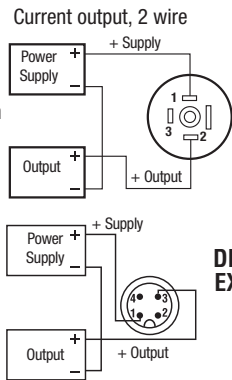
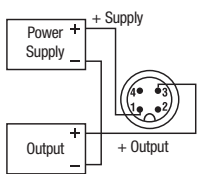


## SERIES 100

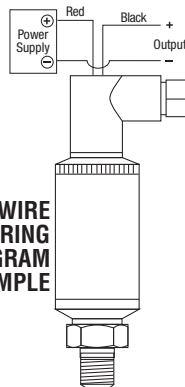
Wiring -  
Mini-Hirschmann  
connector



Wiring -  
M12 x 1 4-pin  
round connector



**2 WIRE  
WIRING  
DIAGRAM  
EXAMPLE**



### Load Limitations 4 mA to 20 mA Output Only

$$V_{min} = 10V + (.020 \times R_L)$$

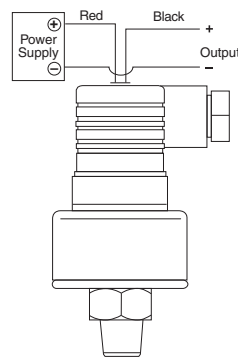
$$R_L = R_s + R_w$$

$R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

Series 100	4 mA to 20 mA 2-Wire
+ Supply	Red/1/A/1/Brown
+ Output	Black/2/B/3/Blue

Example: Red/1/A/1 = Applicable color wire/din plug number/bendix pin/M12 x 1 pin number/M12 color wire

## SERIES 600



**2 WIRE  
DIAGRAM  
EXAMPLE**

### Load Limitations 4 mA to 20 mA Output Only

$$V_{min} = 10V + (.020 \times R_L)$$

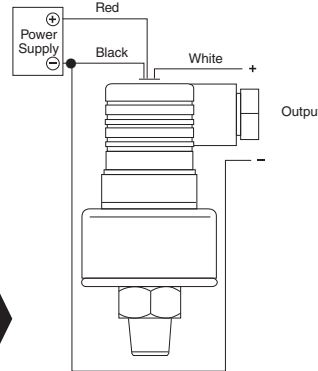
$$R_L = R_s + R_w$$

$R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

Series 600	4 mA to 20 mA 2-Wire
+ Supply	Red/1
+ Output	Black/2

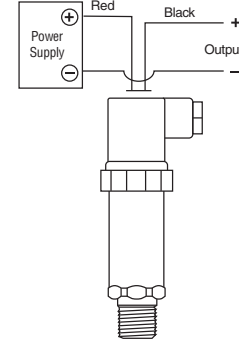
Series 600	Voltage Output
+ Supply	Red/1
Common	Black/2
+ Output	White/3

Example: Red/1 = Applicable color wire/din plug number.



**3 WIRE  
DIAGRAM  
EXAMPLE**

## SERIES 615/616



**2 WIRE  
DIAGRAM  
EXAMPLE**

### Load Limitations 4 mA to 20 mA Output Only

$$V_{min} = 10V + (.020 \times R_L)$$

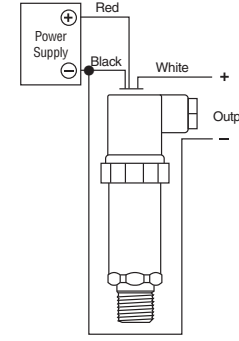
$$R_L = R_s + R_w$$

$R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

Series 615/616	4 mA to 20 mA 2-Wire
+ Supply	Red/1/A/1/1/Brown
+ Output	Black/2/B/2/3/Blue

Series 615/616	Voltage Output
+ Supply	Red/1/A/1/1/Brown
Common	Black/2/B/2/3/Blue
+ Output	White/3/C/3/4/Black

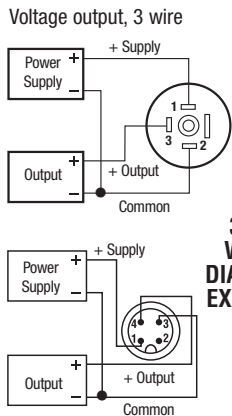
Example: Red/1/A/1/1 = Applicable color wire/din plug number/bendix pin/junction box pin/M12 x 1 pin number/M12 color wire



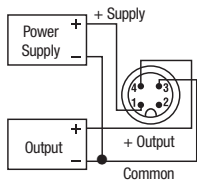
**3 WIRE  
DIAGRAM  
EXAMPLE**

## SERIES 200

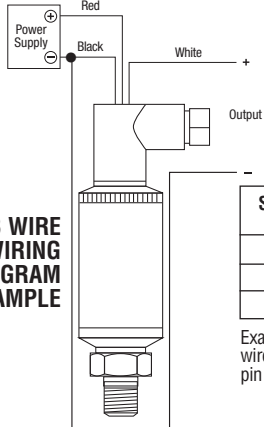
Wiring -  
Mini-Hirschmann  
connector



Wiring -  
M12 x 1 4-pin  
round connector



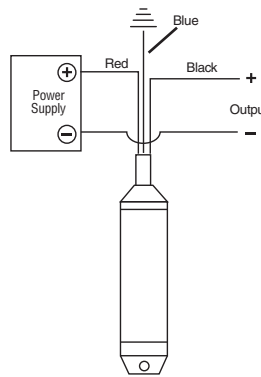
**3 WIRE  
WIRING  
DIAGRAM  
EXAMPLE**



Series 200	0-5, 1-6, 0-10 1 Vdc to 11 Vdc 3-WIRE
+ Supply	Red/1/A/1/Brown
Common	Black/2/B/3/Blue
+ Output	White/3/C/4/Black

Example: Red/1/A/1 = Applicable color wire/din plug number/bendix pin/M12 x 1 pin number/M12 color wire

## SERIES 612



**2 WIRE  
DIAGRAM  
EXAMPLE**

### Load Limitations 4 mA to 20 mA Output Only

$$V_{min} = [10V + (.020 \times R_L)] - 0.04354 \frac{\Omega}{ft} \times \text{cable length}$$

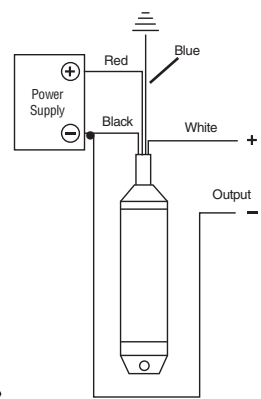
$$R_L = R_s + R_w$$

$R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

Series 612	4 mA to 20 mA 2-Wire
+ Supply	Red
+ Output	Black
Case ground	Blue

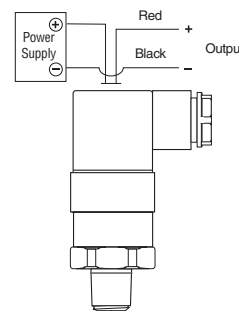
Series 612	Voltage Output
+ Supply	Red
Common	Black
+ Output	White
Case ground	Blue

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**3 WIRE  
DIAGRAM  
EXAMPLE**

## SERIES 300



**2 WIRE  
DIAGRAM  
EXAMPLE**

### Load Limitations 4 mA to 20 mA Output Only

$$V_{min} = 10V + (.020 \times R_L)$$

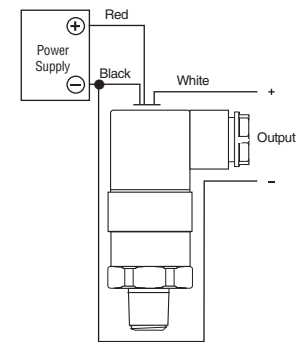
$$R_L = R_s + R_w$$

$R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

Series 300	4 mA to 20 mA 2-Wire
+ Supply	Red/1/1/1/Brown
+ Output	Black/2/2/3/Blue

Series 300	Voltage Output
+ Supply	Red/1/1/1/Brown
Common	Black/2/2/3/Blue
+ Output	White/3/3/4/Black

Example: Red/1/1/1 = Applicable color wire/din plug number/junction box pin/M12 x 1 pin number/M12 color wire

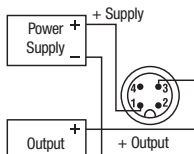


**3 WIRE  
DIAGRAM  
EXAMPLE**

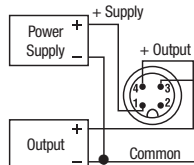
## SERIES 640

### Wiring - M12 x 1 4-pin round connector

Current output, 2 wire



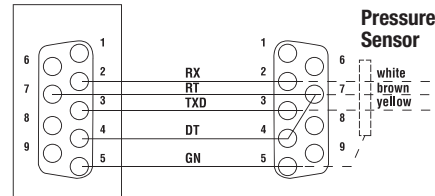
Voltage output, 3 wire



### Load Limitations 4 mA to 20 mA Output Only

$V_{min} = 10V + (.020 \times R_L)$   
 $R_L = R_s + R_w$   
 $R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

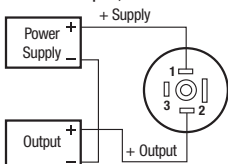
### RS 232 Interface



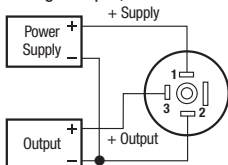
## SERIES 660

### Wiring - Mini-Hirschmann connector

Current output, 2 wire



Voltage output, 3 wire



### Load Limitations 4 mA to 20 mA Output Only

$V_{min} = 10V + (.020 \times R_L)$   
 $R_L = R_s + R_w$   
 $R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

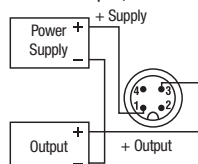
Series 660	4 mA to 20 mA 2-Wire
+ Supply	Brown/1/1/Brown
+ Output	Green/2/3/Blue

Series 660	Voltage Output
+ Supply	Brown/1/1/Brown
Common	Green/2/3/Blue
+ Output	White/3/4/Black

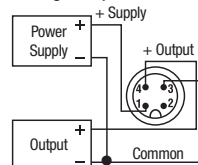
Example: Brown/1/1 = Applicable color wire/din plug number M12 x 1 Pin number/M12 color wire

### Wiring - M12 x 1 4-pin round connector

Current output, 2 wire



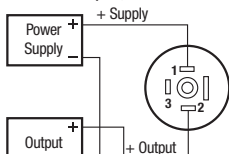
Voltage output, 3 wire



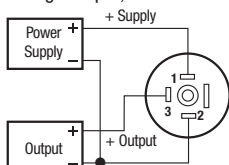
## SERIES 680

### Wiring - Mini-Hirschmann connector

Current output, 2 wire



Voltage output, 3 wire



### Load Limitations 4 mA to 20 mA Output Only

$V_{min} = 10V + (.020 \times R_L)$   
 $R_L = R_s + R_w$   
 $R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

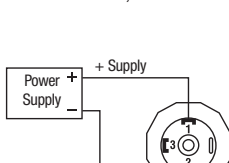
Series 680	4 mA to 20 mA 2-Wire
+ Supply	Red/1/1/Brown
+ Output	Black/2/3/Blue

Series 680	Voltage Output
+ Supply	Red/1/1/Brown
Common	Black/2/3/Blue
+ Output	White/3/4/Black

Example: Red/1/1 = Applicable color wire/din plug number M12 x 1 Pin number/M12 color wire

## SERIES 800

4 mA to 20 mA, 2 wire



### Load Limitations 4 mA to 20 mA Output Only

$V_{min} = 10V + (.020 \times R_L)$   
 $R_L = R_s + R_w$   
 $R_L$  = Loop Resistance (ohms)  
 $R_s$  = Sense Resistance (ohms)  
 $R_w$  = Wire Resistance (ohms)

Series 800	4 mA to 20 mA 2-Wire
+ Supply	Red/1
+ Output	Black/2

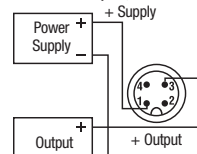
Series 800	Voltage Output
+ Supply	Red/1
Common	Black/2
+ Output	White/3

Example: Red/1 = Applicable color wire/din plug number.

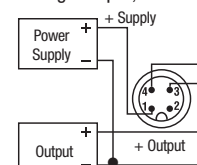
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### Wiring - M12 x 1 4-pin round connector

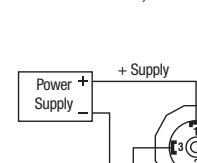
Current output, 2 wire



Voltage output, 3 wire



0 Vdc to 10 Vdc, 3 wire



### Installation:

NOSHOK pressure transmitters/transducers may be mounted in any plane with negligible effect on performance. Although these units are designed and manufactured to withstand substantial shock and vibration, it is recommended that they be mounted in an area of minimal vibration. Always use a wrench on the wrench flats when installing. NEVER use a pipe wrench on the housing or in the area of the electrical connection.

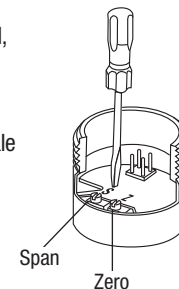
### Maintenance/Calibration:

NOSHOK pressure transmitters/transducers require no maintenance. Recalibration is dependent on the users Quality Assurance Program. If no program is in place, NOSHOK recommends a 1 year cycle.

### Alignment Procedure (applies only to 100, 200, 615/616, and 640 series):

Using a pressure source and meter with adequate accuracy, perform the following steps:

- Open sensor
- With no pressure applied, adjust the "Z" potentiometer for the correct Zero output
- Apply the correct full scale pressure to the unit
- Adjust the "S" potentiometer for the correct Span output



# NOSHOK TRANSMITTERS TRANSDUCERS

## Wiring Diagrams & Electrical Connections for:

100, 200, 300, 600, 612, 615/616, 640, 660, 680 and 800 Series

The Instrumentation Company

**NOSHOK**  
INCORPORATED

### CORPORATE HEADQUARTERS

1010 West Bagley Rd. • Berea, OH 44017  
 440-243-0888 • FAX 440-243-3472  
 E-mail: [noshok@noshok.com](mailto:noshok@noshok.com)  
 Web: [www.noshok.com](http://www.noshok.com)