What is claimed is:

1. A fuel flow meter assembly for detecting fraud caused by tampering, said fuel flow meter assembly comprising:

a fuel flow meter comprising a shaft;

a fiber optic displacement sensor operatively connected to said fuel flow meter shaft for generating information representative of an amount of fuel delivered through said fuel flow meter;

at least one transponder coupled with one of said fuel flow meter shaft and said displacement sensor; and

at least one interrogator electronics coupled with the other of said fuel flow meter shaft and said displacement sensor, said at least one interrogator electronics configured for remote electronic communication with said at least one transponder.

2. The fuel flow meter assembly of claim 1, wherein said at least one transponder is embedded in said fuel flow meter shaft.

3. The fuel flow meter assembly of claim 1, wherein a unique ID is stored in a memory of said at least one transponder.

4. The fuel flow meter assembly of claim 3, wherein said at least one interrogator electronics is configured to request said unique ID from said at least one transponder upon initiation of a fueling transaction.

5. The fuel flow meter assembly of claim 1, wherein said at least one interrogator electronics is configured to interrogate said at least one transponder during each rotation of said fuel flow meter shaft.

6. The fuel flow meter assembly of claim 5, wherein said at least one interrogator electronics transmits information representative of responsive signals from said transponder to a fuel dispenser control system.

7. The fuel flow meter assembly of claim 6, wherein said fuel dispenser control system is configured to compare said information representative of an amount of fuel delivered through said fuel flow meter from said fiber optic displacement sensor with the number of times said at least one interrogator electronics has interrogated said at least one transponder during a fueling transaction.

8. The fuel flow meter assembly of claim 1, wherein said fiber optic displacement sensor is in optical communication with a light source and a detector, wherein said light source and said detector are in electronic communication with a fuel dispenser control system.

9. The fuel flow meter assembly of claim 8, wherein said fiber optic displacement sensor comprises a disc defining a plurality of radial slots.

10. The fuel flow meter assembly of claim 9, wherein rotation of said fuel flow meter shaft allows light from said light source to pass through said plurality of radial slots and be detected at said detector.

11. The fuel flow meter assembly of claim 10, wherein said fuel dispenser control system determines an amount of fuel delivered through said fuel flow meter based on said light detected at said detector.

12. A fuel flow meter assembly comprising:

a fuel flow meter comprising a shaft; and

a first displacement sensor for generating information representative of a first amount of fuel delivered through said fuel flow meter;

said first displacement sensor comprising:

at least one transponder operatively coupled for rotation with said fuel flow meter shaft; and

at least one interrogator electronics configured for remote electronic communication with said at least one transponder;

a second displacement sensor for generating information representative of a second amount of fuel delivered through said fuel flow meter;

said second displacement sensor comprising a disc operatively connected for rotation with said fuel flow meter shaft, said disc defining a plurality of radial slots therethrough; and

said second displacement sensor in optical communication with a light source and a detector;

wherein rotation of said fuel flow meter shaft allows light from said light source to pass through said plurality of radial slots and be detected at said detector.

13. The fuel flow meter assembly of claim 12, wherein said light source and said detector are in electronic communication with a fuel dispenser control system.

14. The fuel flow meter assembly of claim 13, wherein said fuel dispenser control system determines said first amount of fuel delivered through said fuel flow meter based on information representative of responsive signals from said transponder to said interrogator electronics and determines said second amount of fuel delivered through said fuel flow meter based on said light detected at said detector.

15. The fuel flow meter assembly of claim 14, wherein said fuel dispenser control system compares said first amount with said second amount.

16. The fuel flow meter assembly of claim 14, wherein said first and second amounts are representative of the flow rate of fuel delivered through said fuel flow meter.

17. The fuel flow meter assembly of claim 12, wherein said at least one transponder comprises a plurality of transponders.

18. The fuel flow meter assembly of claim 12, wherein said at least one interrogator electronics is configured to interrogate said at least one transponder during each rotation of said fuel flow meter shaft.

19. The fuel flow meter assembly of claim 16, wherein said at least one interrogator electronics transmits information representative of responsive signals from said transponder to a fuel dispenser control system.

20. The fuel flow meter assembly of claim 17, wherein said fuel dispenser control system is configured to determine at least one of the rate of rotation, direction of rotation, and the position of said fuel flow meter shaft.

21. A method of detecting fraud in association with a flow meter assembly, said flow meter assembly comprising a flow meter comprising a shaft, said method comprising the steps of:

providing a first displacement sensor for generating information representative of a first amount of fluid delivered through said flow meter;

said first displacement sensor comprising at least one transponder and at least one interrogator electronics configured for remote electronic communication with said at least one transponder;

providing a second displacement sensor for generating information representative of a second amount of fluid delivered through said flow meter;

said second displacement sensor comprising a disc operatively connected for rotation with said flow meter shaft, said disc defining a plurality of radial slots therethrough;

said second displacement sensor in optical communication with a light source and a detector;

determining said first amount based on information representative of responsive signals from said transponder to said interrogator electronics;

determining said second amount based on light detected at said detector; and

comparing said first amount with said second amount.

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What is claimed is:

1. A fuel flow meter assembly comprising:

a fuel flow meter comprising a shaft; and

a first displacement sensor comprising at least one transponder coupled for rotation with said fuel flow meter shaft and at least one interrogator electronics, said first displacement sensor operative to generate information representative of a first amount of fuel delivered through said fuel flow meter based on remote electronic communication between said at least one interrogator electronics and said at least one transponder;

a second displacement sensor comprising a disc operatively connected for rotation with said fuel flow meter shaft, said disc defining a plurality of radial slots therethrough, said second displacement sensor in optical communication with a light source and a detector;
wherein rotation of said fuel flow meter shaft allows light from said light source to pass through said plurality of radial slots and be detected at said detector; and
wherein said second displacement sensor is operative to generate information representative of a second amount of fuel delivered through said fuel flow meter.

2. The fuel flow meter assembly of claim 1, wherein said light source and said detector are in electronic communication with a fuel dispenser control system.

3. The fuel flow meter assembly of claim 2, wherein said fuel dispenser control system determines said first amount of fuel delivered through said fuel flow meter based on information representative of responsive signals from said transponder to said interrogator electronics and determines said second amount of fuel delivered through said fuel flow meter based on said light detected at said detector.

4. The fuel flow meter assembly of claim 3, wherein said fuel dispenser control system compares said first amount with said second amount.

5. The fuel flow meter assembly of claim 3, wherein said first and second amounts are

representative of the flow rate of fuel delivered through said fuel flow meter.

6. The fuel flow meter assembly of claim 5, wherein said at least one interrogator electronics transmits information representative of responsive signals from said transponder to a fuel dispenser control system.

7. The fuel flow meter assembly of claim 1, wherein said at least one transponder comprises a plurality of transponders.

8. The fuel flow meter assembly of claim 7, wherein said fuel dispenser control system is configured to determine at least one of the rate of rotation, direction of rotation, and the position of said fuel flow meter shaft.

9. The fuel flow meter assembly of claim 1, wherein said at least one interrogator electronics is configured to interrogate said at least one transponder during each rotation of said fuel flow meter shaft.

10. A method of detecting fraud in association with a flow meter assembly, said flow meter assembly comprising a flow meter comprising a shaft, said method comprising the steps of:

providing a first displacement sensor comprising at least one transponder and at least one interrogator electronics;

generating information representative of a first amount of fluid delivered through said flow meter based on remote electronic communication between said at least one interrogator electronics and said at least one transponder;

providing a second displacement sensor comprising a disc operatively connected for rotation with said flow meter shaft, said disc defining a plurality of radial slots therethrough, said second displacement sensor in optical communication with a light source and a detector;

generating information representative of a second amount of fluid delivered through said flow

meter based on light detected at said detector; and

comparing said first amount with said second amount.