

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

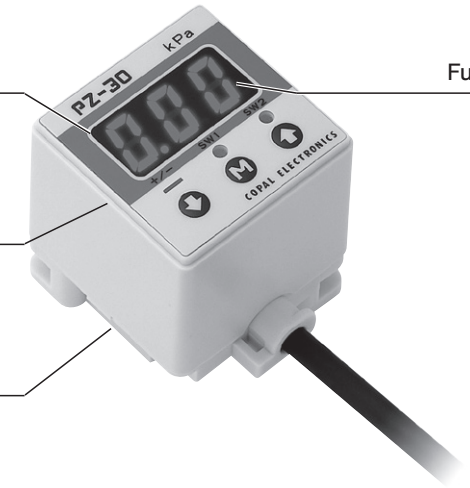
- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Visit our website - *Click HERE*

PRESSURE INDICATORS PZ-30



CE marking
Compatible with EMC directive

c UL us

※ Except for Current output type

FEATURES

- **Pressure indicators separated from sensor**
  - Can be used with variety of sensors
- **Wide range of applications such as pneumatic equipment or semiconductor equipment**
- **Any range of pressure sensors is available**
- **Low power consumption by non display mode**
- **Set data protection by panel lock function**

MODEL NUMBER DESIGNATION

P Z - 3 0 - N V S T I

Series name

Switch output interface
N : NPN open collector
P : PNP open collector

Input signal type
V : 1 ~ 5 V
I : 4 ~ 20 mA

Sensor connection type
ST : One-touch type terminal
CN : Connector type terminal

Analog output
Blank : Voltage output
I : Current output

型式一覧 LIST OF MODEL NUMBERS

Analog output	Switch output type	Input signal type	Sensor connection type	
			One-touch type terminal	Connector type terminal
Analog output	NPN	1 ~ 5 V	PZ-30-NVST	PZ-30-NVCN
		4 ~ 20 mA	PZ-30-NIST	PZ-30-NICN
	PNP	1 ~ 5 V	PZ-30-PVST	PZ-30-PVCN
		4 ~ 20 mA	PZ-30-PIST	PZ-30-PICN
Analog Current output	NPN	1 ~ 5 V	ⓐ PZ-30-NVSTI	
		4 ~ 20 mA	ⓐ PZ-30-NISTI	
	PNP	1 ~ 5 V	ⓐ PZ-30-PVSTI	
		4 ~ 20 mA	ⓐ PZ-30-PISTI	

※ Verify the above model numbers when placing orders.

Marked ⓐ is manufactured upon receipt of order basis.

PZ-30
PRESSURE INDICATORS

STANDARD SPECIFICATIONS

● Unless otherwise specified, the specs are defined at an ambient temperature of 25 ± 5 °C and excitation voltage of 24 VDC.

Item / Model number			PZ-30
General specifications	Operating temp. range	°C	− 10 ~ 50
	Operating humidity	%RH	35 ~ 85
	Protection grade		IP40
	Storage temp.	°C	− 20 ~ 70
	Net weight	g	Approx. 80 (Including 2 m cable)
	Insulation resistance		100 MΩ minimum
	Dielectric strength		500 VDC 1 minute
	Supply voltage		10.8 ~ 30 VDC (Including ripple percentage) ※
	Consumption current		50 mA maximum
Imput	Input signal		1 ~ 5 V (V) / 4 ~ 20 mA (I)
	Input impedance		10 kΩ (V) / 250 Ω (I)
Display	No. of digit		3
	Display element		LED
	Display cycle		Approx. 4 times/s
	Negative pressure display		"–" LED is ON
	Display accuracy		± 1 %F.S. (Without sensor's error)
	Thermal error		± 0.5 % (0 ~ 50 °C, Reference temp. 25 °C)
	Resolution		1 count
Switch	Output status		NPN/PNP
			2-point output (Transistor, Open collector output)
	Switching capacity		30 VDC 100 mA maximum
	Residual voltage		1.2 V maximum (NPN), 2.2 V maximum (PNP)
	Hysteresis setting		0 ~ 300 counts Adjustable
	Repeatability		± 0.2 %F.S. ± 1 count
	Short circuit protection		With pretection function
	Response		Approx. 5 ms ("F – 0") (Selectable 5 ms ~ 2.5 s)
	Thermal error		± 0.5 %F.S. (0 ~ 50 °C, Refernce temp. 25°C)
	State indication		Output 1 (Green LED), Output 2 (Red LED) Lighted when output is ON.
Analog output	Voltage output		1 ~ 5 V
	Current output		4 ~ 20 mA(Load resistance 500 Ω minimum)

※ When analog current output type of PZ30 is chosen or when a sensor of current output type is connected, supply voltage is 24 VDC ± 10 %

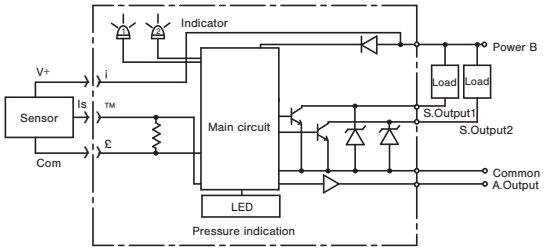
ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions	Permissible change
Vibration	10 ~ 500 Hz, 98.1 m/s² or 1.5 mm P-P, 3 directions for 2 hours each	Pressure indication, switch operating points and analog output variation : ± 1 %F.S. maximum each after test
Shock	490 m/s², 3 directions for 3 times each	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	
EMC	EMI : EN55011: 2007, A2 : 2007 Group 1, class B EMS : EN61326-1: 2006 Table 2	Pressure indication, switch operating pressure and analog output: ± 5 %F.S. maximum during test

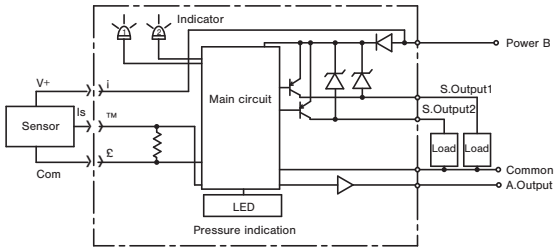
INTERNAL ELECTRICAL SCHEMATICS

Voltage analog output

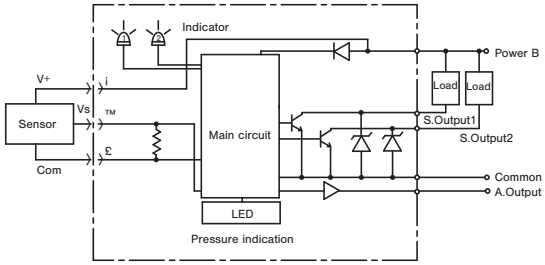
• Current input NPN output



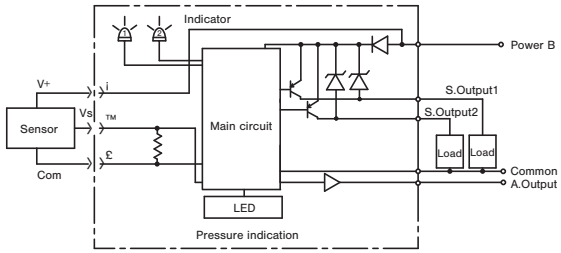
• Current input PNP output



• Voltage input NPN output



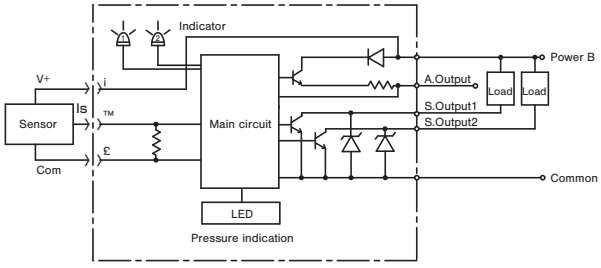
• Voltage input PNP output



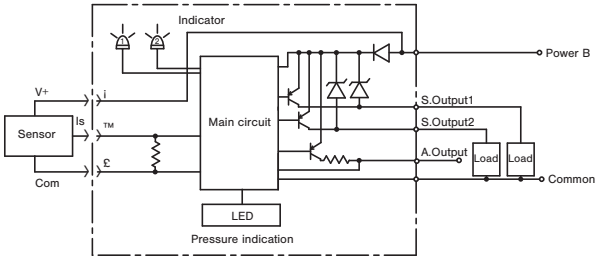
※ When connecting the 2-wire type of current output sensors, please do not connect the 3 (Com.) terminal.

Current analog output

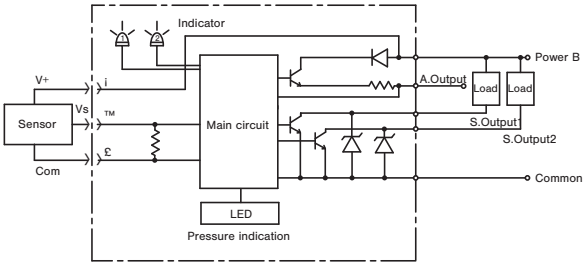
• Current input NPN output



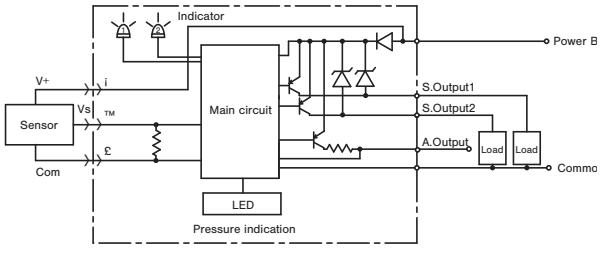
• Current input PNP output



• Voltage input NPN output



• Voltage input PNP output



※ When connecting the 2-wire type of current output sensors, please do not connect the 3 (Com.) terminal.
(Note) Refer to the PIN allocation for the rear terminal number of the PZ-30 and the connector pin terminal number.
(Please from the table on dimension drawing)

PZ-30
PRESSURE INDICATORS

ANALOG OUTPUT MODE

● Analog output setting : The second figure in triple digits LED indicates output mode in the initial setting.
Output mode is fixed by rated pressure.

Analog output		−Pr 0 Pr
Code	Output mode	
"1"	R mode (Compound)	1 V (4 mA) → (Vzero) → 5 V (20 mA)
"2"	G mode (Positive)	1 V (4 mA) → 5 V (20 mA)
"3"	V mode (Negative)	5 V (20 mA) → 1 V (4 mA)

SWITCH OUTPUT MODE

● Switch output can be set when blinking red LED indicates (SW2) in the intial setting.
● The mode is set at "Separate (H/H), 1" prior to shipment. The mode is initialized at "Separate (L/L), 4" when rated pressure is set at "-12P" or "-12F" (negative pressure).

Output	SW1				SW2			
Mode	Separate		Window comparator		Separate		Window comparator	
Operation	HI	LO	A	B	HI	LO	A	B
C-1	○				○			
C-2	○					○		
C-3		○			○			
C-4		○				○		
C-5			○				○	
C-6			○					○
C-7				○			○	
C-8				○				○
Pressure setting (Operating point)	Setting 1		(Lower limit) : Setting 1 (Upper limit) : Setting 2		Setting 2		(Lower limit) : Setting 1 (Upper limit) : Setting 2	

Separate mode	Window comparator mode
(HI operation) ON / OFF, P1: SW1, P2: SW2, -Pr, Pr, H	(A operation) ON / OFF, P1, P2, -Pr, Pr, H
(HI operation) ON / OFF, P1: SW1, P2: SW2, -Pr, Pr, H	(B operation) ON / OFF, P1, P2, -Pr, Pr, H
P1≦P2 or P1≧P2	P1≦P2−2H

H : Switch hysteresis、
P1＝Setting 1, P2＝Setting 2

Note 1. In the Separate Mode, setting 1 corresponds to SW1, and Setting 2 corresponds to SW2.
Note 2. In the Window Comparator Mode, the minimum value for SW1 and SW2 corresponds to Setting 1 and the maximum value corresponds to Setting 2.

SELECTION OF DISPLAY MULTIPLIER/RATED PRESSURE

Selection of display multiplier

- Please set any code when blinking red LED indicates negative pressure in the initial setting.
- Display multiplier is set at "1" (kPa) prior to shipment.

Selection of rated pressure

- Please set any code when blinking red LED indicates negative pressure, SW1, SW2 in the initial setting.
- Rated pressure is set at "12P" (0 ~ 100 kPa) prior to shipment.

Mode (1/3)		Pressure reference	Gauge/Absolute										
		Pressure unit	kPa										MPa
Display multiplier		Rated pressure range	0 ~ 10	0 ~ 35	0 ~ 50	0 ~ -100	0 ~ 100	0 ~ 350	0 ~ 500	0 ~ 600	0 ~ 700	0 ~ 1000	0 ~ 2.00
Code	Multiplier	Setting code	"11P"	"41P"	"51P"	"-12P"	"12P"	"42P"	"52P"	"62P"	"72P"	"13P"	"23P"
"1"	× 1 (kPa)	Rated pressure display (P_L ~ P_H)	0.00 9.99	0.0 35.0	0.0 50.0	0.0 -99.9	0.0 99.9	0 350	0 500	0 600	0 700	0 999	
"2"	× 0.0102		0.00 0.10	0.00 0.35	0.00 0.51	0.00 -1.02	0.00 1.02	0.00 3.57	0.00 5.10	0.00 6.12	0.00 7.14	0.00 9.99	0.0 20.4
"3"	× 10.2		0.0 99.9	0 357	0 510	0 -999	0 999						
"4"	× 7.501		0.0 75.0	0 262	0 375	0 -750	0 750						
"5"	× 102		0 999										
"6"	× 0.01		0.00 0.10	0.00 0.35	0.00 0.50	0.00 -1.02	0.00 1.02	0.00 3.50	0.00 5.00	0.00 6.00	0.00 7.00	0.00 9.99	0.0 20.0
"7"	× 10		0.0 99.9	0 350	0 500	0 -999	0 999						
"8"	× 0.145		0.00 1.45	0.00 5.07	0.00 7.25	0.0 -14.5	0.0 14.5	0.0 50.7	0.0 72.5	0.0 87.0	0 101	0 145	0 290
"9"	× 0.000145												0.00 0.29
"A"	× 0.001 (MPa)											0.00 1.00	0.00 2.00
"b"	× 0.2953		0.00 2.95	0.0 10.3	0.0 14.7	0 -29.5	0 29.5	0 103	0 147	0 177	0 206	0 295	0 590

Mode (2/3)		Pressure reference	Gauge/Absolute					Compound						
		Pressure unit	MPa					kPa						
Display multiplier		Rated pressure range	0 ~ 3.50	0 ~ 5.00	0 ~ 10.0	0 ~ 20.0	0 ~ 35.0	-10 ~ 10	-100 ~ 100	-100 ~ 200	-100 ~ 300	-100 ~ 500	-100 ~ 600	-100 ~ 1000
Code	Multiplier	Setting code	"43P"	"53P"	"14P"	"24P"	"44P"	"11r"	"12r"	"22r"	"32r"	"52r"	"62r"	"13r"
"1"	× 1 (kPa)	Rated pressure display (P_L ~ P_H)						-9.99 9.99	-99.9 99.9	-100 200	-100 300	-100 500	-100 600	-100 999
"2"	× 0.0102		0.0 35.7	0.0 51.0	0 102	0 204	0 357	-0.10 0.10	-1.02 1.02	-1.02 2.04	-1.02 3.06	-1.02 5.10	-1.02 6.12	-1.02 9.99
"3"	× 10.2							-99.9 99.9	-999 999					
"4"	× 7.501							-75.0 75.0	-750 750					
"5"	× 102							-999 999						
"6"	× 0.01		0.0 35.0	0.0 50.0	0.0 99.9	0 200	0 350	-0.10 0.10	-1.00 1.00	-1.00 2.00	-1.00 3.00	-1.00 5.00	-1.00 6.00	-1.00 9.99
"7"	× 10							-99.9 99.9	-999 999					
"8"	× 0.145		0 507	0 725				-1.45 1.45	-14.5 14.5	-14.5 29.0	-14.5 43.5	-14.5 72.5	-14.5 87.0	-14 145
"9"	× 0.000145		0.00 0.50	0.00 0.72	0.00 1.45	0.00 2.90	0.00 5.07							-0.01 0.14
"A"	× 0.001 (MPa)		0.00 3.50	0.00 5.00	0.00 9.99	0.00 20.0	0.00 35.0		-0.10 0.10	-0.10 0.20	-0.10 0.30	-0.10 0.50	-0.10 0.60	-0.10 1.00
"b"	× 0.2953		0 999					-2.95 2.95	-29.5 29.5	-29.5 59.0	-29.5 88.5	-29 147	-29 177	-29 295

PZ-30
PRESSURE INDICATORS

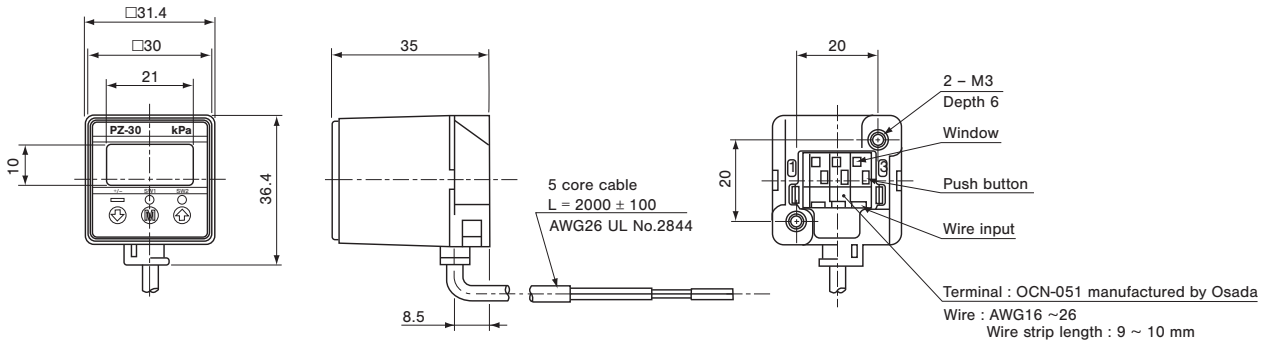
SELECTION OF DISPLAY MULTIPLIER/RATED PRESSURE

Mode (3/3)		Pressure reference	Gauge/Absolute							
		Pressure unit	(× 1 / 0.0102) kPa							
Display multiplier		Rated pressure range	0 ~ 0.10	0 ~ 0.35	0 ~ 0.50	0 ~ -1.00	0 ~ 1.00	0 ~ 3.50	0 ~ 5.00	0 ~ 7.00	0 ~ 10.0
Code	Multiplier	Setting code	"11F"	"41F"	"51F"	"-12F"	"12F"	"42F"	"52F"	"72F"	"13F"
"1"	× 1 (kPa)	Rated pressure display (P_L ~ P_H)	0.00 9.80	0.0 34.3	0.0 49.0	0.0 -98.0	0.0 98.0	0 343	0 490	0 686	0 980
"2"	× 0.0102		0.00 0.10	0.00 0.35	0.00 0.50	0.00 -1.00	0.00 1.00	0.00 3.50	0.00 5.00	0.00 7.00	0.00 9.99
"3"	× 10.2		0.0 99.9	0 350	0 500	0 -999	0 999				
"4"	× 7.501		0.0 73.5	0 257	0 367	0 -735	0 735				
"5"	× 102		0 999								
"6"	× 0.01		0.00 0.09	0.00 0.34	0.00 0.49	0.00 -0.98	0.00 0.98	0.00 3.43	0.00 4.90	0.00 6.86	0.00 9.80
"7"	× 10		0.0 98.0	0 340	0 490	0 -980	0 980				
"8"	× 0.145		0.00 1.42	0.00 4.97	0.00 7.10	0.0 -14.2	0.0 14.2	0.0 49.7	0.0 71.0	0.0 99.5	0 142
"9"	× 0.000145										
"A"	× 0.001 (MPa)										0.00 0.98
"b"	× 0.2953		0.00 2.89	0.0 10.1	0.0 14.4	0.0 -28.9	0.0 28.9	0 101	0 144	0 202	0 289

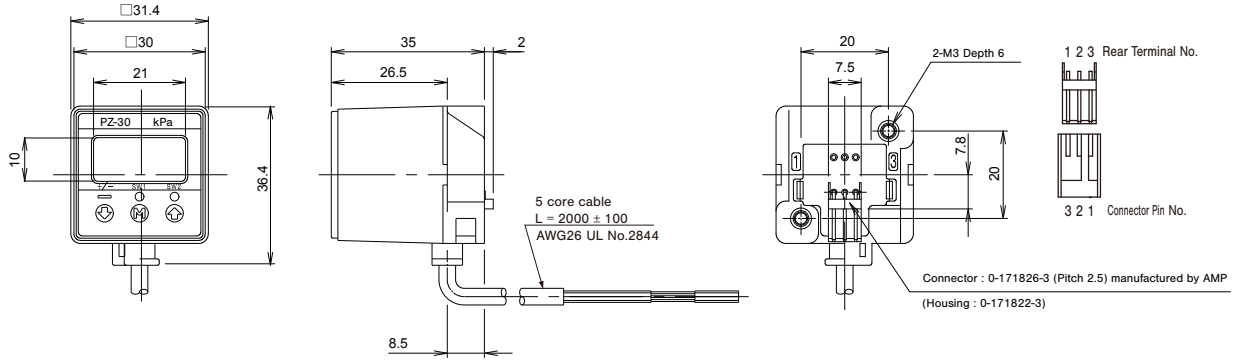
OUTLINE DIMENSION

Unless otherwise specified, tolerance: ± 0.5 (Unit: mm)

One-touch type terminal



Connector type terminal



Wire color	Connection
Brown	Power ⊕
Gray	Analog output
Black	Switch output 1
White	Switch output 2
Blue	Common

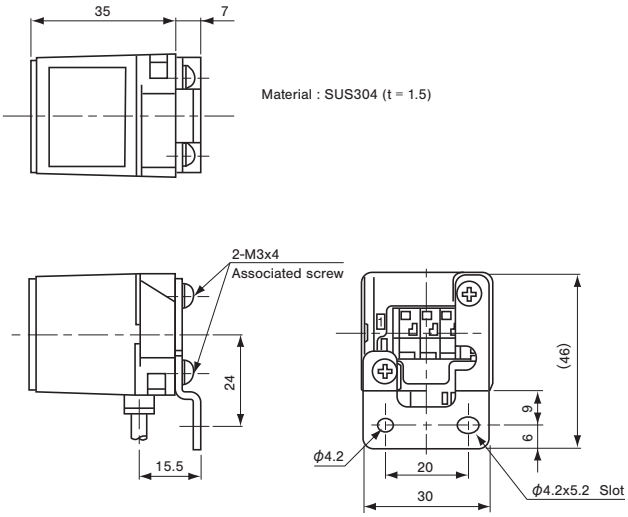
Connector pin No.	Rear terminal No.	Connection of pressure sensor
3	1	V+ : Power supply voltage output (Input voltage)
2	2	Sensor signal: Voltage output Vs (1 ~ 5V) /Current output Is (4 ~ 20mA)
1	3	COMMON (※)

※ When connecting the 2-wire type of current output sensors, please do not connect the 3 (Com.) terminal.

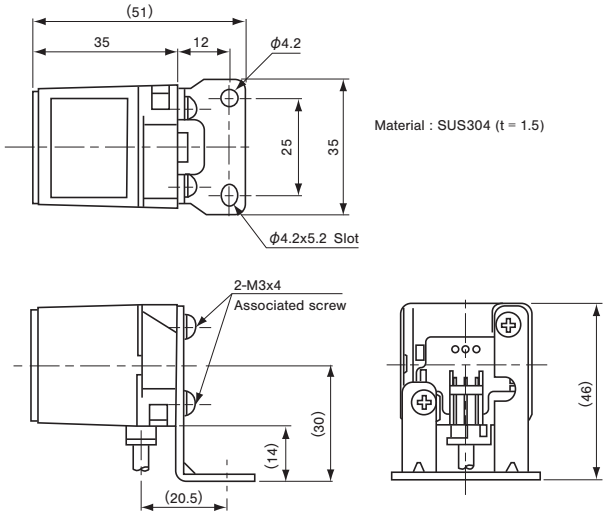
HOW TO MOUNT OPTIONAL ACCESSORIES <SOLD SEPERATELY>

Unless otherwise specified, tolerance: ± 0.5 (Unit: mm)

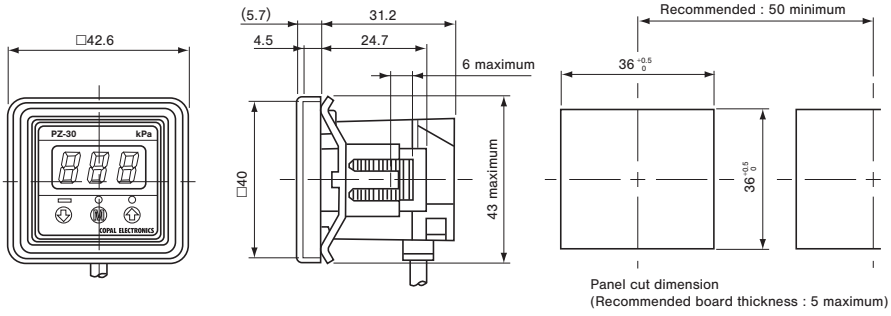
Rear panel mounting bracket set



Panel mounting bracket set



Panel holder set



Name	Series Name	Contents
Panel holder set (PG-30/PG-35)	ACPG-003	Panel holder cover Panel holder Panel stopper (2 pcs.)
Holder cover set	ACPG-004	Panel holder cover Panel holder
Holder stopper set	ACPG-007	Panel holder Panel stopper (2 pcs.)
Rear panel bracket set (Z)	ACPG-011	Rear panel bracket set (Z) and M3 × 4, male screw (2 pcs.)
Panel bracket set (Z)	ACPG-012	Panel panel bracket set (Z) and M3 × 4, male screw (2 pcs.)

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP