INSTRUCTION MANUAL 10A267 – ABM 300/400 (AC/DC) Sensors Communication For a Single Or Network Level Sensors With RS485/232

Fig. # 1 RS232 Connection

ABM Sensor Terminal

L1 8
L2/N 7
GND. 6
+ 5
– 4
Shield 3
A/TX 2
B/RX 1

Red
WHT. or BLK.
DB9

Fig. # 2 RS485 Connection

ABM Sensor Terminal

L1 8
L2 / N 7
GND. 6
+ 5
– 4
Shield 3
A/TX 2
B/RX 1

Red
WHT. or BLK.
DB9
Connect Shield to Ground at one End
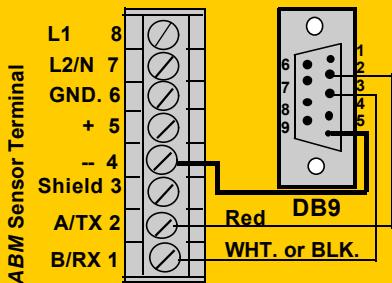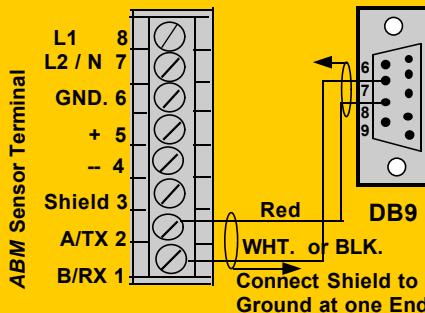
Connect to Serial Port of PC ,use Extension Cable length as required ,Refer to Fig.# 1 or # 2 For Wiring

To Power Source

FUSE

24VDC + 8
7
6
+ 5
4-20 mA 4

STATUS
Calibration Switch ABM

Sensor Calibration Switch & Status Led

1/2" PVC Conduit Only for PVC Housings, Metal Conduit not Recommended Except for Metal Housing.

ULTRASONIC

RADAR
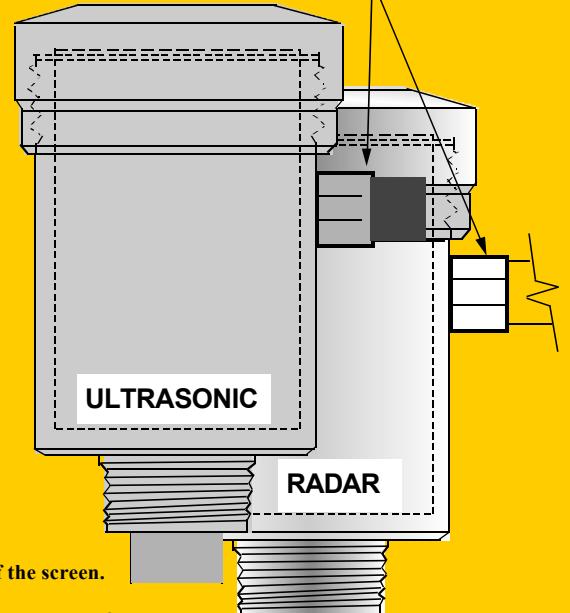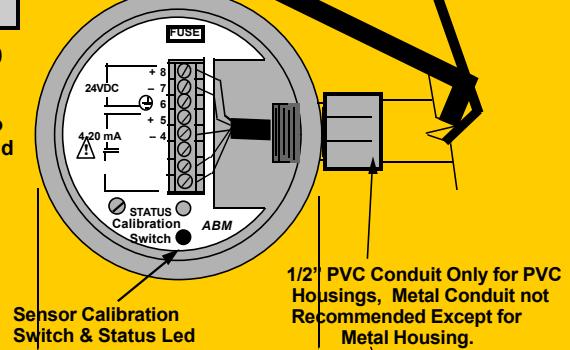
1) Load "Gateway Single Probe Software" into your PC .
   (Select SETUP.EXE from installation CD and follow instruction on the screen.)
2) Click on START and under PROGRAMS select "Gateway PC".
3) Select "Start Data Link". You will see two bar graphs, displaying the last 8 echoes & the current output .Traffic light icon at the screen bottom indicates communication status to probe.
4) Pick "Tools".
   Screen displays the following parameters,
      :Reset Max. Temperature
      :Sensor I.D. with single probe is 2 and with network is 4,5…..
      :Empty Tank Distance calibration
      :Full Tank Distance calibration -
        programmable distance calibration with accuracy of 0.1"
      :Select Transducer Freq. 25   KHz   90' probe
                                 45   KHz   60' probe
                                 52.6 KHz   50' probe
                                 64.1 KHz   35' probe
                                 69.4 KHz   30' probe
                                 80.6 KHz   16' and 20' probes
                                148.8 KHz   9' probe
      :Temperature Scale
5) Show Calibration Data ,Screen displays the following parameters,
      :Sensor I.D. with single probe is 2
      :Current Frequency -shows the operating frequency
      :Empty Tank Distance
      :Full Tank Distance
      :Probe Software Rev.
      :D. Link Protocol
      :Max Temperature - shows the max. temperature of environment
6) Select Protocol   :RS485/232
                     :MODBUS RTU

7) Fix point Calibration (the same as using the probe calibration Switch) is in the top left corner of the screen.

8) By selecting "Diagnostic" the screen displays all information on " errors", happy face- no errors , unhappy face - errors .

9) Echo chart displays information on stability of the echoes.

10) Echo Profile displays profiles of your ultrasonic probe . NOTE- when using this feature the probe is not in the measurement mode . To return to "measurement mode" exit the echo profile (select x). Wait until you get the Data Link OK (green light on the Probe Status LED). On the "echo profile" you will see a marker where the software picked up an echo. To change target for different measurement, exit profile screen, wait for updated data, and again go to echo profile. The marker will pick up the new target .

11) Select Data Logging (Excel format) on FILE menu to collect history data for current and temperature in MS Excel format. Path for data collection: C:\ABM\GATEWAYPC\DATA\yyyy mm dd\sensorID\Data is collected for each sensor ID. The current is collected in 1 hour data files and temperature is collected in 24 hours data files. Use chart wizard in MS Excel to create the graph and view current and temperature data. The current data is collected every 0.5 second and temperature is collected every 1 minute. Select Data Logging (for Sensor Viewer) on FILE menu to collect history data for current and temperature for Sensor Viewer display. Follow instruction on Sensor Viewer Help menu.

12) Select AutoScan to collect data for all sensors connected in the network. Scanning time for one sensor is 30 seconds. Echo Profile display is disabled in Auto Scan mode.