

BAG NAG INSTRUCTION MANUAL



FEATURES

- Display Changes from **Green** to **Red** (Alarm Status)
Time to Change Bags-Clean Filter
- Highly Accurate 0.25% of Full Scale
- Ceramic Diaphragm 316 SS ½" NPT Process Port
- Display Pressure Units PSI, Bar, Kg/Cm², KPA, MPA, In Hg
- Two (2) 3 Amp Relay Alarm Functions
- 4-20ma Analog Output Function (Remote Display)
- Digital RS-485 Interface Function (optional)
- IP66 NEMA 4X
- Plastic Gauge Isolator For Corrosive Services, Slurries,
Heavy Sediment (optional)

Read the user's manual carefully before starting to use the unit or software.
Producer reserves the right to implement changes without prior notice.

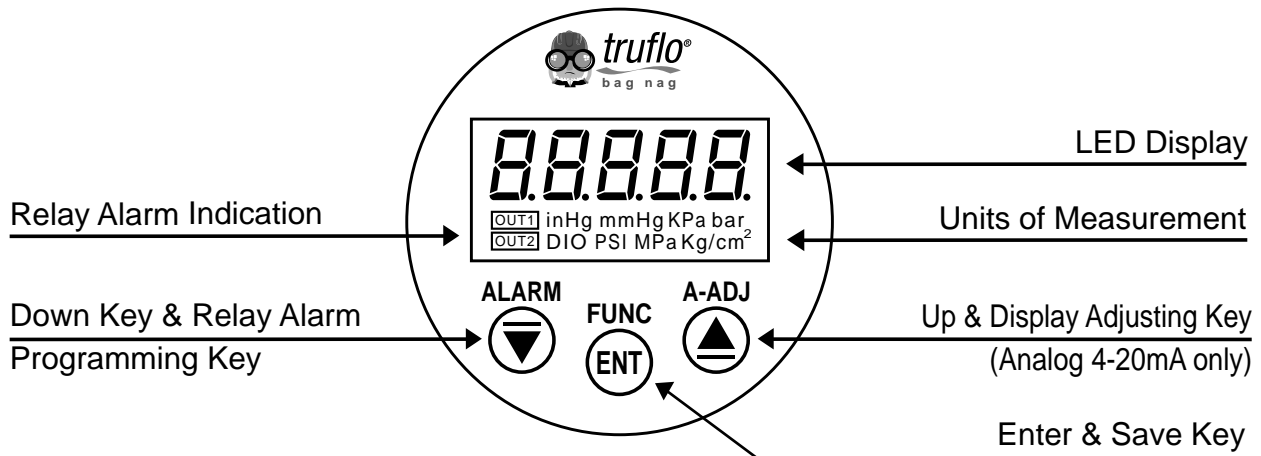


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THE Bag Nag

DIGITAL PRESSURE ALARM + TRANSMITTER

FRONT PANEL & KEY FUNCTIONS



Gauge Isolators are Recommended for Corrosive/Chemical Services.

BNS SERIES

Key Name	Symbol	Descriptions
Enter Key & Save Key		1. In the measuring state, press this key into enter into programming stage 2. In the programming state, press this key will save the value & move to next parameter.
Up Key & Display & A/O Adjusting Key		1. In the measuring state, press this key into enter to Display & Analog Output Adjustment. 2. In the programming state, press this key to increase the digits.
Down Key & Alarm Setting Key		1. In the measuring state, press this key into enter to the alarm setting. 2. In the programming state, press this key will decrease the digits.

GENERAL MODE OPERATING PROCEDURES

Programming Alarm Setpoint

Follow Hand For Programming

Block Charts	Display	Descriptions	Default
Power On	10000	Measuring Status Current Value for Measurement.	
Press (7 Sec)	P-1	Setpoint Alarm 1 (P-1) Press or to Modify Alarm 1 Setpoint (Flashing)	00000
Press	P-2	Setpoint Alarm 2 (P-2) Press or to Modify Alarm 2 Setpoint (Flashing)	00000
Press	HYS	Alarm Hysteresis Setting (HYS) Press or to modify the value, relay will alarm if pressure runs lower or higher than current display value (depends on alarm action) Hysteresis is the Pressure buffer between current pressure and relay setting. Prevents Relay Chatter-Display will go orange when in Hysteresis Range-Warning that alarm point is close	00000

DC Power Only



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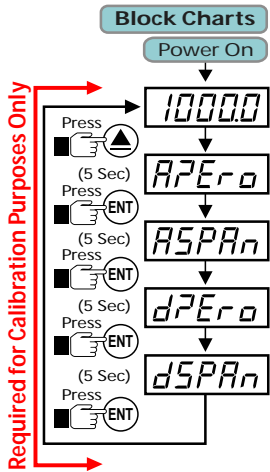
Follow Hand For Programming









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Display "0" ZERO SPAN Analog Output 4-20mA Only : ZERO & "SPAN" Adjustment

Display '0' Adjustment Required if Display is NOT reading '0' when Powered On

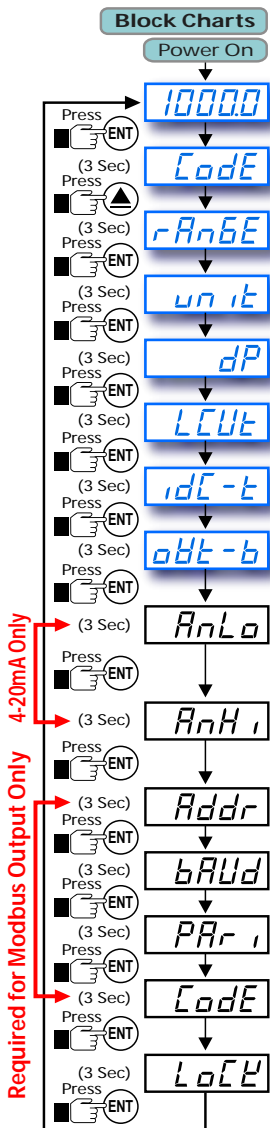
A/O = Analog Output





























Display	Descriptions	Default
Measuring Status	Current value for measurement. (Normal Display)	
Analog/O Zero Adjustment (AZEr0)	Press  or  to modify the Analog/O zero. (-99~99) PS: Use this function to adjust the real Analog/O zero	00000
Analog/O Span Adjustment (ASPAAn)	Press  or  to modify the Analog/O span. (-99~99) PS: Use this function to adjust the real Analog/O span.	00000
Display/O Span Adjustment (ASPAAn)	Press  or  to modify the Display/O Span. (-99~99) PS: Use this function to adjust the real Display/O Span.	00000
Display Span Adjustment (ASPAAn)	Press  or  to modify the Display Span. (-99~99) PS: Use this function to adjust the real Display Span.	00000

Programming Steps

Follow  Hand For Programming



Display	Descriptions	Default
Measuring Status	Current value for measurement. (Normal Display)	00000
Pass Code SET (PCodE)	Press  or  to modify output mode setting (H, C, D) (Alarm Output) below this add (For Basket/Filter Relay Alarm applications Select D Alarm Mode)	Code
Pressure Range (rAnGE)	Factory set for your Unit or Pressure Range. (No Change Required)	1. 10.
Pressure Unit Setting (unit)	Press  or  to select Pressure unit type (bar, kg/cm2, kpa, Mpa, PSL, mmHg, inHg)	PSI
Decimal Point Setting (dP)	Press  or  to select decimal point (0~4) (0 Recommended)	0 Recommended
Display Low Cut Setting (LCut)	Press  or  to modify display low cut to 0(0~99) (0 Recommended)	00000
Sampling Time Base (idC-t)	Press  or  to modify sampling time base (0.1~9.9 sec) (0.5 Recommended)	0.5
Output Mode Setting (oUt.t)	Press  or  to modify output mode setting (H, C, D) (Alarm Output). (For BASKET / BAG Notification Select D)	0
Analog/O Low Scale Setting (AnLo)	Press  or  to adjust Analog/O low scale to correspond to the display value (programmable). 0-100 psi EX: A/O is 4-20 mA, when the display reads 0 the output is 4mA, 0=4mA	00000
Analog/O Hi Scale Setting (AnHi)	Press  or  to adjust Analog/O hi scale to correspond to the display value (programmable). 0-100 psi EX: 4-20mA, when the display reads 100.0 then 20mA is the output signal, Range is 0-100; 4mA=0, 20mA = 100	99999
Address Setting (Addr)	Press  or  to modify address (0~255). (OPTIONAL) For RS 485 Ethernet	00000
Baud Rate Setting (bAUd)	Press  or  to select baud rate (19200/9600/4800/2400). (OPTIONAL)	19200
Parity Setting (PAri)	Press  or  to select parity (n.8.2/n.8.1/even/odd). (OPTIONAL)	n.8.2.
Pass Code Setting (CodE)	Press  or  to modify pass code (0~19999). PS: Please don't forget the new pass code after modification.	00000
Key Lock Setting (LoCK)	Press  or  to lock the keys, using key lock function. Only can view the parameters, but cannot modify any values. PS: no (unlock), YES ("ENT" unlock, others lock).	no

Transmitter Calibration, Offset (Zero), Span Units Are Factory Calibrated) (For Calibration Purposes Only)

The **BNS Series** pressure transmitter has two adjustments in common which are termed OFFSET (zero) and SPAN (gain) These adjustments allow the output signal to be varied based on the input signal

Offset

This adjustment sets what is in effect the value of output when the input is zero. Figure 1 shows the effect of altering the 0 (Zero) Start Point

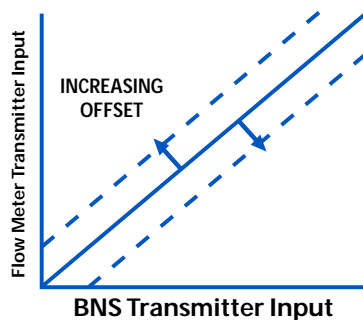


Fig 1

SPAN

As can be seen from Figure 2, altering the SPAN changes the slope of the relationship between input and output signals.

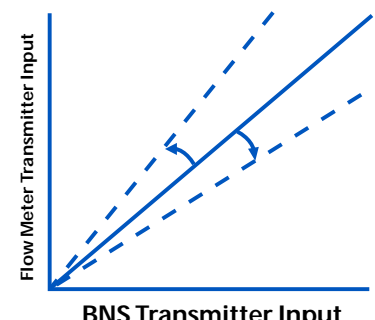


Fig 2

Calibration Principles

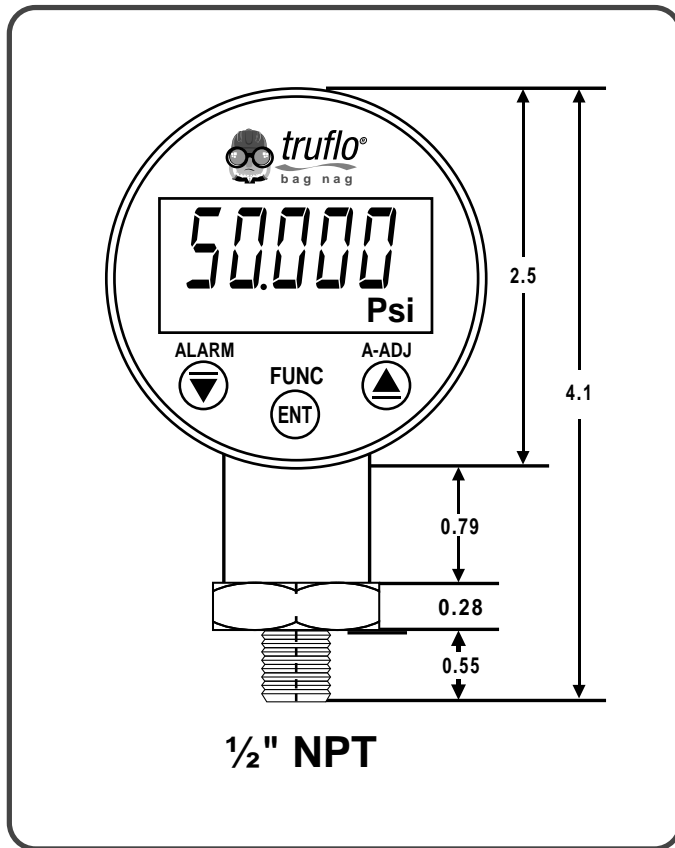
The principle used in the calibration of transmitters is that if two points on a straight line are established then the line itself is established. By examining Figure 2 it can be seen that at low magnitudes of input signal the effect of span adjustment is very small. Consequently the first calibration point should be selected close to the bottom of the input range. The offset adjustment is then used to give the required output signal for the input signal being fed to the transmitter.

Because alteration of the span results in a higher output deviation at the top end of the input range it follows that the second calibration point should be at this top end, top 25% of Span. Thus the calibration at this point is achieved by imposing an input signal of suitable magnitude and adjusting the span to give the correct output.

In practice it is sometimes difficult to eliminate the interaction effects between offset and span so it is recommended that the procedure for setting these two points be repeated until both points are obtained without the need for further adjustments.

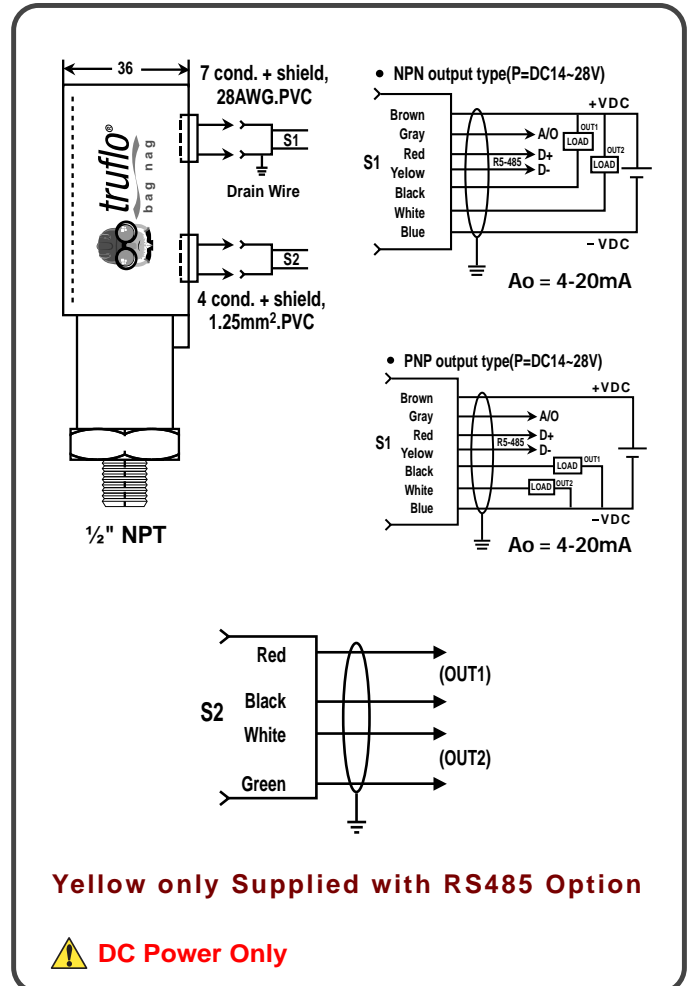
For Calibration Only- BNS Series Gauges Factory Calibrated.

DIMENSION (unit : inch)



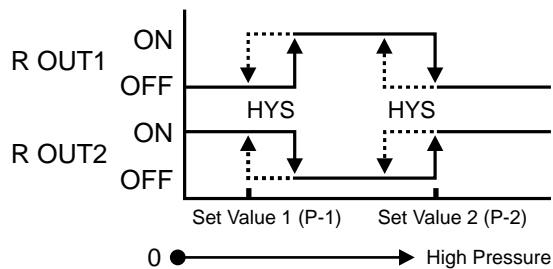
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CONNECTION DIAGRAM

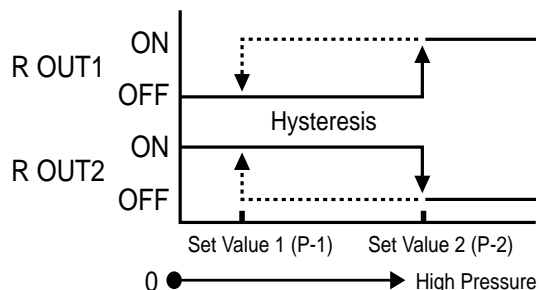


Relay Alarm Output Type

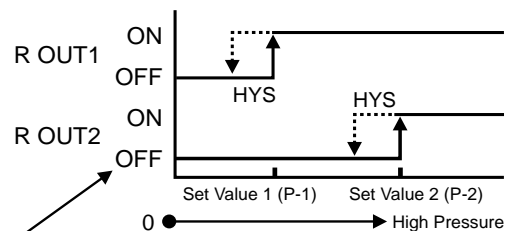
OUT-T = C (Window Comparator Mode)



OUT-T = H (Hysteresis Mode)



OUT-T = D (Dual Output Mode)



(D Output is Recommended for Basket or Bag Cleaning / Replacement)

Example :

Standard Operating Process Pressure with Clean Basket Strainer or Bag Filter = 55 psi

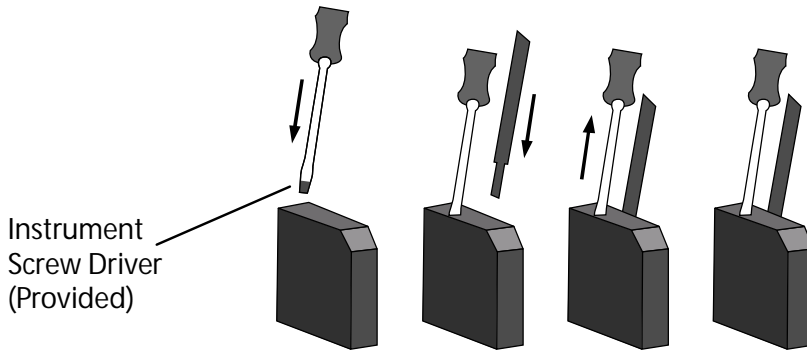
SET P1 = 60 psi (Filter or BAG is Dirty)

SET P2 = 75 psi (Filter or BAG Needs to be Cleaned / Changed)

⚠ DC Power Only

Example : TVL Series Controller + Display

Use Screw Driver Provided



Method of connecting cables to the clamping connectors

Truflo BNS Series 4-20mA Wiring Diagram

