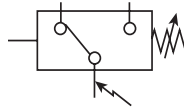


MPS-32

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

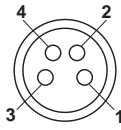
Specifications

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



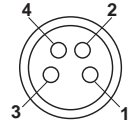
Lead Wiring



Sensor Pin Out with Analog Output Current Output

Pin #

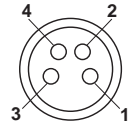
- 1 Brown: 24VDC
- 2 White: 4 to 20mA
- 3 Blue: 0VDC
- 4 Black: PNP Open Collector Output 1



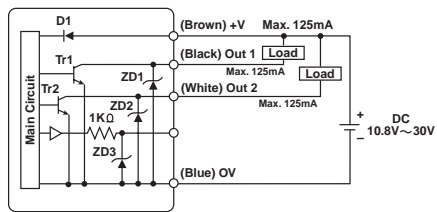
Voltage Output

Pin #

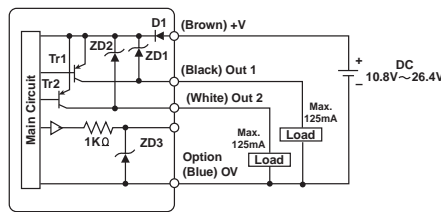
- 1 Brown: 24VDC
- 2 White: 1 to 5VDC
- 3 Blue: 0VDC
- 4 Black: PNP Open Collector Output 1



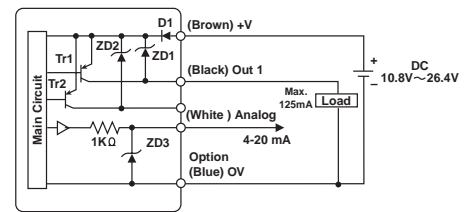
Internal Circuit for Open Collector and Analog Output Wiring



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

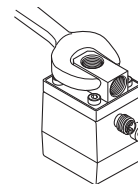
- Parker Sensors have not been investigated for explosion-proof construction in hazardous environments.
- Do not use with flammable gases, liquids, or in hazardous environments.
- Avoid installing the sensor in locations where excessive voltage surges could damage or affect the performance of the sensor.

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.

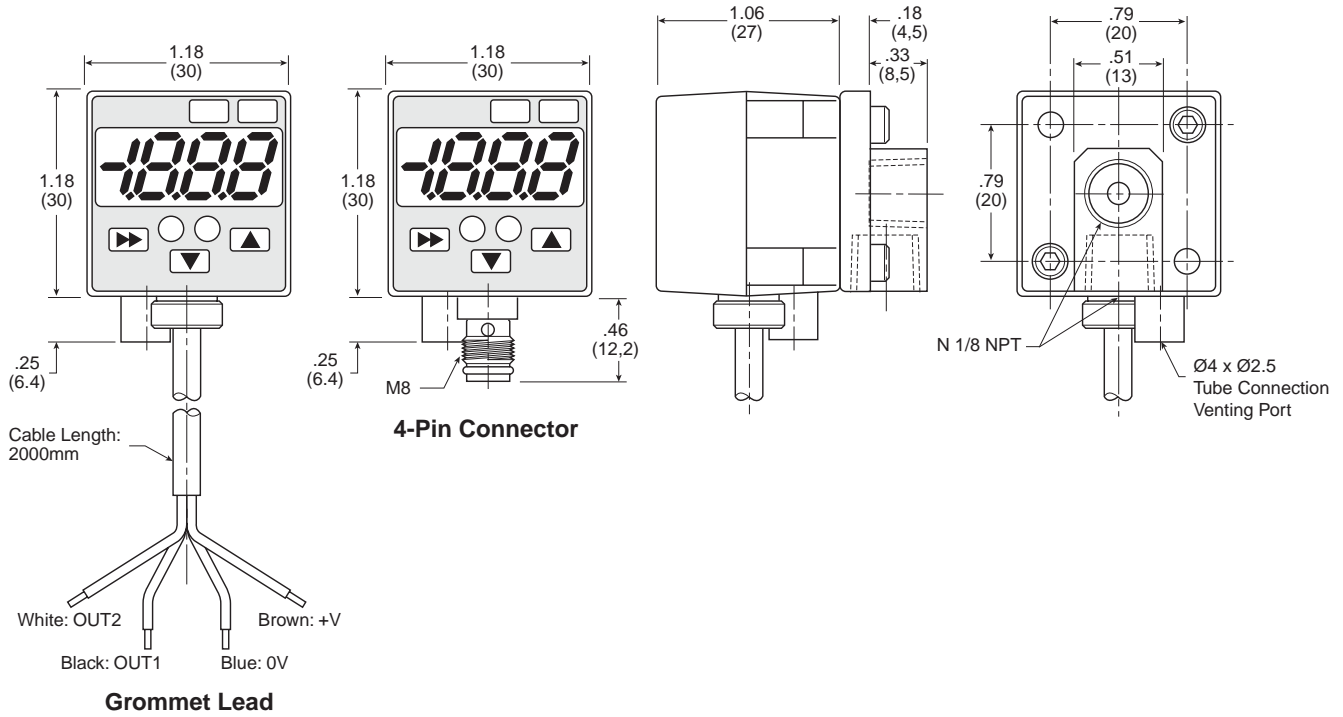


Error Messages

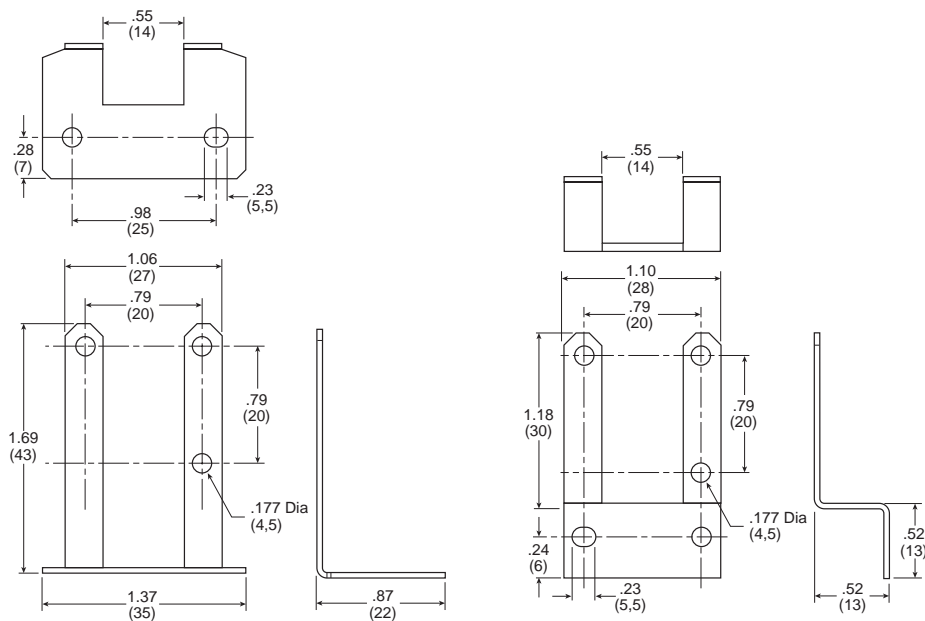
Display	Description	Solutions
<i>Err</i>	Zero Reset Error	Reset Zero Below 3% of F.S.
<i>Er1</i>	System Error (Internal)	Contact Factory
<i>CE1</i>	Over current of Output 1	Load current exceeds maximum 125mA.
<i>FFF</i> <i>-FF</i>	Applied pressure exceeds pressure range	Apply pressures within the rating 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 \leftrightarrow no \uparrow \downarrow nc

ou2 \leftrightarrow no \uparrow \downarrow nc

-PA \uparrow -bA \uparrow -H9 \uparrow -iH

PA \uparrow bA \uparrow F9 \uparrow PS

ESY \leftrightarrow off \uparrow \downarrow on

2 Press 2x

Output Mode 1 Hysteresis or Window Comparator

ou1 \leftrightarrow HYS \uparrow \downarrow CnP \uparrow \downarrow off

End

3 Press 4x

Output Mode 2 Hysteresis or Window Comparator

ou2 \leftrightarrow HYS \uparrow \downarrow CnP \uparrow \downarrow off

End

4 Press 1x

Output 1 Switch Point Setting Hysteresis Mode

H-1 \leftrightarrow 70 \uparrow \downarrow 145

0

h-1 \leftrightarrow 13 \uparrow \downarrow 145

0

Window Comparator Mode

Low

A-1 \leftrightarrow 42 \uparrow \downarrow 144

0

High

b-1 \leftrightarrow 71 \uparrow \downarrow 145

1

End

5 Press 3x

Output 2 Switch Point Setting Hysteresis Mode

H-2 \leftrightarrow 97 \uparrow \downarrow 145

0

h-2 \leftrightarrow 13 \uparrow \downarrow 145

0

Window Comparator Mode

Low

A-2 \leftrightarrow 85 \uparrow \downarrow 144

0

High

b-2 \leftrightarrow 113 \uparrow \downarrow 145

1

End

6 Press 5x

Automatic Teach Mode & Auto Surveillance

AL \leftrightarrow on \uparrow \downarrow off

ALn \leftrightarrow 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 \leftrightarrow off \uparrow \downarrow 0

300

7 Press 6x

Display Refresh Settings / Output Response Time Interval

dSP \leftrightarrow 0.1 \uparrow \downarrow 30

0.1

RuE \leftrightarrow 1 \uparrow \downarrow 16 \uparrow \downarrow 64

5 12

End

8 Press 7x

Display Peak Value Bottom Value or Their Difference

Pb \leftrightarrow off \uparrow \downarrow on

Pbt \leftrightarrow 10 \uparrow \downarrow 99

2

Pbd \leftrightarrow PE \uparrow \downarrow bo \uparrow \downarrow du

End

9 Press 8x

Special Display Features

dSF \leftrightarrow off \uparrow \downarrow on

Fnc \leftrightarrow 1b \uparrow \downarrow 1d \uparrow \downarrow 2b \uparrow \downarrow 2d

off

AL

End

10 Press 9x

Display Color Choices Red and / or Green, Energy Save

Or Press 1x to Return

Wait 3 Seconds

col \leftrightarrow 2-r

Output	On	Off
2-r	Red	Green
2-g	Green	Red
1-r	Red	Red
1-g	Green	Green

End

11 Hold Press 1x

Lock

Hold Press 1x

Unlock

UnC

12 Press 1x

Peak Value

PE

Press 1x

Bottom Value

bo

13 Press for 3 Seconds

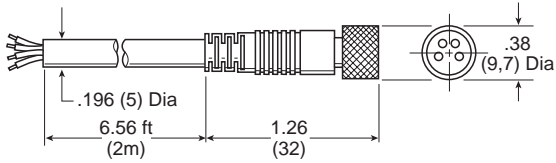
Zero Reset

0

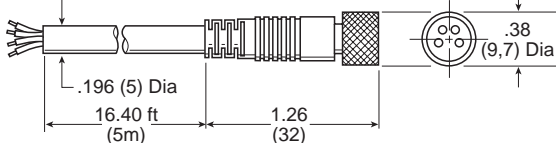
Accessories

Cables

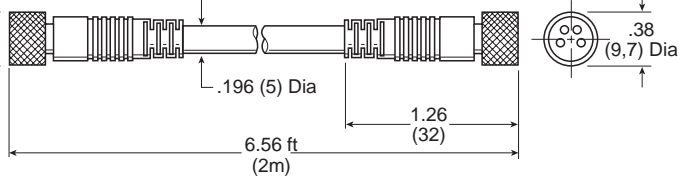
CB-M8-4P-2M, Female to Open Lead



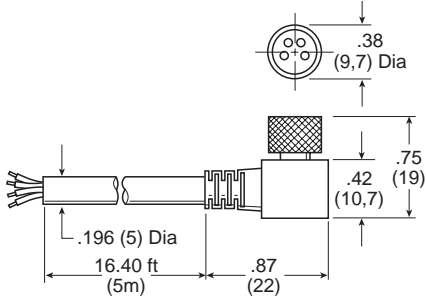
CB-M8-4P-5M, Female to Open Lead



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**

