What Is Claimed Is:

CLAIMS

1. A sensing device comprising:

a first housing attached to a coupling having an inlet, the first housing configured to house at least in part a condition responsive actuatable sensing element, the actuatable sensing element having a first end and a second end, the first end in communication with the inlet;

a second housing mounted with respect to the first housing, the second housing including a groove configured to house at least in part an electrical mounting member, the electrical mounting member: (i) having a top side and a bottom side, and (ii) having at least one switch secured ~~thereto~~ to the bottom side of the electrical mounting member, the at least one switch including a switch actuator;

wherein the second housing has a proximal side defining a first horizontal plane and a bottom side defining a second horizontal plane, and wherein the groove is angled relative to at least one of the first and second horizontal planes; and

wherein the electrical mounting member is configured to be positioned within the angled groove and rotated within the angled groove without being moved in the axial direction of the electrical mounting member and with respect to the second housing to thereby adjust the height of the switch actuator relative to the second end of the actuatable sensing element.

2. The device of claim 1, wherein the first and second housings are substantially cylindrical, and the electrical mounting member is substantially circular.

3. The device of claim 1, wherein the actuatable sensing element is selected from the group consisting of an actuatable sensing diaphragm, an actuatable sensing bellows and an actuatable sensing piston.

4. The device of claim 1, wherein the electrical mounting member is a printed circuit board.

5. The device of claim 1, wherein the at least one switch is a pressure switch or a temperature switch.

6. The device of claim 1, ~~wherein the second housing further includes a groove configured to house at least a portion of the electrical mounting member~~ further comprising a

retaining member positioned above the electrical mounting member, the retaining member configured and dimensioned to maintain the electrical mounting member in the groove.

7. The device of claim 6, wherein the ~~second housing has a proximal side defining a first horizontal plane and a bottom side defining a second horizontal plane, and wherein the groove is angled relative to at least one of the first and second horizontal planes~~ retaining member is a retaining ring or a spring clip.

8. The device of claim ~~7~~ 1, wherein the groove is angled from about 0.25 degrees to about 0.75 degrees relative to at least one of the first and second horizontal planes.

9. The device of claim ~~7~~ 1, wherein the first and second horizontal planes are substantially parallel.

10. The device of claim ~~6~~ 1, wherein the groove travels approximately 360° around the inner portion of the second housing.

11. A sensing device comprising:

a first housing attached to a coupling having an inlet, the first housing configured to house at least in part a condition responsive actuatable sensing element, the actuatable sensing element having a first end and a second end, the first end in communication with the inlet;

a second housing mounted with respect to the first housing, the second housing including a groove configured to house at least in part an electrical mounting member, the electrical mounting member: (i) having a top side and a bottom side, and (ii) having a first switch and a second switch secured ~~thereto~~ to the bottom side of the electrical mounting member, the first switch including a first switch actuator and the second switch including a second switch actuator;

wherein the second housing has a proximal side defining a first horizontal plane and a bottom side defining a second horizontal plane, and wherein the groove is angled relative to at least one of the first and second horizontal planes; and

wherein the electrical mounting member is configured to be positioned within the angled groove and rotated within the angled groove without being moved in the axial direction of the electrical mounting member and with respect to the second housing to thereby adjust the heights of the first and second switch actuators relative to: (i) one another, and (ii) the second end of the actuatable sensing element.

12. The device of claim 11, wherein the first and second housings are substantially cylindrical, and the electrical mounting member is substantially circular.

13. The device of claim 11, wherein the actuatable sensing element is selected from the group consisting of an actuatable sensing diaphragm, an actuatable sensing bellows and an actuatable sensing piston.

14. The device of claim 11, wherein the electrical mounting member is a printed circuit board.

15. The device of claim 11, wherein the first and second switches are pressure switches or temperature switches.

16. The device of claim 11, ~~wherein the second housing further includes a groove configured to house at least a portion of the electrical mounting member~~ further comprising a retaining member positioned above the electrical mounting member, the retaining member configured and dimensioned to maintain the electrical mounting member in the groove.

17. The device of claim 16, wherein the ~~second housing has a proximal side defining a first horizontal plane and a bottom side defining a second horizontal plane, and wherein the groove is angled relative to at least one of the first and second horizontal planes~~ retaining member is a retaining ring or a spring clip.

18. The device of claim ~~17~~ 11, wherein the groove is angled from about 0.25 degrees to about 0.75 degrees relative to at least one of the first and second horizontal planes.

19. The device of claim ~~17~~ 11, wherein the first and second horizontal planes are substantially parallel.

20. The device of claim ~~16~~ 11, wherein the groove travels approximately 360° around the inner portion of the second housing.

21. The device of claim 11, wherein the actuatable sensing element is configured to actuate in response to condition changes: (i) received at the inlet and (ii) to which the actuatable sensing element is sensitive; and

wherein the rotation of the electrical mounting member allows a user to adjust the heights of the first and second switch actuators to a position where the first and second switch actuators change state at substantially the same time upon actuation of the actuatable sensing element.

22. The device of claim 21, wherein the first and second switch actuators change state within a tolerance of about 0.00005 inches height difference between the first and second switch actuators relative to the second end of the actuatable sensing element.

23. A method for fabricating a sensing device comprising:

providing a first housing attached to a coupling having an inlet, the first housing configured to house at least in part a condition responsive actuatable sensing element, the actuatable sensing element having a first end and a second end, the first end in communication with the inlet;

providing a second housing mounted with respect to the first housing, the second housing including a groove configured to house at least in part an electrical mounting member, the electrical mounting member: (i) having a top side and a bottom side, and (ii) having a first switch and a second switch secured ~~thereto~~ to the bottom side of the electrical mounting member, the first switch including a first switch actuator and the second switch including a second switch actuator;

wherein the second housing has a proximal side defining a first horizontal plane and a bottom side defining a second horizontal plane, and wherein the groove is angled relative to at least one of the first and second horizontal planes;

positioning the electrical mounting member within the angled groove;

rotating the electrical mounting member within the angled groove without moving the electrical mounting member in the axial direction of the electrical mounting member and by rotating the electrical mounting member with respect to the second housing to thereby adjust the heights of the first and second switch actuators relative to: (i) one another, and (ii) the second end of the actuatable sensing element;

securing the second housing relative to the first housing after the desired position of the electrical mounting member has been determined by a user; and

securing the electrical mounting member with respect to the second housing after the desired position of the electrical mounting member has been determined by the user.

24. The method of claim 23, ~~wherein the second housing further includes a groove configured to house at least a portion of the electrical mounting member~~ further comprising a retaining member positioned above the electrical mounting member, the retaining member configured and dimensioned to maintain the secured electrical mounting member in the groove.

25. The method of claim 24, wherein the ~~second housing has a proximal side defining a first horizontal plane and a bottom side defining a second horizontal plane, and wherein the groove is angled relative to at least one of the first and second horizontal planes~~ retaining member is a retaining ring or a spring clip.

26. The method of claim ~~25~~ 23, wherein the groove is angled from about 0.25 degrees to about 0.75 degrees relative to at least one of the first and second horizontal planes.

27. The method of claim ~~24~~ 23, wherein the groove travels approximately 360° around the inner portion of the second housing.

28. The method of claim 23, wherein the actuatable sensing element is configured to actuate in response to condition changes: (i) received at the inlet and (ii) to which the actuatable sensing element is sensitive; and

wherein the desired position of the electrical mounting member allows the first and second switch actuators to change state at substantially the same time upon actuation of the actuatable sensing element.

29. The method of claim 28, wherein the first and second switch actuators change state within a tolerance of about 0.00005 inches height difference between the first and second switch actuators relative to the second end of the actuatable sensing element.

30. The method of claim 23, wherein the electrical mounting member is secured with respect to the second housing by sealing the electrical mounting member with a sealant.