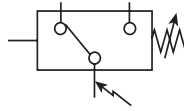


MPS-32

Red ←→ Green Display



MPS-V32N-PC



MPS-V32N-PG

Mounting Bracket MPS-ACCK1 Included with Sensors.



WRA171 with MPS-V32N-PG

Features

- Pressure Ranges:
 - Vacuum Pressure 0 to -30 inHg
 - Positive Pressure 0 to 145 PSI
- Sensor Output:
 - 2 NPN or PNP Open Collector Transistor Output, 30VDC, 125mA
 - Optional Analog Output, 4 to 20mA
 - Optional Analog Output, 1 to 5VDC
- Switch Point and Window Comparator Mode
- 4 Selectable Units of Measure (mmHg, -bar, -kPa, inHg) (kgf/cm², PSI, bar, kPa)
- Output Response Time Less Than 2.0 Milliseconds
- RoHS
- Air and Non-Corrosive Gases
- Error Message

MPS-32 Programming Options

Outputs Change N.O. / N.C.	✓
Units of Measure change	✓
EZY Mode	
Hysteresis Mode	✓
Window Comparator Mode	✓
Auto Teach Mode	✓
Auto Surveillance Mode	✓
Display Refresh Settings	✓
Output Response Time	✓
Display Peak / Bottom Difference Value	✓
Special Display Features	✓
Lockout Option	✓
Peak Value at a Touch	✓
Bottom Value at a Touch	✓
Zero Reset	✓
Red / Green LED Display Options	✓
Peak Surveillance Mode	✓
Energy Savings Mode	
Scan Mode	
Password Lockout	
Error Output Mode	
Setting of Decimal Point	

MPS-32 Ordering Numbers

Pressure Range	Port Size	Output Circuit	Electrical Connector	Part Number
0 to -30 inHg	1/8 NPSF*	PNP Sourcing	4 Pin, M8	MPS-V32N-PC
			2M Lead Wire	MPS-V32N-PG
		NPN Sinking	4 Pin, M8	MPS-V32N-NC
			2M Lead Wire	MPS-V32N-NG
0 to 145 PSI	1/8 NPSF*	PNP Sourcing	4 Pin, M8	MPS-P32N-PC
			2M Lead Wire	MPS-P32N-PG
		NPN Sinking	4 Pin, M8	MPS-P32N-NC
			2M Lead Wire	MPS-P32N-NG
		PNP Sourcing with 4-20ma	4 Pin, M8	MPS-P32N-PCI
		PNP Sourcing with 1-5VDC	4 Pin, M8	MPS-P32N-PCA

* Mounting Bracket Included

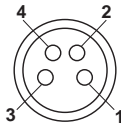
Specifications

Pressure Range	Vacuum (V)	Positive (P)
Units of Measure Display Resolution (with unit-switching function)	bar: 0.001 kPa: 0.1 mmHg: 1 inHg: 0.1	bar: 0.01 MPa: 0.001 kgf/cm ² : 0.01 PSI: 1
Proof Pressure	-101 to 0 kPa	0 to 1 MPa
Media	Air & Non-Corrosive Gases	
Pressure Port	(N) 1/8" NPSF	
Operating Temperature	32 to 122°F (0 to 50°C)	
Storage Temperature	14 to 140°F (-10 to 60°C)	
Humidity	35 to 85% RH	
Electrical Connection	(C) 4-Pin, M8 Connector, (G) Grommet Open Lead	
Power Supply	12 to 24VDC ±10% or less, Ripple (Vp-p) 10% or less	
Display	3 + 1/2 Digit, 2 Color, 7-Segment LED	
Display Refresh	.1 to 3.0 Seconds, Variable (Factory set at 0.1)	
Control Output	NPN (Sinking), PNP (Sourcing), Open Collector, max 125mA, 2 Output	
Switch Output	Output Signal, NPN or PNP, Normally Open or Closed, LED Indicator	
Output Modes	Hysteresis or Window Comparator	
Response Time	2ms or less, (Variable 32, 128, 1024ms)	
Repeatability	± 0.2% of F.S. ± 1 digit or less	± 0.3% of F.S. ± 1 digit or less
Analog Output	Voltage Output	1 to 5VDC (1 ± 0.04V, 5 ± 0.04V); Outout Impedance 1kΩ; Linearity 0.5% of F.S.; Response Time 2ms or less
	Current Output	4 to 20mA; Linearity ±0.5% of F.S. or less; Maximum Load Impedance 300Ω with Power Supply Voltage of 12V; 600Ω with Power Supply Voltage of 12V; Minimum Load Impedance 50Ω
Thermal Error	32 to 122°F (0 to 50°C) 25°C (77°C) ± 2% of F.S. or less at range of 32 to 122°F (0 to 50°C)	
General Protection	IP50, CE Marked, EMC-EN61000-6-2: 2001	
Current Consumption	<80mA	
Vibration Resistance	10 to 150Hz, Double Amplitude 1.5mm, XYZ, 2 hrs.	
Shock Resistance	10G, XYZ	
Material	Housing: ABS (gray) , Pressure Port: Zinc Die-cast, Diaphragm: Silicone	
Mass	1.7 oz. (45g) (Not including cable)	

Sensor Pin Out

Pin #

- 1 Brown: 24VDC
- 2 White: NPN / PNP Open Collector Output 2
- 3 Blue: 0VDC
- 4 Black: NPN / PNP Open Collector Output 1



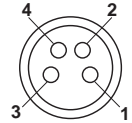
Lead Wiring



Sensor Pin Out with Analog Output Current Output

Pin #

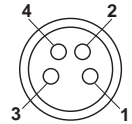
- 1 Brown: 24VDC
- 2 White: 4 to 20mA
- 3 Blue: 0VDC
- 4 Black: PNP Open Collector Output 1



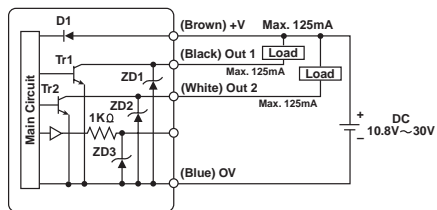
Voltage Output

Pin #

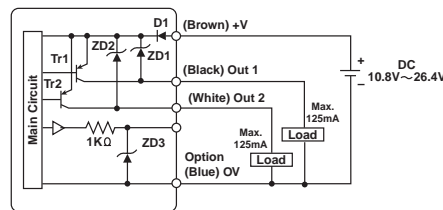
- 1 Brown: 24VDC
- 2 White: 1 to 5VDC
- 3 Blue: 0VDC
- 4 Black: PNP Open Collector Output 1



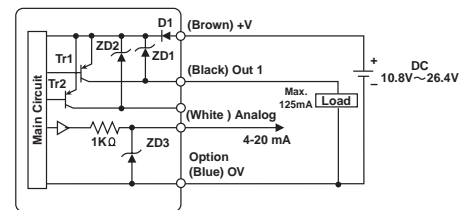
Internal Circuit for Open Collector and Analog Output Wiring



NPN (2 Open Collector Output)



PNP (2 Open Collector Output)



PNP (with Analog Output)

⚠ Cautions

The MPS-32 Pressure Sensor is designed to monitor pressure and is not a safety measure to prevent accidents. The compatibility of the sensor is the responsibility of the designer of the system and specifications.

Operating Environment

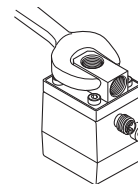
- Parker Sensors have not been investigated for explosion-proof construction in hazardous environments.
- Do not use with flammable gases, liquids, or in hazardous environments.
- Avoid installing the sensor in locations where excessive voltage surges could damage or affect the performance of the sensor.

Operations

- Dedicate a power supply of 10.8 to 26.4VDC to the sensor and set the ripple to V_p-p 10% or less. Avoid excessive voltage. Avoid voltage surges.
- A small amount of internal voltage drop is possible. Ensure the power supply minus any internal voltage drop exceeds the operating load.
- Verify the operating media is compatible with the specified sensor. Check the chemical make-up, operating temperatures, and maximum pressure ranges of the system before installing.
- Installation of air dryer system is recommended to remove moisture.

Installation

- Never insert an object into the pressure port other than an appropriate fluid connector.
- Avoid short-circuiting the sensor. Connect the brown lead to V+ and blue lead to 0V.
- Do not connect the output lead wires (black / white) to the power supply.
- Outputs not being used should be trimmed and insulated.
- Install as shown using the metal mounting bracket.

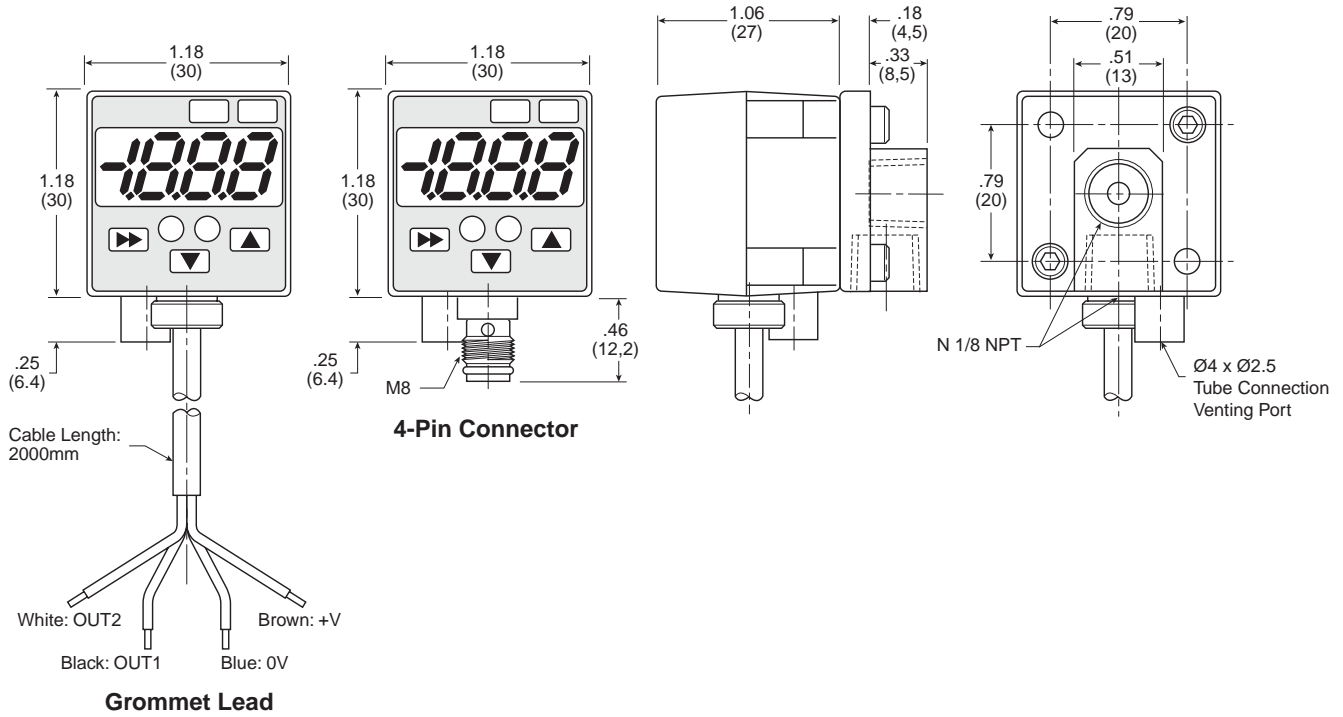


Error Messages

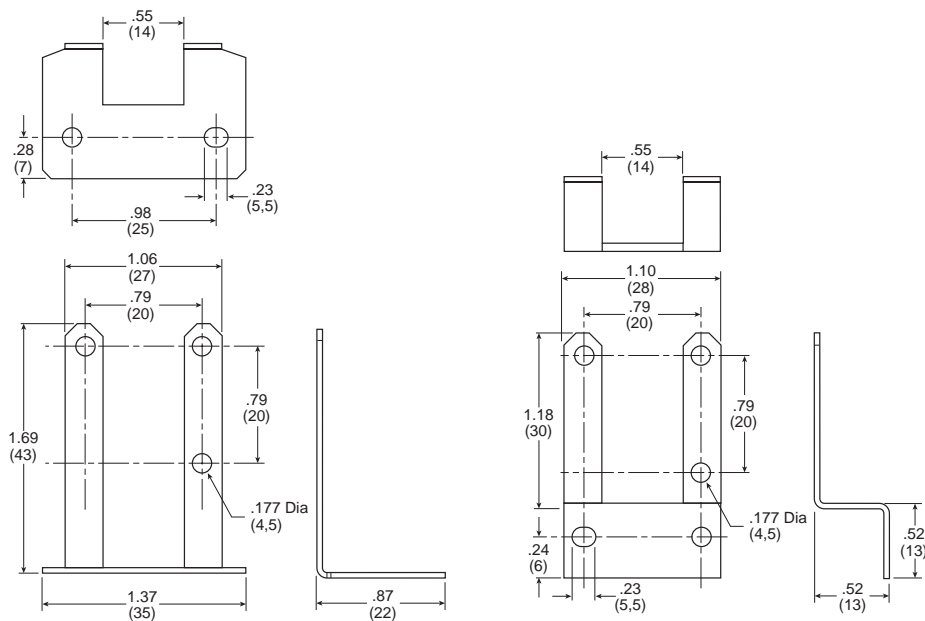
Display	Description	Solutions
<i>Err</i>	Zero Reset Error	Reset Zero Below 3% of F.S.
<i>Er1</i>	System Error (Internal)	Contact Factory
<i>CE1</i>	Over current of Output 1	Load current exceeds maximum 125mA.
<i>FFF</i> <i>-FF</i>	Applied pressure exceeds pressure range	Apply pressures within the rating of the sensor

Dimensions

N
1/8" Female



MPS-ACCK1
Mounting
Brackets
(Included)



See page 38 for Symbol Explanation

1 Hold Press 1x

Output Set Open or Closed Selecting Units of Measure Easy Mode Activation

$ou1 \rightleftharpoons no \uparrow \downarrow nc$
 $ou2 \rightleftharpoons no \uparrow \downarrow nc$
 $-PA \uparrow \downarrow -bA \uparrow \downarrow -H9 \uparrow \downarrow -iH$
 $PA \uparrow \downarrow bA \uparrow \downarrow F9 \uparrow \downarrow PS$
 $ESY \rightleftharpoons off \uparrow \downarrow on$

2 Press 2x

Output Mode 1 Hysteresis or Window Comparator

$ou1 \rightleftharpoons HYS \uparrow \downarrow CnP \uparrow \downarrow off$
 End

3 Press 4x

Output Mode 2 Hysteresis or Window Comparator

$ou2 \rightleftharpoons HYS \uparrow \downarrow CnP \uparrow \downarrow off$
 End

4 Press 1x

Output 1 Switch Point Setting Hysteresis Mode

$H-1 \rightleftharpoons 70 \uparrow \downarrow 145$
 0
 $h-1 \rightleftharpoons 13 \uparrow \downarrow 145$
 0
 Window Comparator Mode
 Low
 $A-1 \rightleftharpoons 42 \uparrow \downarrow 144$
 0
 High
 $b-1 \rightleftharpoons 71 \uparrow \downarrow 145$
 1
 End

5 Press 3x

Output 2 Switch Point Setting Hysteresis Mode

$H-2 \rightleftharpoons 97 \uparrow \downarrow 145$
 0
 $h-2 \rightleftharpoons 13 \uparrow \downarrow 145$
 0
 Window Comparator Mode
 Low
 $A-2 \rightleftharpoons 85 \uparrow \downarrow 144$
 0
 High
 $b-2 \rightleftharpoons 113 \uparrow \downarrow 145$
 1
 End

6 Press 5x

Automatic Teach Mode & Auto Surveillance

$AL \rightleftharpoons on \uparrow \downarrow off$
 $ALn \rightleftharpoons 1 \uparrow \downarrow 100$
 1
 End

Vacuum Cycle: 803
Release Cycle: 0

Note: When Auto Surveillance is turned on P1 is added to Output 1 setting, Output 2 is turned off and P-1 becomes Output 2.

$P-1 \rightleftharpoons off \uparrow \downarrow 0$
 300

7 Press 6x

Display Refresh Settings / Output Response Time Interval

$dSP \rightleftharpoons 0.1 \uparrow \downarrow 30$
 0.1
 $RuE \rightleftharpoons 1 \uparrow \downarrow 16 \uparrow \downarrow 64$
 512
 End

8 Press 7x

Display Peak Value Bottom Value or Their Difference

$Pb \rightleftharpoons off \uparrow \downarrow on$
 $Pbt \rightleftharpoons 10 \uparrow \downarrow 99$
 2
 $Pbd \rightleftharpoons PE \uparrow \downarrow bo \uparrow \downarrow du$
 End

9 Press 8x

Special Display Features

$dSF \rightleftharpoons off \uparrow \downarrow on$
 $Fnc \rightleftharpoons 1b \uparrow \downarrow 1d \uparrow \downarrow 2b \uparrow \downarrow 2d$
 off
 AL

10 Press 9x

Display Color Choices Red and / or Green, Energy Save Or Press 1x to Return

Wait 3 Seconds

Output	On	Off
Col	2-r	Green
	2-9	Green
	1-r	Red
	1-9	Green

End

11 Hold Press 1x

Lock

Hold Press 1x

Unlock

12 Press 1x

Peak Value

Press 1x

Bottom Value

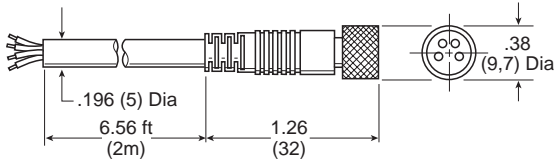
13 Press for 3 Seconds

Zero Reset

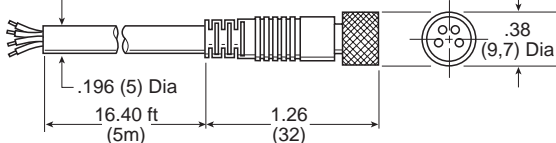
Accessories

Cables

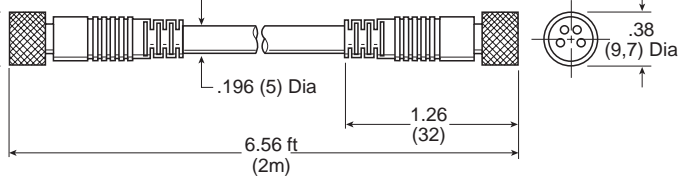
CB-M8-4P-2M, Female to Open Lead



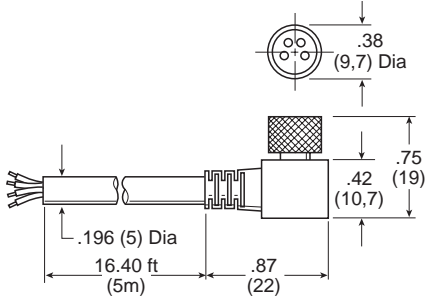
CB-M8-4P-5M, Female to Open Lead



CB-M8-4P-M8-2M, M8 Female to M8 Male



CB-M8-4P-5M-90, Female to Open Lead



Pin Out Connection

**Female Interface
4-Pin, M8**



**Male Interface
4-Pin, M8**



Cable Pin	Color
1	Brown
2	White
3	Blue
4	Black

**MPS-ACCH7
 Panel Mounting
 Bracket**

