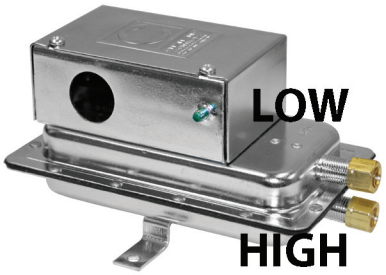
Field Calibration of Series AFS™ Sensing Switches



Series AFS switches ship from the factory set to their minimum set points of 0.05" wc (0.40" wc for the manual reset models).

When changing the set point of an air switch, do not exceed the maximum number of turns of the adjustment screw: ten full (10) turns, after four (4) initial turns required to engage the spring. The ten (10) full turns cover the entire set point range of either 0.05" to 2.0" wc, or .05" to 12.0", or .40" to 12.0" as shown in Figures 1, 2 and 3.

Please Note: To precisely calibrate a Cleveland Controls air switch, a digital manometer is recommended to confirm set point at actual operating temperature.

Field Calibrating 2.0" Adjustable Switches (such as AFS-262)

These switches have an adjustment range of 0.05" ±0.02" wc to 2.0" wc. To achieve a given set point, use the following procedure.

Turn the adjusting screw counter-clockwise until motion has stopped. Next, turn the adjusting screw four (4) complete turns in a clockwise direction to engage the spring. From this point, the next ten (10) turns will be used for the actual calibration: Each full turn represents approximately 0.2" wc.

Example:

To set the switch at 1.5" wc, turn the screw counter-clockwise until travel stops. Then turn four (4) turns clockwise to engage the spring. A further 7-½ turns clockwise will result in a setting of 1.5" wc because (7-½ turns) x (0.2" per turn) = 1.5" wc (approximately).

Field Calibrating 12.0" Adjustable Switches (such as AFS-222)

These switches have an adjustment range of 0.05" ±0.02" wc to 12.0" wc. To achieve a given set point, use the following procedure.

Turn the adjusting screw counter-clockwise until motion has stopped. Next, turn the adjusting screw four (4) complete turns in a clockwise direction to engage the spring. From this point, the next ten (10) turns will be used for the actual calibration: Each full turn represents approximately 1.2" wc

Example:

To set the switch at 2.5" wc, turn the screw counter-clockwise until travel stops. Then turn four (4) turns clockwise to engage the spring. A further 2 turns clockwise will result in a setting of 2.5" wc because (2 turns) x (1.2" per turn) = 2.5" wc (approximately).

Field Calibrating 12.0" Manual Reset Adjustable Switches (such as AFS-460)

These switches have an adjustment range of 0.40" ±0.06" wc to 12.0" wc. To achieve a given set point, use the following procedure.

Turn the adjusting screw counter-clockwise until motion has stopped. Next, turn the adjusting screw four (4) complete turns in a clockwise direction to engage the spring. From this point, the next ten (10) turns will be used for the actual calibration: Each full turn represents approximately 1.16" wc.

Example:

To set the switch at 2.9" wc, turn the screw counter-clockwise until travel stops. Then turn four (4) turns clockwise to engage the spring. A further 2-½ turns clockwise will result in a setting of 2.9" wc because: (2.5 turns) x (1.16" wc per turn) = 2.9" wc.

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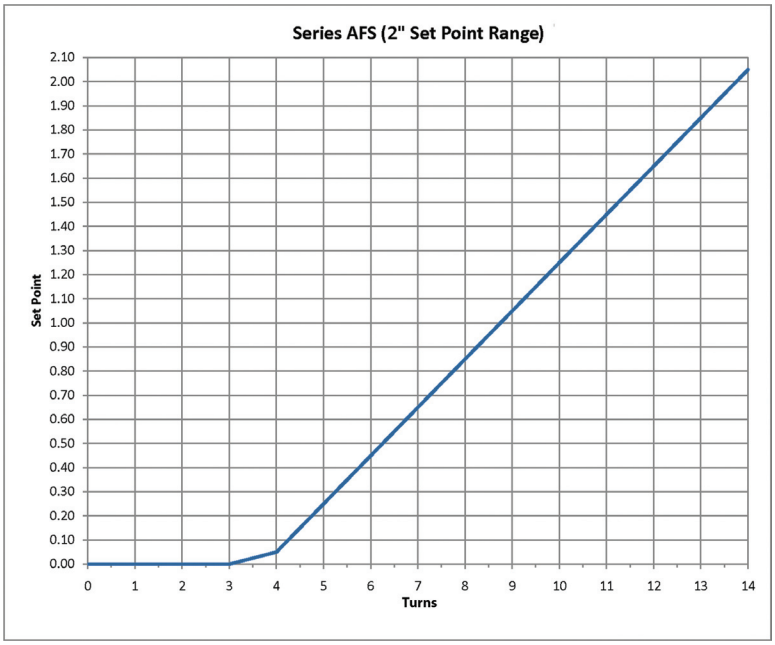
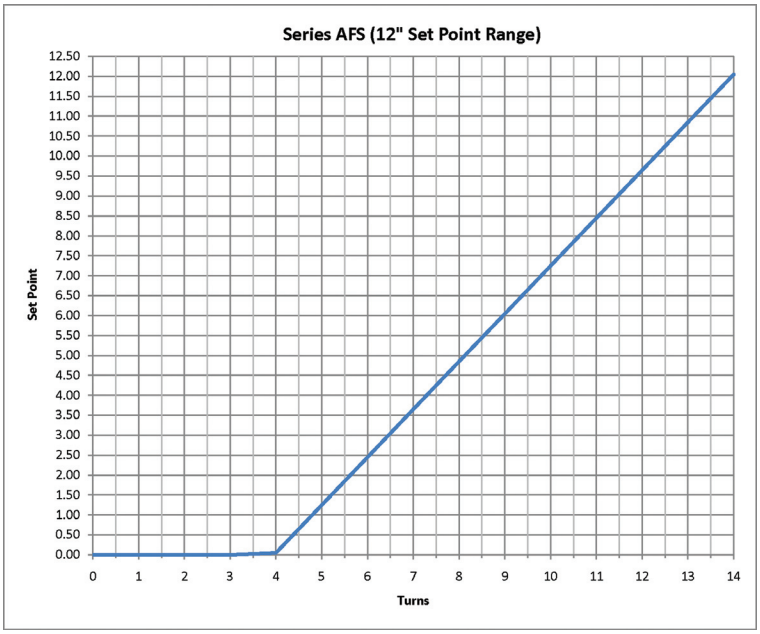
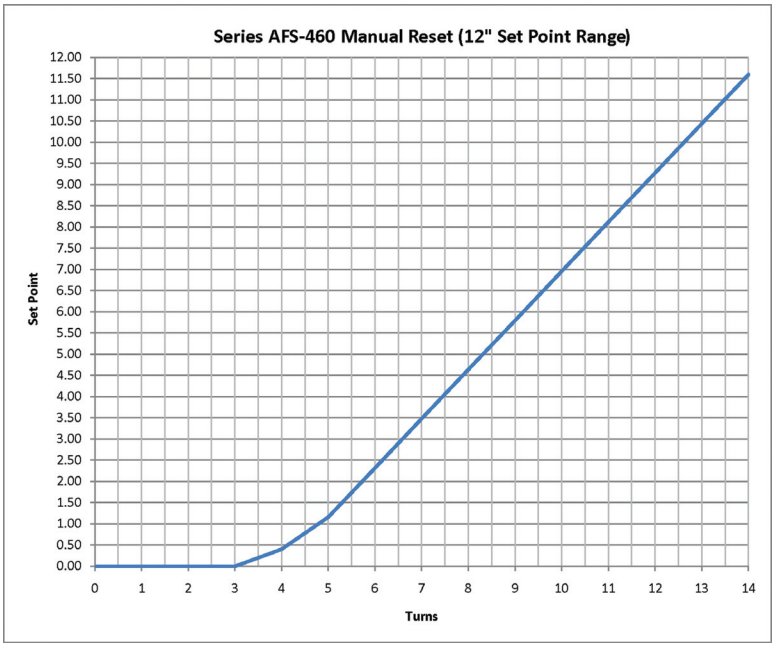

Series AFS (2" Set Point Range)
Set Point
2.10
2.00
1.90
1.80
1.70
1.60
1.50
1.40
1.30
1.20
1.10
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Turns


Series AFS (12" Set Point Range)
Set Point
12.50
12.00
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Turns


Series AFS-460 Manual Reset (12" Set Point Range)
Set Point
12.00
11.50
11.00
10.50
10.00
9.50
9.00
8.50
8.00
7.50
7.00
6.50
6.00
5.50
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
Turns