

## Data Sheet

# ZL95 Fluoropolymer Pressure Transducer with Display for Corrosive Liquids and Gases

### FEATURES

- 4 digit LED display with NPN switch outputs
- PTFE/PFA wetted parts
- Corrosion resistant to chemicals such as hydrofluoric acid
- Compatible with pipe diameters from 0.25 to 0.5 in. O.D.
- Capacitance sensor for excellent thermal stability
- Multiple mounting options include tube connections, press fit nuts, flared nuts, and threaded nuts
- Class 100,000 cleanroom packaged and bagged

### TYPICAL USES

- Cleaning equipment for semiconductor
- Cleaning equipment for Flat Panel Displays (FPD)
- Wet stations
- Chemical supply systems



ZL95  
Pressure Transducer



### PERFORMANCE SPECIFICATIONS

Static Accuracy:	±1.0% of span @ 73 °F (23 °C) Accuracy includes the effects of linearity, hysteresis and repeatability
Display Accuracy:	±1.0% of span (+ 1 digit) @ 73 °F (23 °C) Accuracy includes the effects of linearity, hysteresis and repeatability
Temperature Effect:	±0.05% of span/°C (Zero & Span) in operating temperature range
Adjustable Display Response Time:	OFF, 25 ms, 250 ms, 2.5 s, 5 s, 10 s (OFF = 200 ms)

### ENVIRONMENTAL SPECIFICATIONS

Operating Temperature:	50 °F to 140 °F (10 °C to 60 °C)
Storage Temperature:	14 °F to 149 °F (-10 °C to 65 °C)
Humidity:	35% to 85% RH

### FUNCTIONAL SPECIFICATIONS

Pressure Ranges:	0-45 psi to 0-75 psi
Response Time:	≤ 50 mSec (10% to 90%)
Proof Pressure:	100 psi max.

### ELECTRICAL SPECIFICATIONS

Output Signal:	4 to 20 mA (3 wire), 0 to 5 Vdc (3 wire), 0 to 10 Vdc (3 wire), 1 to 5 Vdc (3 wire)
Supply Voltage:	21.6 to 26.4 Vdc
Load Resistance:	Rmax = 400 Ω for 4 to 20 mA output, Rmin = 10k Ω for voltage outputs
EMC/EMI:	EN61326-1: 2013, EN61326-2-3: 2013
LED Display:	4 digit LED display
LED Character Size:	0.3" Height
Hold function:	Displays Max/Min value

### KEY BENEFITS

- Bright, easy-to-see 4-digit LED display
- Isolated sensing elements for corrosive liquids and gases incorporating special vent design
- Low metal ion elution
- Push button zero

### PHYSICAL SPECIFICATIONS

Ingress Rating:	IP54
Case Material:	Polypropylene and PTFE/PFA
Pressure Connection Sizes:	Tube connection sizes include: ¼", ⅜", and ½"
Unit Weight:	Approx. 210g (includes cable)

### SWITCH FEATURE

Switch outputs:	(2) NPN with field programmable set point, deadband and response time.
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### WETTED MATERIALS

Fitting:	PTFE/PFA
Diaphragm:	PFA

### APPROVALS

CE/UKCA, RoHS

## Data Sheet

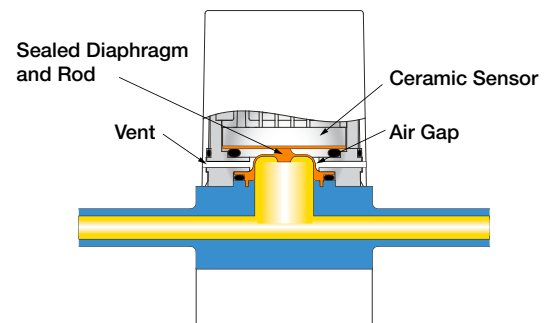
# ZL95 Fluoropolymer Pressure Transducer with Display for Corrosive Liquids and Gases

ORDERING CODE	Example:	ZL95	7	1	5	1	42	C06	75#	-X1N
<b>Model</b>		ZL95								
<b>Accuracy</b>			7							
<b>Pressure Connection Type</b>										
1 - In-Line type										
2 - Single port type										
<b>Pressure Connection Bore Diameter</b>										
5 - Bore diameter O.D. 1/4" I.D. 5/32"										
6 - Bore diameter O.D. 3/8", I.D. 1/4"										
7 - Bore diameter O.D. 1/2", I.D. 3/8"										
<b>Pressure connecting Port</b>										
1 - Tube connection										
2 - S300 nut (press fit)										
4 - 20 series nut (press fit)										
6 - Flare nut (Insert)										
A - S300 male screw (in-line type only)										
<b>Analog Output</b>										
42 - 4 to 20 mA										
05 - 0-5 Vdc										
10 - 0-10 Vdc										
15 - 1-5 Vdc										
<b>Cable Length</b>										
C06 - 6 feet										
<b>Pressure Range</b>										
45#										
75#										
300 KP										
500 KP										
<b>Options (If indicating an option must include an "X" (-X...))</b>										
1N - Material Test Report/ Traceability Certificate										

STANDARD RANGES	
psi	kPa
45#	300 KP
75#	500 KP

## INTRODUCTION

The ZL95 transducer with display is a fluoropolymer pressure transducer designed for use in semiconductor processes that require PTFE/PFA wetted parts for improved chemical compatibility for use in corrosive gases and fluids. A secondary isolation diaphragm and vent design isolates the ceramic sensing element from corrosive gases and liquids.



# ZL95 Fluoropolymer Pressure Transducer with Display for Corrosive Liquids and Gases

## WIRING DIAGRAMS

### Electric Connection

Colored cables are used as described below. Confirm the connection before power is on. Warm up the unit and allow it to stabilize for about five minutes after power up before adjusting the zero point and starting measurements.

### Wiring for Analog Outputs

- Brown - Power source (+)
- Blue - Common for power source (-) and analog output (-)
- Black - Open collector output 1
- White - Open collector output 2
- Orange - Analog output (+)

### Internal Type

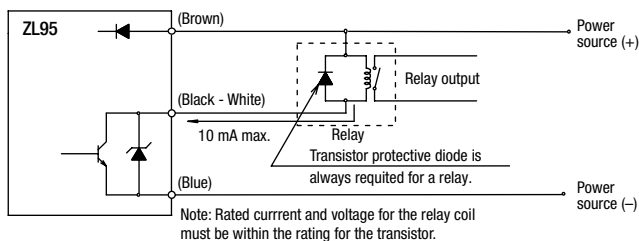
Output Type: The comparator output comprises open collector output. The analog output comprises 4 to 20 mA current output or any of the voltage outputs.

“Open collector” means that the collector of an output transistor is open for the user to use for any desired user defined application. Accordingly, the user is free to use the open collector output in any way.

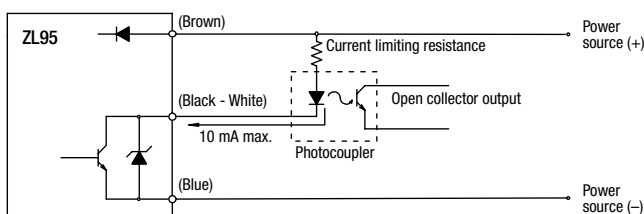
**The output transistor is rated for 30 Vdc, 10 mA. Be sure not to exceed this rating.**

### 1. Wiring for open Collector

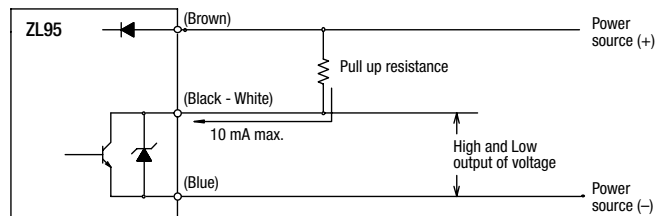
#### a. with relay



#### b. with photocoupler

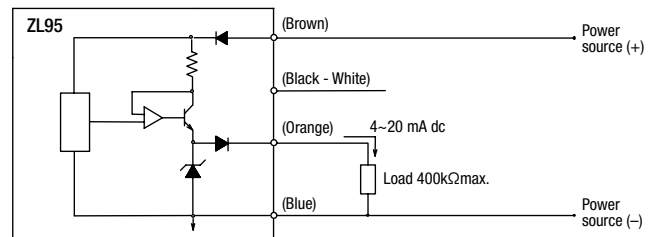


### c. Voltage Output

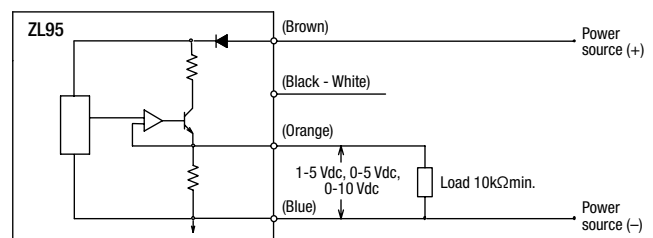


### 2. Wiring for Analog Outputs

#### a. 4-20 mA output



#### b. Voltage Outputs: 0-5 Vdc, 0-10 Vdc, 1-5 Vdc



### Noise Precautions

#### Power Lines

Noise on the power lines can cause fluctuating pressure indication and incorrect operation. Check the cable routing for the DC power lines and use a power source of a high noise removal rate.

#### Output Lines

The internal circuit of the open collector output is connected to that of the output line. Take a special care when routing the wires and make the wires as short as possible.

#### Induced Noise

The unit may operate erroneously when subjected to external induction. Keep off a noise source, change the direction, or provide a magnetic or static shield, etc.

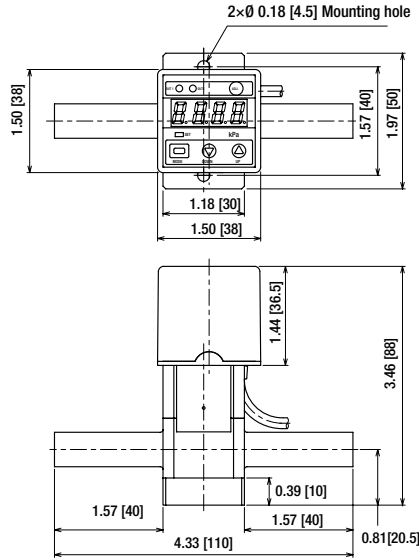
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## ZL95 Fluoropolymer Pressure Transducer with Display for Corrosive Liquids and Gases

Inline Pressure Connection Dimensions are inches [mm]

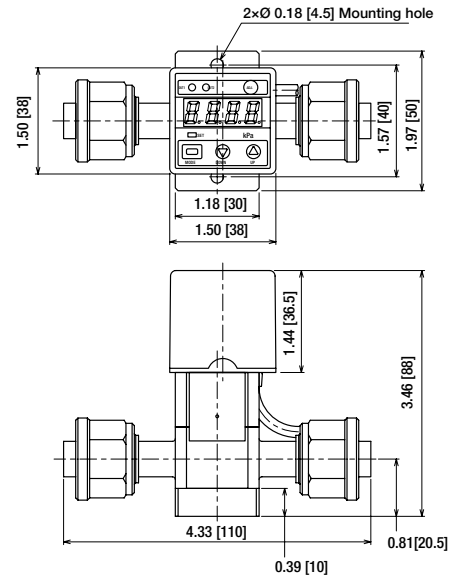
For Reference only, consult Ashcroft for specific dimension drawings

### Tube Connection



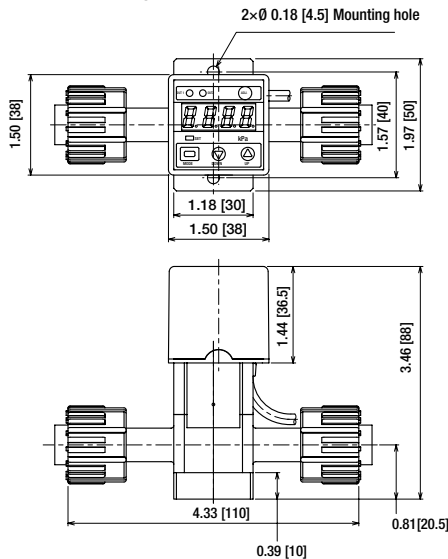
MODEL NUMBER	CONNECTING PORT
ZL95-151	Ø ¼"
ZL95-161	Ø ⅜"
ZL95-171	Ø ½"

### 20 Series Nut (Press Fit) Flowell Corporation



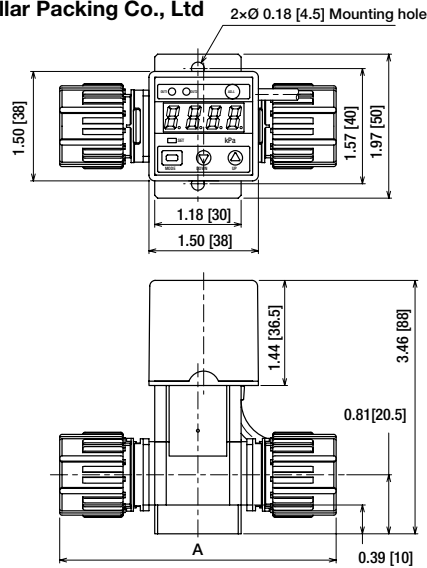
MODEL NUMBER	CONNECTING PORT
ZL95-154	Ø ¼"
ZL95-164	Ø ⅜"
ZL95-174	Ø ½"

### S300 Nut (Press Fit) From Pillar Packing Co., Ltd



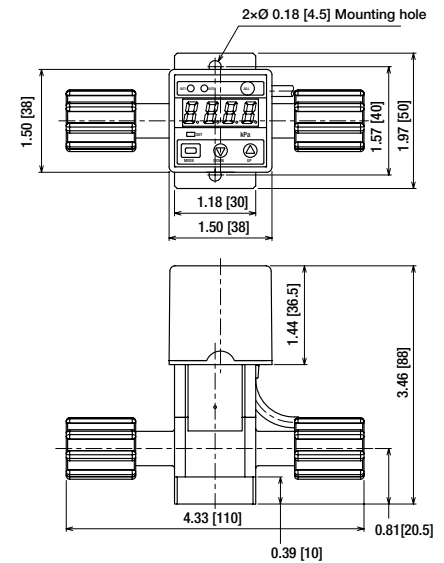
MODEL NUMBER	CONNECTING PORT
ZL95-152	Ø ¼"
ZL95-162	Ø ⅜"
ZL95-172	Ø ½"

### S300 Male Screw From Pillar Packing Co., Ltd



MODEL NUMBER	CONNECTING PORT	A SIZE
ZL95-15A	Ø ¼"	2.68 [68]
ZL95-16A	Ø ⅜"	3.15 [80]
ZL95-17A	Ø ½"	3.78 [96]

### Flare Nut (Insert)



MODEL NUMBER	CONNECTING PORT
ZL95-156	Ø ¼"
ZL95-166	Ø ⅜"
ZL95-176	Ø ½"

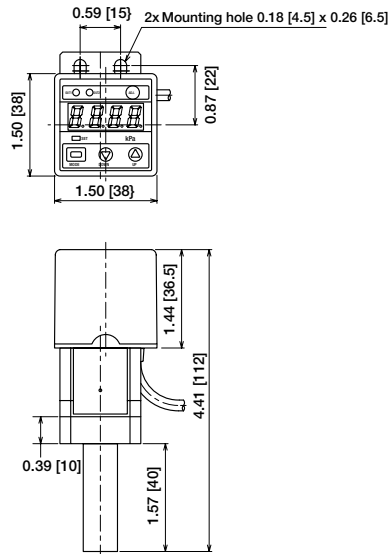
# Data Sheet

## ZL95 Fluoropolymer Pressure Transducer with Display for Corrosive Liquids and Gases

### Single Port Pressure Connection Dimensions are inches [mm]

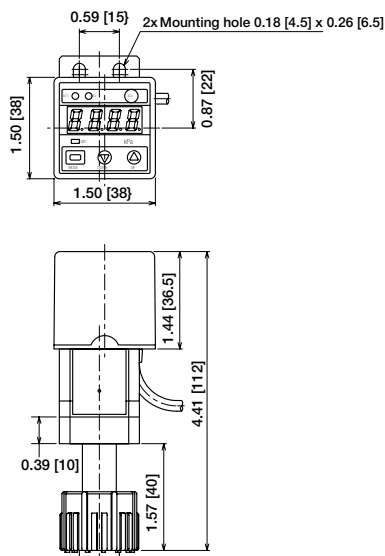
For Reference only, consult Ashcroft for specific dimension drawings

#### Tube Connection



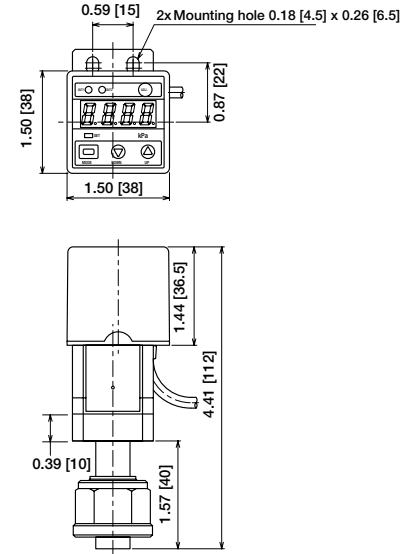
MODEL NUMBER	CONNECTING PORT
ZL95-251	Ø ¼"
ZL95-261	Ø ⅜"
ZL95-271	Ø ½"

#### S300 Nut (Press Fit) From Nippon Pillar Packing Co., Ltd.



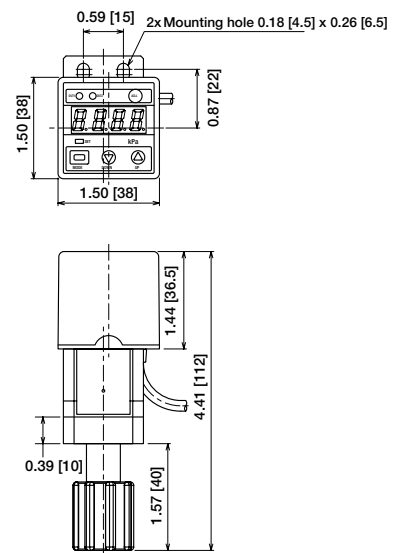
MODEL NUMBER	CONNECTING PORT
ZL95-252	Ø ¼"
ZL95-262	Ø ⅜"
ZL95-272	Ø ½"

#### 20 Series Nut (Press Fit) Flowell Corporation



MODEL NUMBER	CONNECTING PORT
ZL95-254	Ø ¼"
ZL95-264	Ø ⅜"
ZL95-274	Ø ½"

#### Flare Nut (Insert)



MODEL NUMBER	CONNECTING PORT
ZL95-256	Ø ¼"
ZL95-266	Ø ⅜"
ZL95-276	Ø ½"