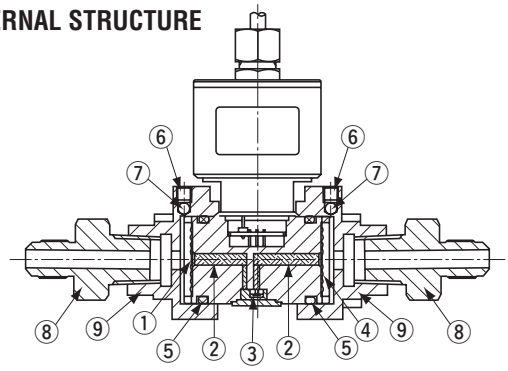
COPAL ELECTRONICS

PRESSURE TRANSDUCERS WITH AMP. PA-838-D

New

INTERNAL STRUCTURE



	Part name	Material
①	Stainless steel diaphragm	SUS 316L
②	Sealed liquid	Silicone oil
③	Sensor chip	Silicone
④	Stainless steel diaphragm	SUS 316L
⑤	"O" ring	Fluoro-rubber
⑥	Ari-bleeding screw	SUS 304
⑦	Ceramic ball	Alumina
⑧	Flare fitting	SUS 304
⑨	Flange	

■ FEATURES

- High corrosion resistance and drip-proof construction
  Pressure port attachment made of SUS 316L
  Proven IP-65 grade gauge body (IP-65 in accordance with IEC)
- For differential pressure
- Two types of joint are provided
  Rc 1/4, 1/4 Flare fitting (7/16 - 20 UNF)

■ MODEL NUMBER DESIGNATION

PA-838 - 101 D - F2

Series name

Pressure reference
D : Differential

Rated pressure range
101 : 0 ~ 10 kPa
501 : 0 ~ 50 kPa
102 : 0 ~ 100 kPa

Fitting
Blank : Rc 1/4
F2 : 1/4 Flare fitting (7/16 - 20 UNF)

■ LIST OF MODEL NUMBERS

Pressure reference / Fitting \ Rated pressure range [kPa]	Differential 0 ~ 10	0 ~ 50	0 ~ 100
Rc 1/4	PA-838-101D	PA-838-501D	PA-838-102D
1/4 Flare fitting (7/16 - 20 UNF)	PA-838-101D-F2	PA-838-501D-F2	PA-838-102D-F2

❊ Verify the above model numbers when placing orders.

Oct, 2005

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■ STANDARD SPECIFICATIONS

● Unless otherwise specified, the specs are defined at an ambient temperature of 25 ± 5 °C, excitation voltage of 24 V DC, load resistance of 250 Ω and line pressure of 0 MPa.

Item / Model number			PA-838		
			101D	501D	102D
General specifications	Pressure reference		Differential ❋1		
	Rated pressure range	kPa	10	50	100
	Maximum pressure ❋2	kPa	200	300	500
	Line pressure	MPa	2		
	Operating temp. range	°C	– 20 ~ 70		
	Compensated temp. range	°C	0 ~ 50		
	Operating humidity	%RH	35 ~ 85 (No condensation)		
	Storage temp.	°C	– 20 ~ 70 (Atmospheric pressure, humidity 65 %RH maximum)		
	Pressure medium		Corrosive gases/liquids compatible with SUS304		
	Insulation resistance	MΩ minimum	100 (500 V DC)		
	Dielectric strength		500 V AC, 60 s (Leakage current 1 mA maximum)		
	Sealed liquid		Silicone oil		
	Pressure port		Rc 1/4, 1/4 Flare fitting (7/16 - 20 UNF)		
	Net weight	g	Rc 1/4 : Approx. 500, 1/4 Flare fitting : Approx. 590		
	Drip-proof structure		IP-65		
Power	Supply voltage	V DC	24 ± 10 % (Including ripple voltage)		
Analog output	Output current	mA DC	4 ~ 20		
	Zero current	mA (at 25 °C)	4 ± 0.2		
	Span current	mA (at 25 °C)	16 ± 0.2		
	Load resistance	Ω	0 ~ 500		
	Linearity/Hysteresis	%F.S.	± 0.5		
	Thermal error	ZERO %F.S./°C	± 0.10	± 0.05	
		SPAN %F.S./°C	± 0.10	± 0.05	
	Response	ms maximum	Approx. 2		
	Gravitational effect (From horizontal position to vertical position)	%F.S.	± 5	± 3	± 1

❋1 : Pressure range Hi side port — Lo side port : 0 ~ rated pressure
❋2 : Please adjust load resistance at 500 Ω when exceeding rated pressure.

Oct, 2005

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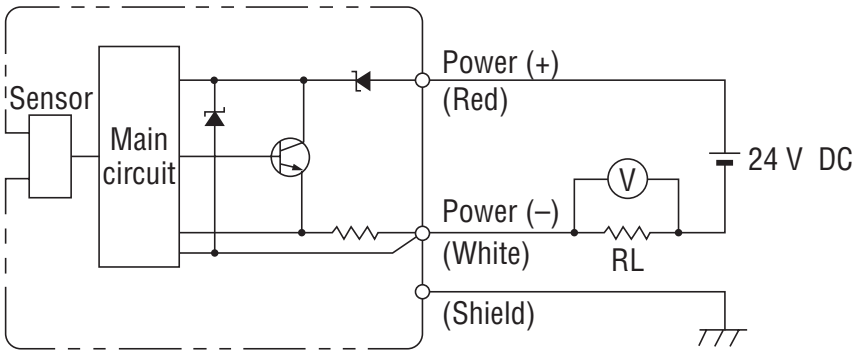
■ ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions (At 25 ± 5 °C)	Permissible change
Vibration	10 ~ 500 Hz, 1.5 mm maximum/98.1 m/s², 3 directions for 2 hours each	Zero current, Span current: ± 1 %F.S. maximum each
Shock	490 m/s², 3 directions for 3 times each	
Pressure cycling	0～Rated pressure/Rated pressure range, 10^6 cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

■ RECOMMENDED EXTERNAL SCHEMATICS



■ Specifications are subject to change without notice. Specifications in this catalog are for reference. The formal specification sheets will be submitted upon request.

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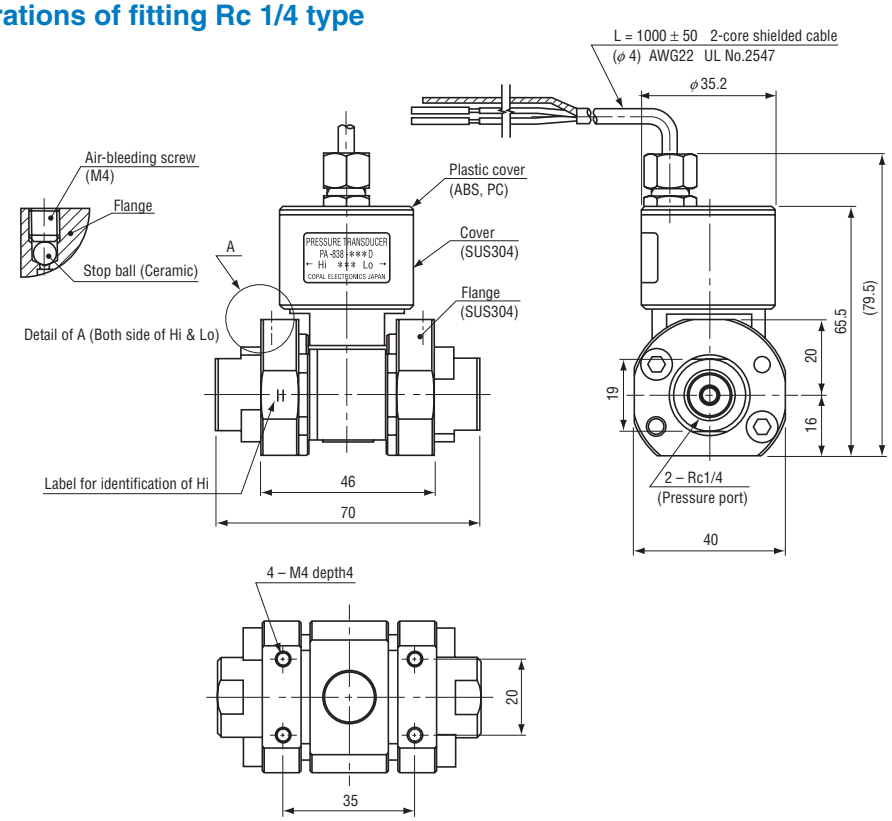
■ OUTLINE DIMENSIONS

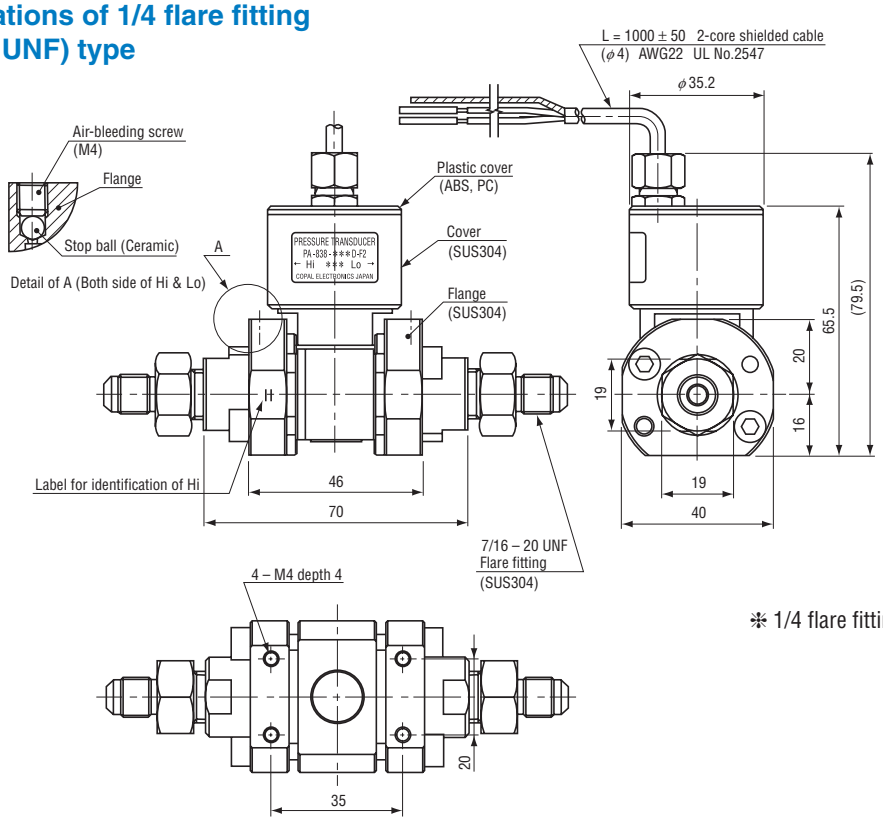
Unless otherwise specified, tolerance : ± 0.5 (Unit: mm)

● Configurations of fitting Rc 1/4 type



Wire color	Connection
Red	Power ⊕
White	Analog output
Shield	—

● Configurations of 1/4 flare fitting (7/16 - 20 UNF) type



❊ 1/4 flare fitting is packed separately.

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