

# USER INSTRUCTION MANUAL

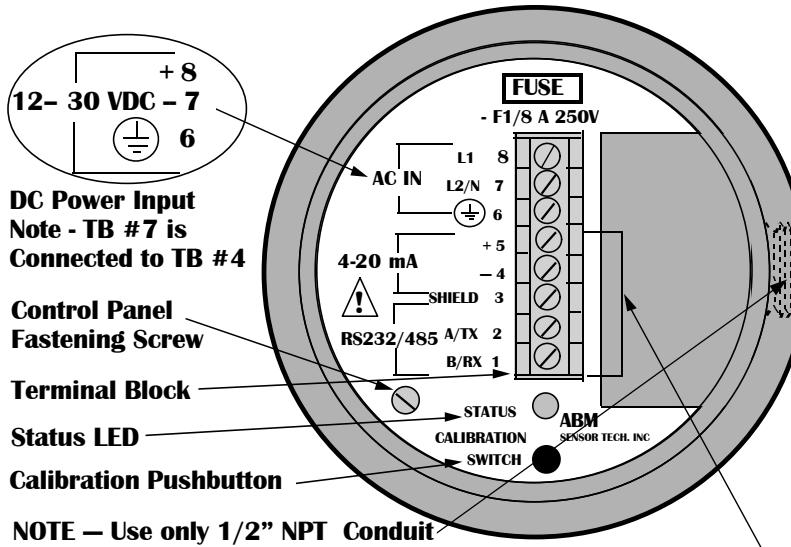
## For ABM300/400 (DC/AC) SENSORS



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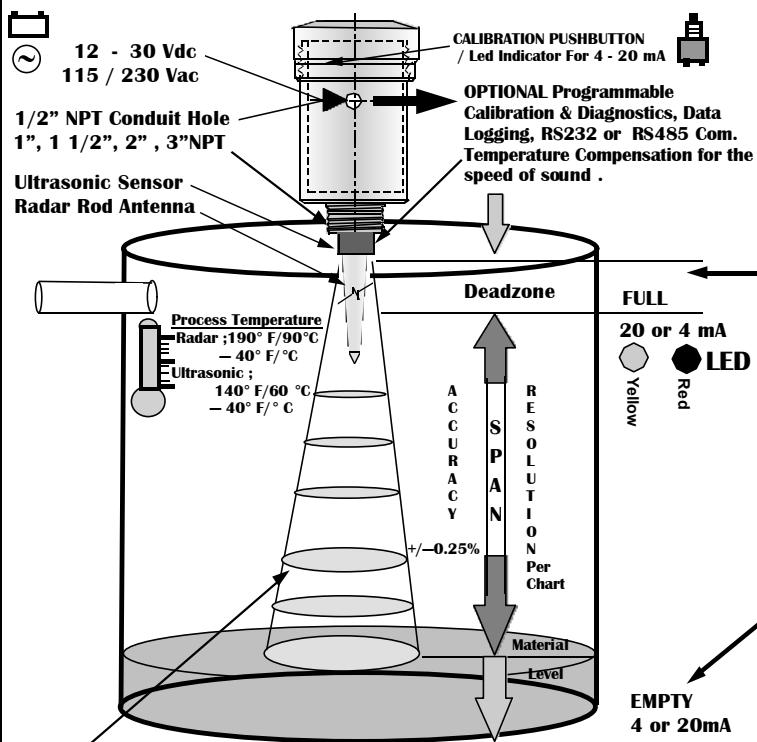
### Inter-Connection Diagram

#### Top View of Sensor (Access Cover Removed)



### Typical Installation

- 1) DIRECT MOUNTING ULTRASONIC SENSOR -SIMPLY THREAD SENSOR DIRECTLY INTO METAL OR PLASTIC NOZZLE.
- 2) RADAR UNIT MUST BE INSTALLED INTO METAL FITTING WITH THE ANTENNA POINTING DOWNWARD.



**Operation** - An ultrasonic/electromagnetic pulse is transmitted from the ABM sensor. The pulse travels to the surface being monitored and is reflected off this surface back to the sensor. The time of flight is divided by 2 and converted to an output signal directly proportional to the material level.

### FCC INFORMATION TO RADAR USERS

**NOTE:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

**WARNING**-Changes or Modifications not expressly approved by ABM Sensor Technology Inc. could void the user's authority to operate the equipment.

### Wiring Information

- Ground shield at one end only.
- All terminal block wiring must be rated for 250V.
- Power input wiring must be protected by a 15A double pole circuit breaker.
- Terminal is for use only with equipment which has no live parts which are accessible.
- Terminal is for use with equipment which maintains basic insulation from hazardous voltage under normal and single fault conditions .
- Connection used at the remote end of external circuit .

### Recommended Wiring

#### For AC Sensor -

Power 3 Wire unshielded 22 AWG , 300 V  
 Current Output 1 Pair shielded 24 AWG , 300 V  
 Communication 1 Pair shielded 24 AWG , 300 V

#### For DC Sensor -

Power & Current output 3 Wire shielded 24 AWG , 300 V  
 Communication 1 Pair shielded 24 AWG , 300 V

### Calibration – 4-20 or 20 –4 mA Output

#### FULL – Calibrate 20 mA or 4mA (Set Near Target)

1. Calibration mode LED color
2. Push button Hold for 3 seconds (20mA) until LED turns or Hold for 7 seconds ( 4mA) until LED turns
3. Release button, Observe , LED flashes to acknowledge

#### EMPTY – Calibrate 4 mA or 20 mA (Set Far Target)

1. Calibration mode LED color
2. Push button Hold for 7 seconds ( 4mA) until LED turns or Hold for 3 seconds (20mA) until LED turns
3. Release button, Observe , LED flashes to acknowledge

Normal operating condition