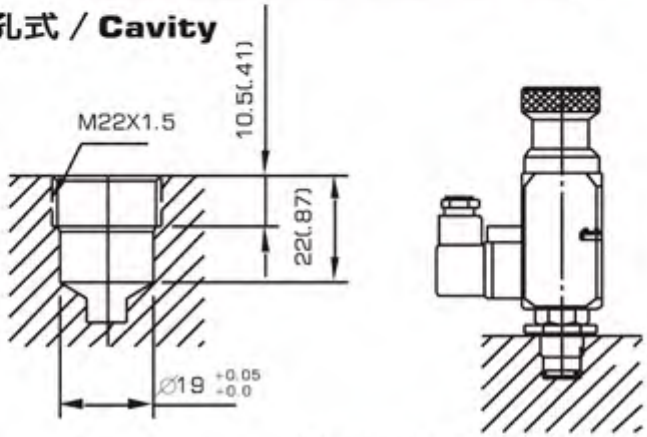
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight DNC
040K	8~40	80	20	1.0
070K	10~70	150	38	1.0
100K	15~100	150	50	1.0
150K	20~150	250	70	1.0
250K	40~250	400	100	1.0
360K	50~360	400	200	1.0

③ **22B:無輸出指示燈Without indicator LED**
06i:附訊號輸出指示燈With indicator LED

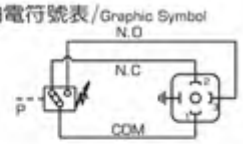
性能圖 / Performance Curves

請參閱DNA表列
See Table DNA Series.

插孔式 / Cavity

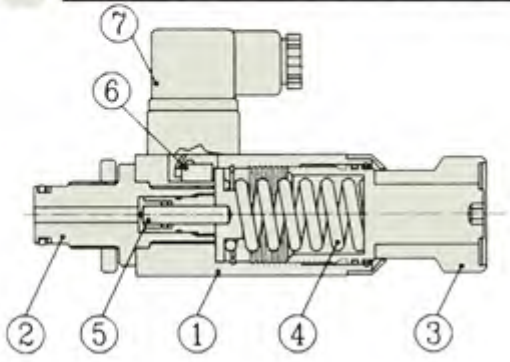


油電符號表/Graphic Symbol



N.O=Normally open
N.C=Normally close
Switching capacity
微動開關容量 電阻/線圖
22B:250VAC:3A 30VDC:2A
06i:24~250V(DC/AC)<0.6A

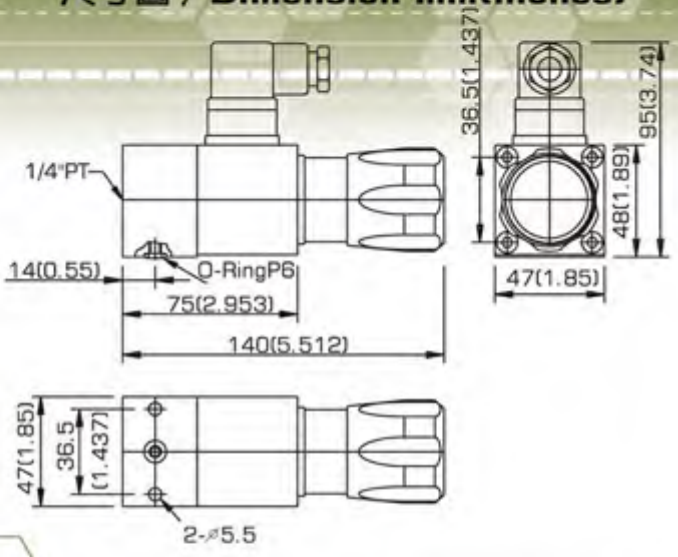
剖面圖 / Schematic Cross-Section



1	本體(鑄鐵) Housing (Casting-Iron)	5	伺服柱塞 Servo-Piston
2	接管孔口(1/4" PT) Connection Port (1/4" PT)	6	微動開關 Microswitch
3	壓力調整鈕 Pressure Adj. knob	7	電氣接頭 Electrical connection
4	彈簧 Spring		

DNL 油電壓力開關 Pressure Switches

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

DNL-100K-21B

① ② ③

① 型式 / Model

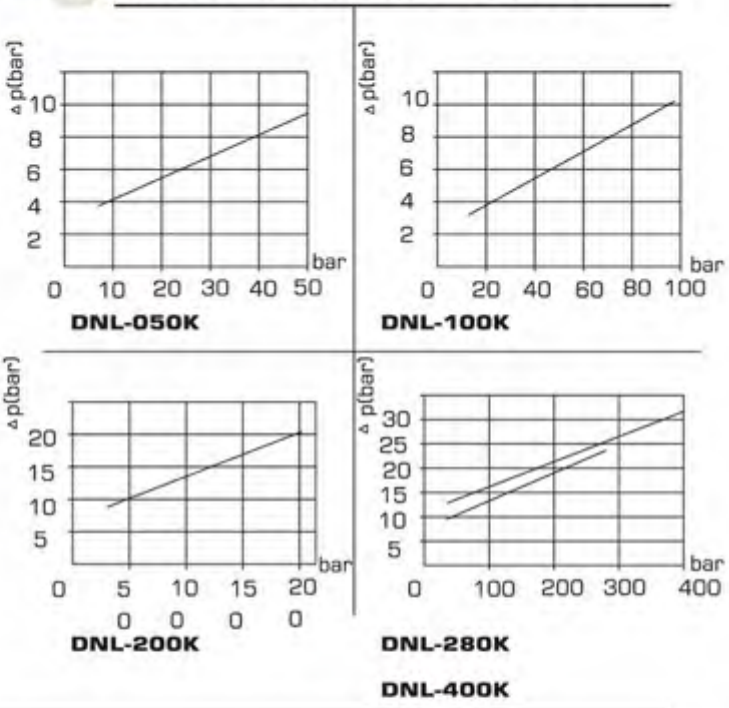
壓力直讀式，標準型
Direct pressure read-out, Heavy-duty microswitch

② 壓力範圍 / Pressure Adj. Range

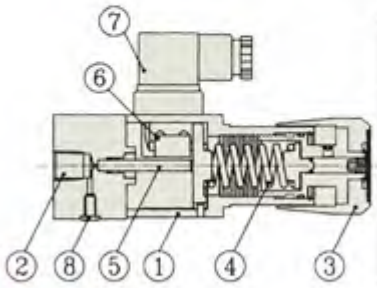
型式 Model	壓力調整範圍bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力bar Set Pres. bar	重量kg Weight DNL
050K	8~50	200	25	1.0
100K	15~100	300	45	1.0
200K	30~200	300	100	1.0
280K	40~280	350	110	1.0
400K	50~400	450	180	1.0

③ 設計資料 / Design Letter

性能圖 / Performance Curves

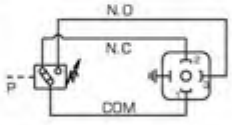


剖面圖 / Schematic Cross-Section



1	本體(鑄鐵) Housing (Casting-Iron)	5	伺服柱塞 Servo-Piston
2	接管孔口(1/4" PT) Connection Port (1/4" PT)	6	微動開關 Microswitch
3	壓力調整鈕 Pressure Adj. knob	7	電氣接頭 Electrical connection
4	彈簧 Spring	8	貼壓油口 O-ring P6 (M5xP0.8)

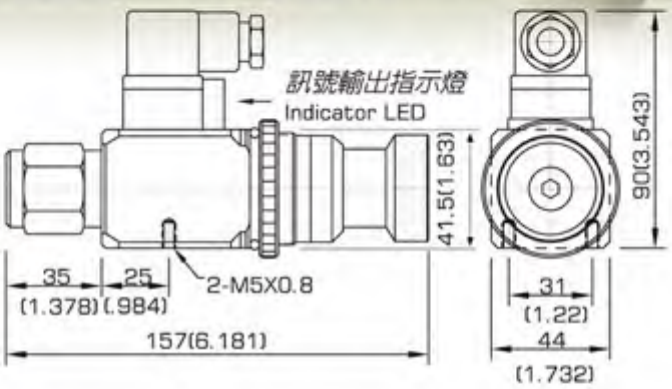
油電符號表/Graphic Symbol



N.O=Normally open
N.C=Normally close
Switching capacity
微動開關容量 電阻/線圈
22B:250VAC:3A 30VDC:2A
06i:24~250V(DC/AC)<0.6A

DNF 油電壓力開關 Pressure Switches

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

DNF-250K-22B

① ② ③

① 型式 / Model

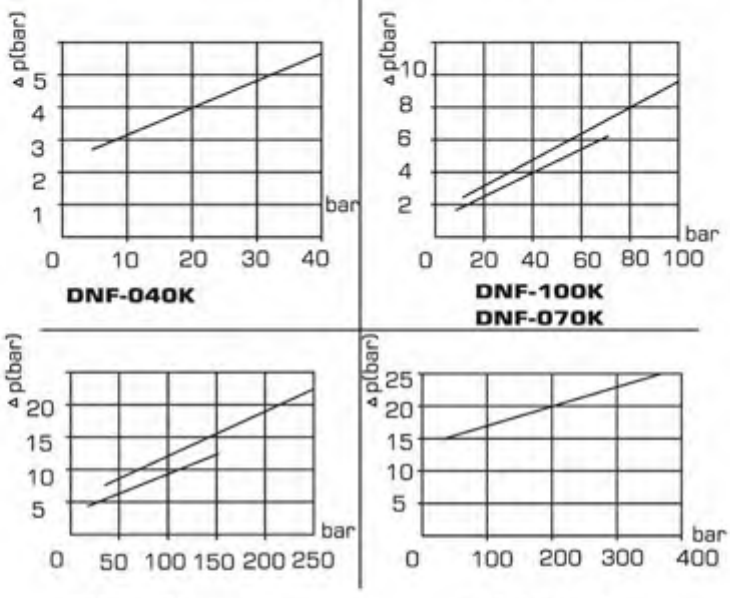
壓力直讀式，面板固定型
Direct pressure read-out, Panel mounting type

② 壓力範圍 / Pressure Adj. Range

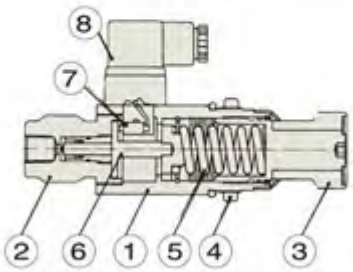
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight DNF
040K	6~40	150	20	1.2
070K	10~70	150	38	1.2
100K	15~100	250	50	1.2
150K	20~150	200	70	1.2
250K	40~250	400	100	1.2
360K	50~360	400	200	1.2

③ 22B：無輸出指示燈Without indicator LED
06i:附訊號輸出指示燈With indicator LED

性能圖 / Performance Curves

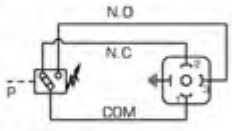


剖面圖 / Schematic Cross-Section



1	本體(鑄鐵) Housing (Casting-Iron)	5	彈簧 Spring
2	接管孔口(1/4" PT) Connection Port (1/4" PT)	6	伺服柱塞 Servo-Piston
3	壓力調整鈕 Pressure Adj. knob	7	微動開關 Microswitch
4	面板固定螺帽 Knob Set Screw	8	電氣接頭 Electrical connection

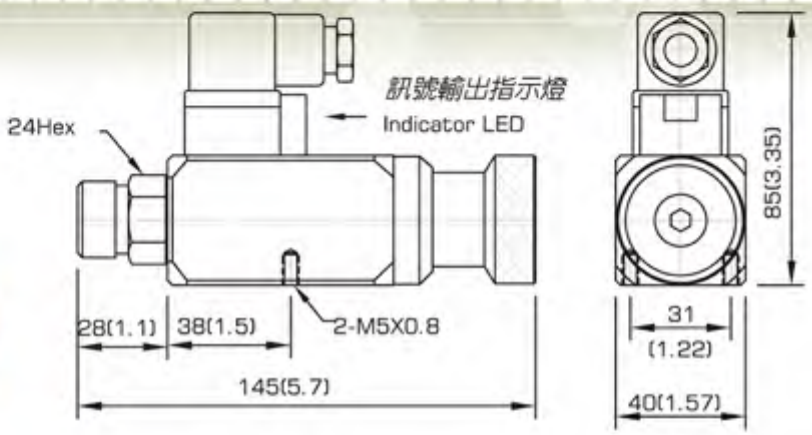
油電符號表 / Graphic Symbol



N.O=Normally open
N.C=Normally close
Switching capacity
微動開關容量 電阻/線圈
22B:250VAC:3A 30VDC:2A
06i:24~250V(DC/AC)0.6A

DNA 油電壓力開關 Pressure Switches

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

DNA-250K-22B

① ② ③

① 型式 / Model

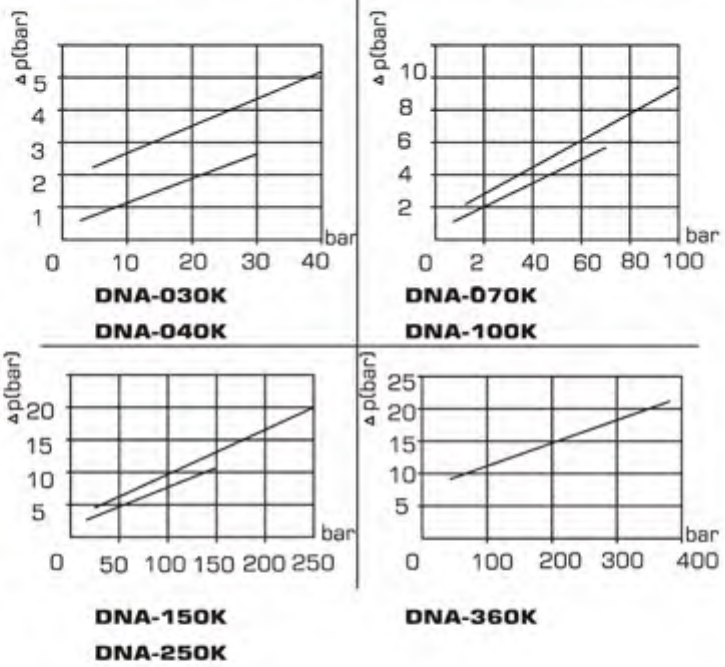
壓力直讀式，標準型
Direct Pressure Read-out, Standard type

② 壓力範圍 / Pressure Adj. Range

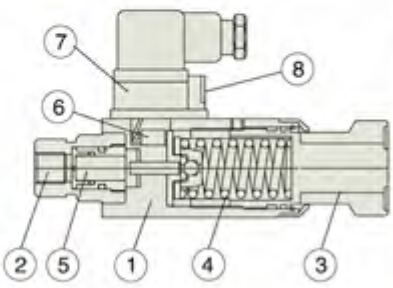
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight DNA
030K	4~30	80	14	1.0
040K	8~40	150	20	1.0
070K	10~70	150	38	1.0
100K	15~100	250	50	1.0
150K	20~150	250	70	1.0
250K	40~250	400	100	1.0
360K	50~360	400	200	1.0

③ 22B:無輸出指示燈Without indicator LED
06i:附訊號輸出指示燈With indicator LED

性能圖 / Performance Curves

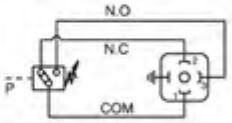


剖面圖 / Schematic Cross-Section



1	本體(鑄鐵) Housing (Casting-Iron)	5	柱塞 Piston
2	接管孔口(1/4PT/NPT/PF) Connection Port (1/4PT /NPT/PF)	6	微動開關 Microswitch
3	壓力調整鈕 Pressure Adj. knob	7	電氣接頭 Electrical connection
4	彈簧 Spring	8	訊號輸出指示燈 Indicator LED

油電符號表/Graphic Symbol



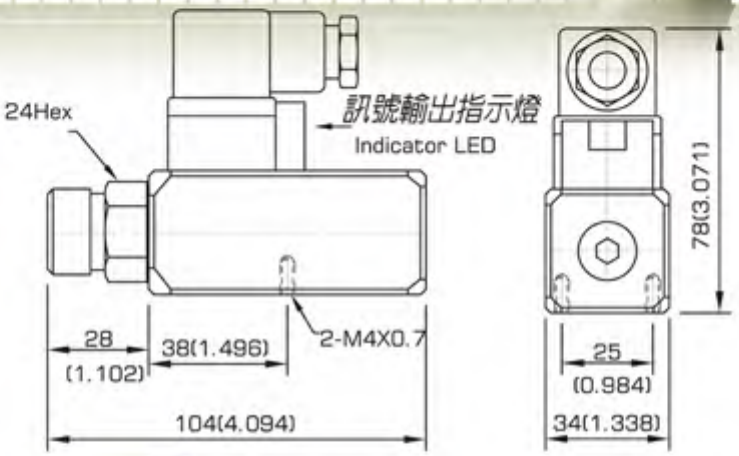
N.O=Normally open
N.C=Normally close

Switching capacity
微動開關容量 電阻/線圈

22B:250VAC:3A 30VDC:2A
06i:24~250V(DC/AC)<0.6A

DNB 油電壓力開關 Pressure Switches

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

DNB-250K-22B

① ② ③

① 型式 / Model

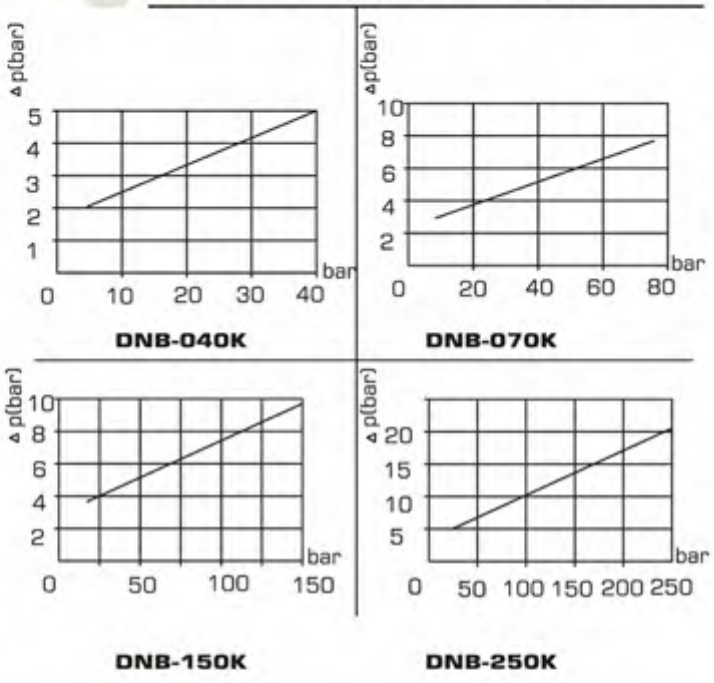
一般型
General type

② 壓力範圍 / Pressure Adj. Range

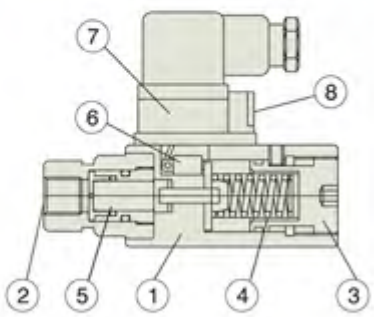
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight DNB
040K	6~40	150	18	0.6
070K	10~70	150	30	0.6
150K	20~150	250	70	0.6
250K	40~250	250	100	0.6

③ 22B：無輸出指示燈Without indicator LED
06i：附訊號輸出指示燈With indicator LED

性能圖 / Performance Curves

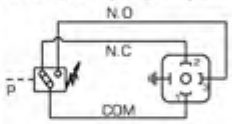


剖面圖 / Schematic Cross-Section



1	本體(鑄鐵) Housing (Casting-Iron)	5	柱塞 Piston
2	接管孔口(1/4PT/NPT/PF) Connection Port (1/4PT /NPT/PF)	6	微動開關 Microswitch
3	壓力調整鈕 Pressure Adj. knob	7	電氣接頭 Electrical connection
4	彈簧 Spring	8	訊號輸出指示燈 Indicator LED

油電符號表 / Graphic Symbol



N.O=Normally open
N.C=Normally close

Switching capacity
微動開關容量 電阻/線圈
22B:250VAC:3A 30VDC:2A
06i:24~250V(DC/AC)≤0.6A

DMB 油電壓力開關 Pressure Switches

尺寸圖 / Dimension mm(inches)

選購型號 / Ordering Code

DMB- 2P250A-PB

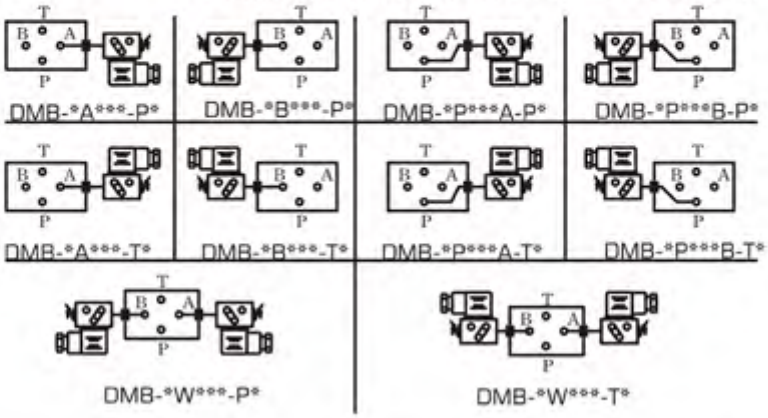
① ②③ ④ ⑤ ⑥ ⑦

① 型式 / Model
DMB 疊加式
DMB-Sandwich Type

② 配合閥規格 /
For use with solenoid valves
02-ISO 03 / CETOP 3/NFPA D03
03-ISO 05 / CETOP 5/NFPA D05

A:A port
B:B port
P:P port
W:A&B port

③ 壓力檢出管路 /
Pressure Transforms Line —



④ 壓力範圍 / Pressure Adj. Range

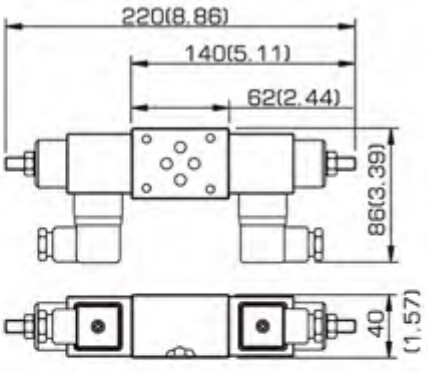
型式 Model	壓力調整範圍 Press Adj. Range bar	測定壓力bar Set Pres.bar
40K	6~40	20
70K	8~70	30
150K	15~150	70
250K	40~250	100

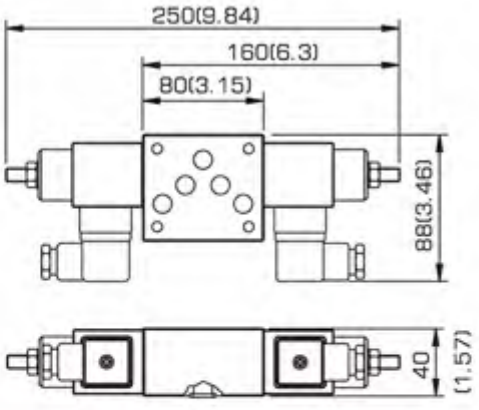
⑤ 調壓向位 / Position of the pressure adj.

⑥ 電器插頭座位 / Position of the electrcal connection

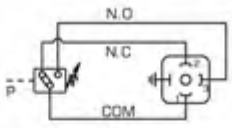
⑦ B:無輸出指式燈/Without indicator LED
i:附訊號指式燈/With indicator LED

尺寸圖 / Dimension mm(inches)





油電符號表/Graphic Symbol



N.O=Normally open
N.C=Normally close

Switching capacity
微動開關容量 電阻/線圖
22B:250VAC:3A 30VDC:2A
06i:24~250V(DC/AC)0.6A

型式 Model	重量 Weight
DMB-02P(A.B)	0.55 kgs
DMB-02W	0.8 kgs

For use with ISO 03/CETOP 3/NFPA D03
Standard Solenoid Valves

型式 Model	重量 Weight
DMB-03P(A.B)	0.9 kgs
DMB-03W	1.5 kgs

For use ISO 05/CETOP 5/NFPA D05
Standard Solenoid Valves

DNM 油電壓力開關 Pressure Switches

選購型號 / Ordering Code

DNM-2P-250A-Pi

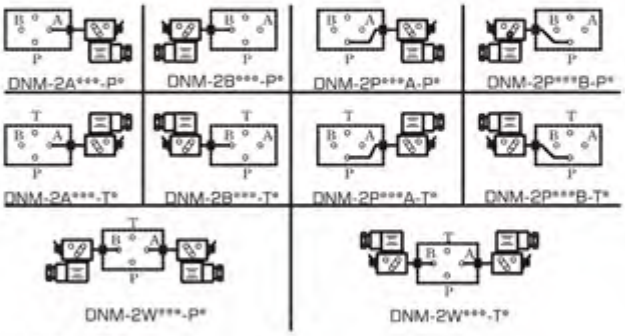
① ②③ ④ ⑤ ⑥ ⑦

① **型式 / Model**
壓力直讀式，疊加式
Direct Pressure Read-out, Sandwich Type

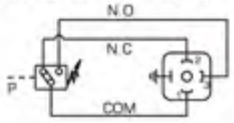
② **配合閥規格 / For use with solenoid valves**
02-ISO 03 / CETOP 3/NFPA D03
03-ISO 05 / CETOP 5/NFPA D05

A:A port
B:B port
P:P port
W:A&B port

③ **壓力檢出管路 / Pressure Transforms Line —**



油電符號表/Graphic Symbol



N.O=Normally open
N.C=Normally close
Switching capacity
微動開關容量 電阻/線圖
22B:250VAC:3A 30VDC:2A
06i:24~250V(DC/AC)<0.6A

性能圖 / Performance Curves

請參閱DNA表列
See Table DNA Series.

④ **壓力範圍 / Pressure Adj. Range**

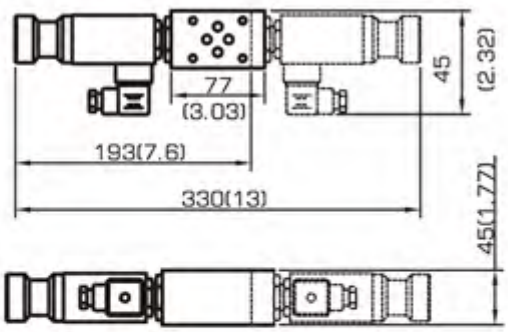
型式 Model	壓力調整範圍bar Press Adj. Range bar	測定壓力bar Set Pres.bar
040K	6~40	20
100K	15~100	50
250K	40~250	100

⑤ **調壓向位 / Position of the pressure adj.**

⑥ **電器插頭座位 / Position of the electrcal connection**

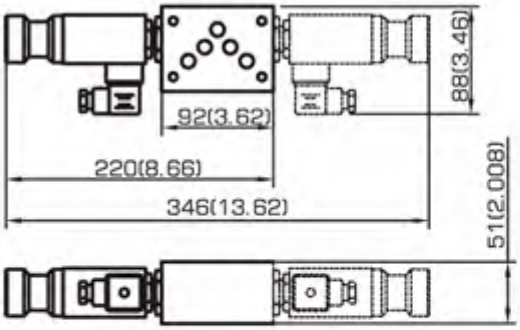
⑦ **B:無輸出指式燈/Without indicator LED**
i:附訊號指式燈/With indicator LED

尺寸圖 / Dimension mm (inches)



型式 Model	重量 Weight
DNM-02P(A.B)	2.1 kgs
DNM-02W	3.1 kgs

For use with ISO 03/CETOP 3/NFPA D03
Standard Solenoid Valves

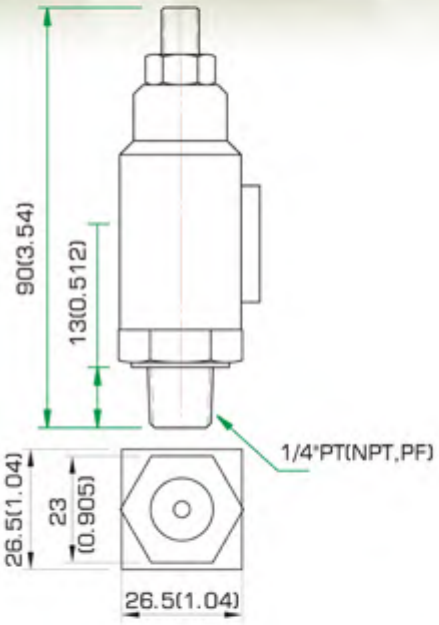


型式 Model	重量 Weight
DNM-03P(A.B)	3.1 kgs
DNM-03W	4.1 kgs

For use with ISO 05/CETOP 5/NFPA D05
Standard Solenoid Valves

TC 油電壓力開關
Pressure Switches

尺寸圖 / Dimension mm(inches)



選購型號 / Ordering Code

TC-250-1

① ② ③

① 型式 / Model

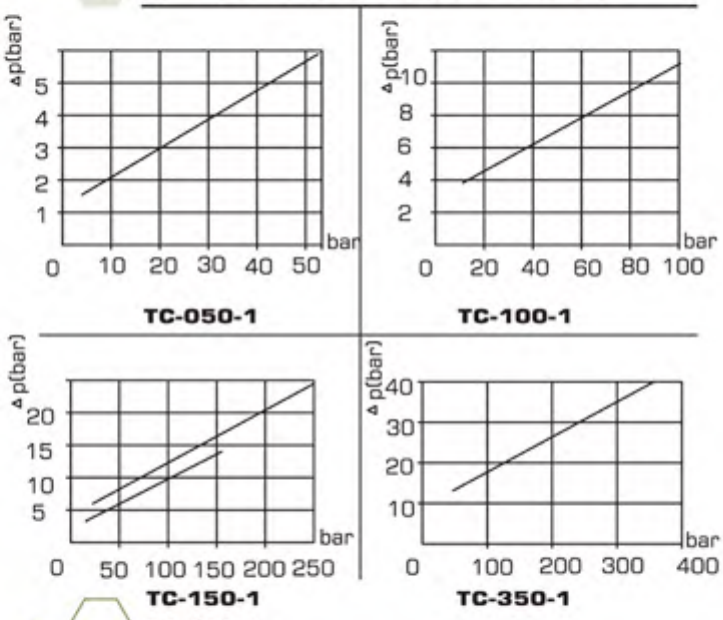
一般型:小型壓力開關
Small Pressure Switches

② 壓力範圍 / Pressure Adj. Range

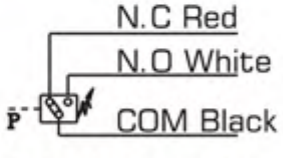
型式 Model	壓力調整範圍 bar Press Adj. Range bar	最高耐壓 bar Surge Pres. bar	測定壓力 bar Set Pres. bar	重量 kg Weight TC
050K	6~50	150	25	0.15
100K	10~100	300	50	0.15
150K	20~150	300	70	0.15
250K	30~250	350	100	0.15
350K	40~350	400	200	0.15

③
1 : 1/4"PT(RC)
2 : 1/4"NPT
3 : 1/4"PF(G)

性能圖 / Performance Curves



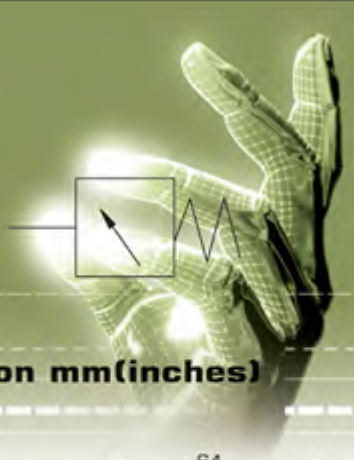
油電符號圖 / Graphic Symbol



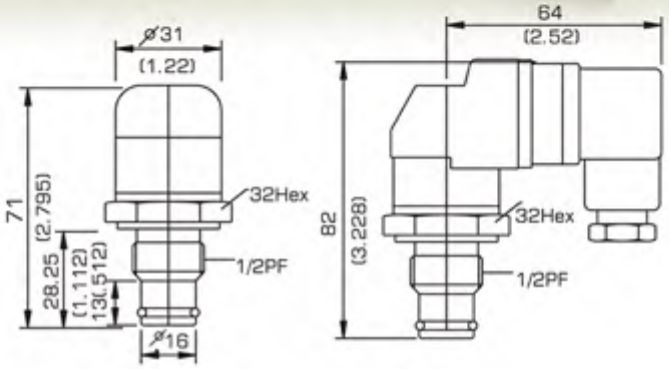
N.O=Normally open
N.C=Normally close

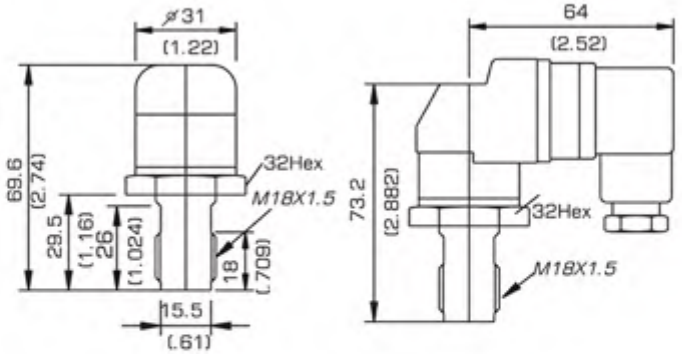
Switching capacity
微動開關容量 電阻/線圖
250VAC:3A 30VDC:2A

TW 壓差顯示器
Differential Pressure Indicator



尺寸圖 / Dimension mm(inches)





選購型號 / Ordering Code

TW-V5A-05

① ② ③ ④ ⑤

① 型式 / Model

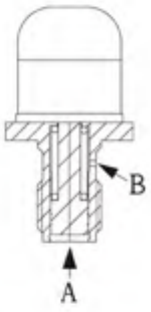
② V=紅綠兩色壓差顯示 Visual indicator
S=紅綠兩色+訊號輸出壓差顯示
Visual-Electrical indicator

③ 動作壓力 / React to pressure differential
3=3 bar (43psi)
5=5 bar (72psi)
7=7 bar (100psi)

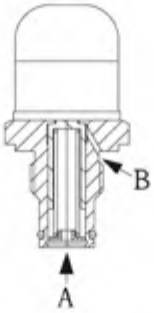
④ 感壓孔□A / Reaction to the A port
感壓孔□B / Reaction to the B port

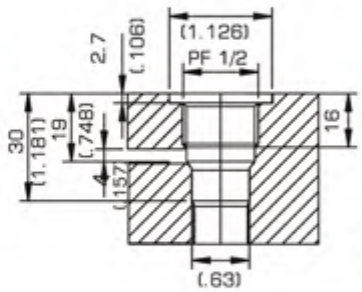
⑤ 05=1/2 PF
18=M18X1.5

TW-***-18 Series

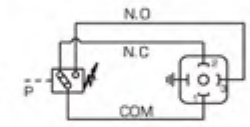


TW-***-05 Series





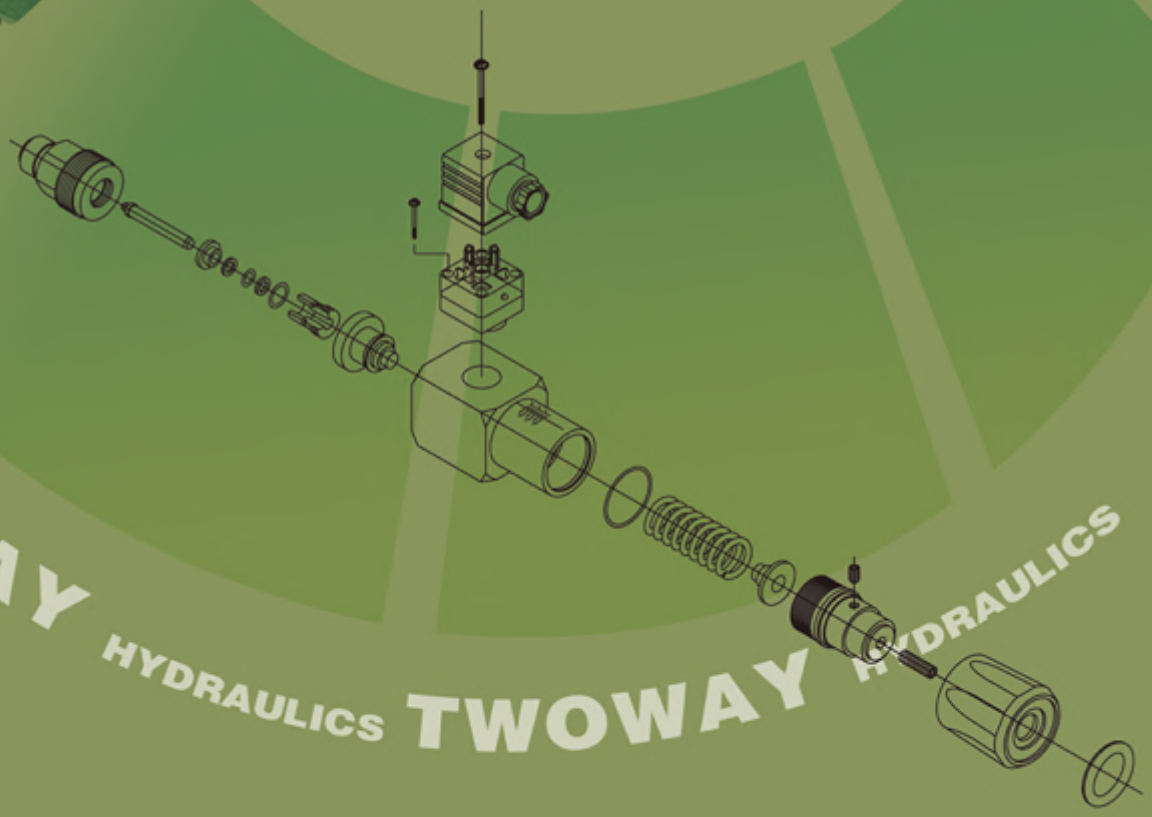
油電符號圖/Graphic Symbol



Switching capacity
微動開關容量 電阻/線圖
250VAC:3A 30VDC:2A

N.O=Normally open

N.O=Normally open



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