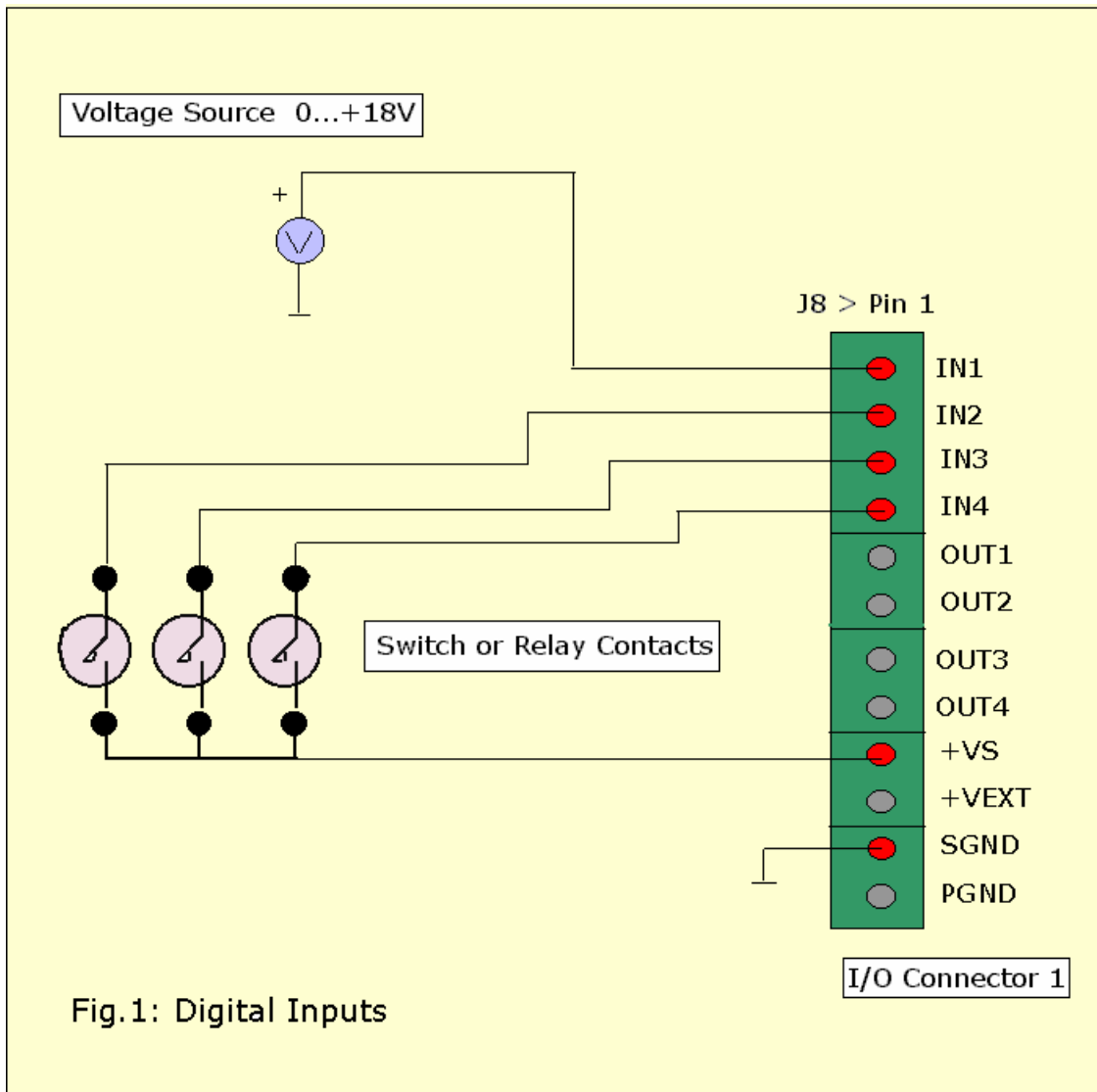




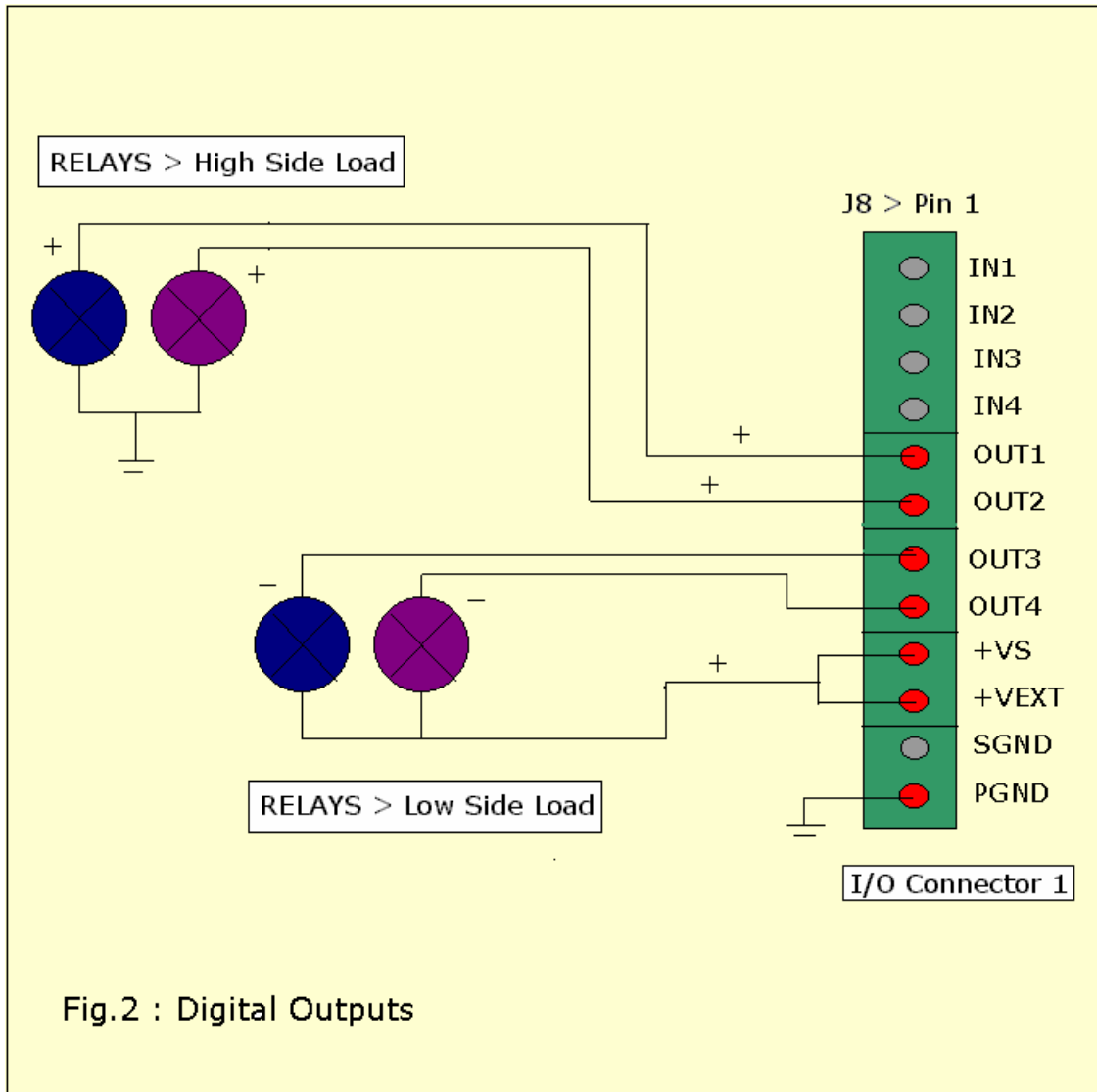
Digital Inputs



- Digital Inputs can be volt free contacts or voltage source
- Examples of volt free contacts are switch and relay contacts
- ON state is indicated when contacts are closed
- Inputs are optically isolated for robustness
- Maximum voltage source input is +18V dc
- Voltage threshold for ON state is +4.8V – 18V dc max
- Voltage threshold for OFF state is +3.0V dc max
- Input current is 5mA max @ +12V dc input (ON state)



Digital Outputs



- Digital Outputs can switch relays, lamps, pumps etc
- Low side mosfet switching can be used for relays, lamps
- High side switching can be used for automotive applications
- Maximum low side capability is 40V dc @ 100mA per output
- Maximum high side capability is 20V dc @ 100mA per output
- Total output current should be less than 400mA
- +VEXT can be supplied from +VS or from external source <18V
- If you are using external source, connect all grounds together



Analogue Inputs (Voltage)

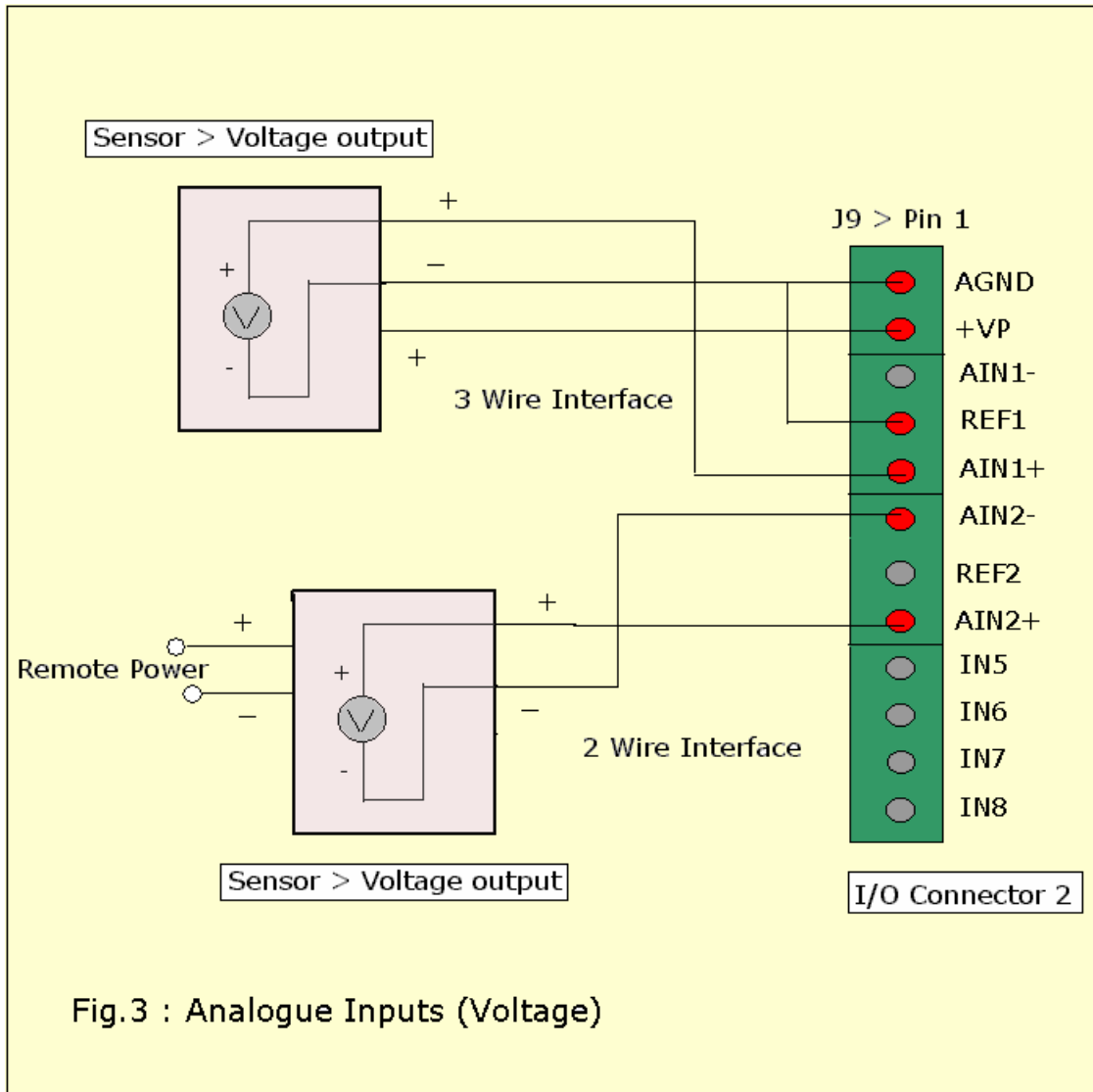


Fig.3 : Analogue Inputs (Voltage)

- Analogue Inputs can be voltage output sensors eg. light sensor
- Standard option is 0 -5V dc for both analogue inputs
- Special options include 0 -10V, 0 -100mV, 4 20mA
- Analogue inputs can be differential or ground referenced
- All inputs are buffered and filtered
- AIN1- and AIN2- are internally connected to REF1 and REF2
- REF1 and REF2 are used to reference AIN1- and AIN2-
- Usually REF1 and REF2 are connected to AGND



Analogue Inputs (Current)

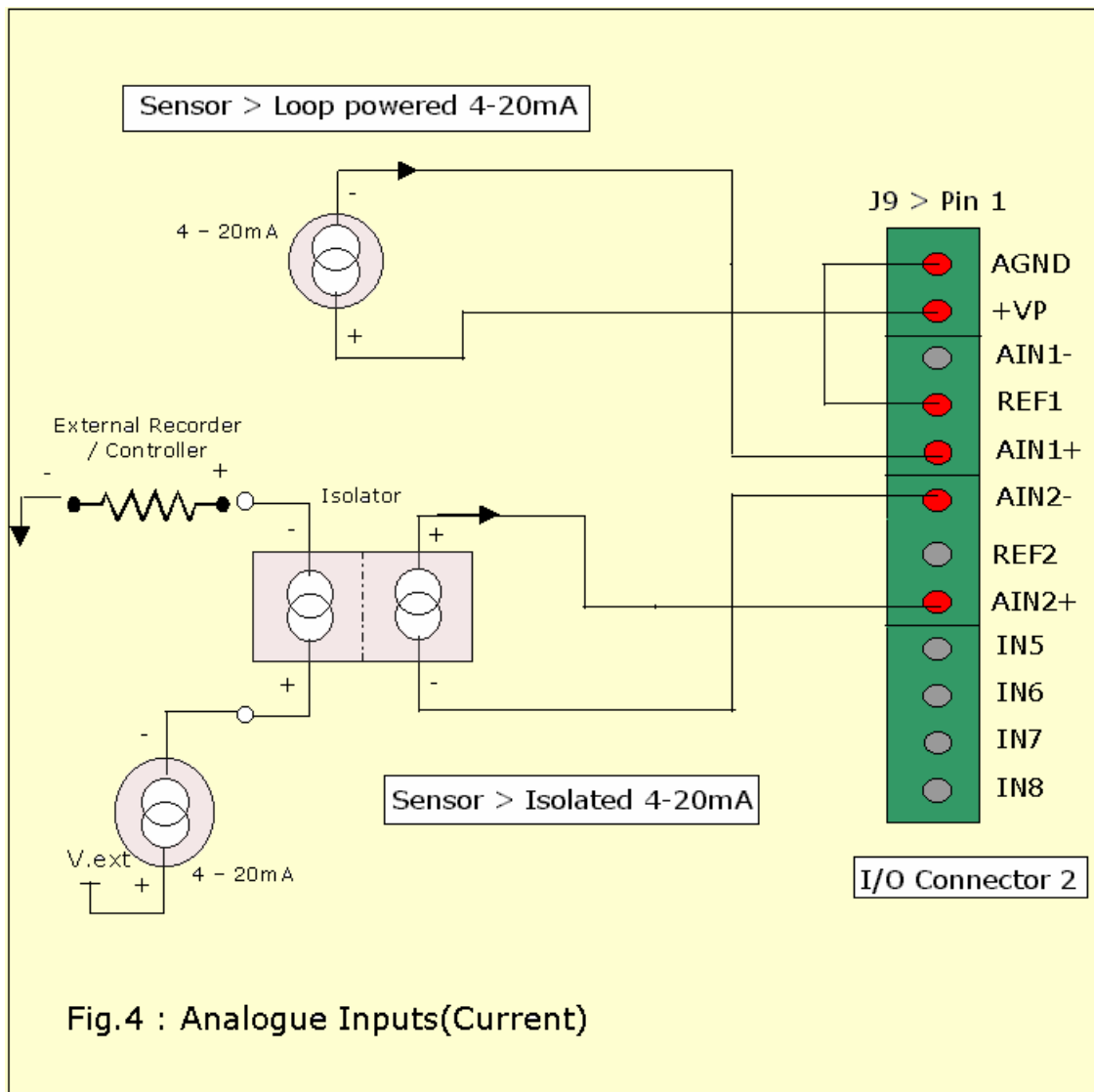
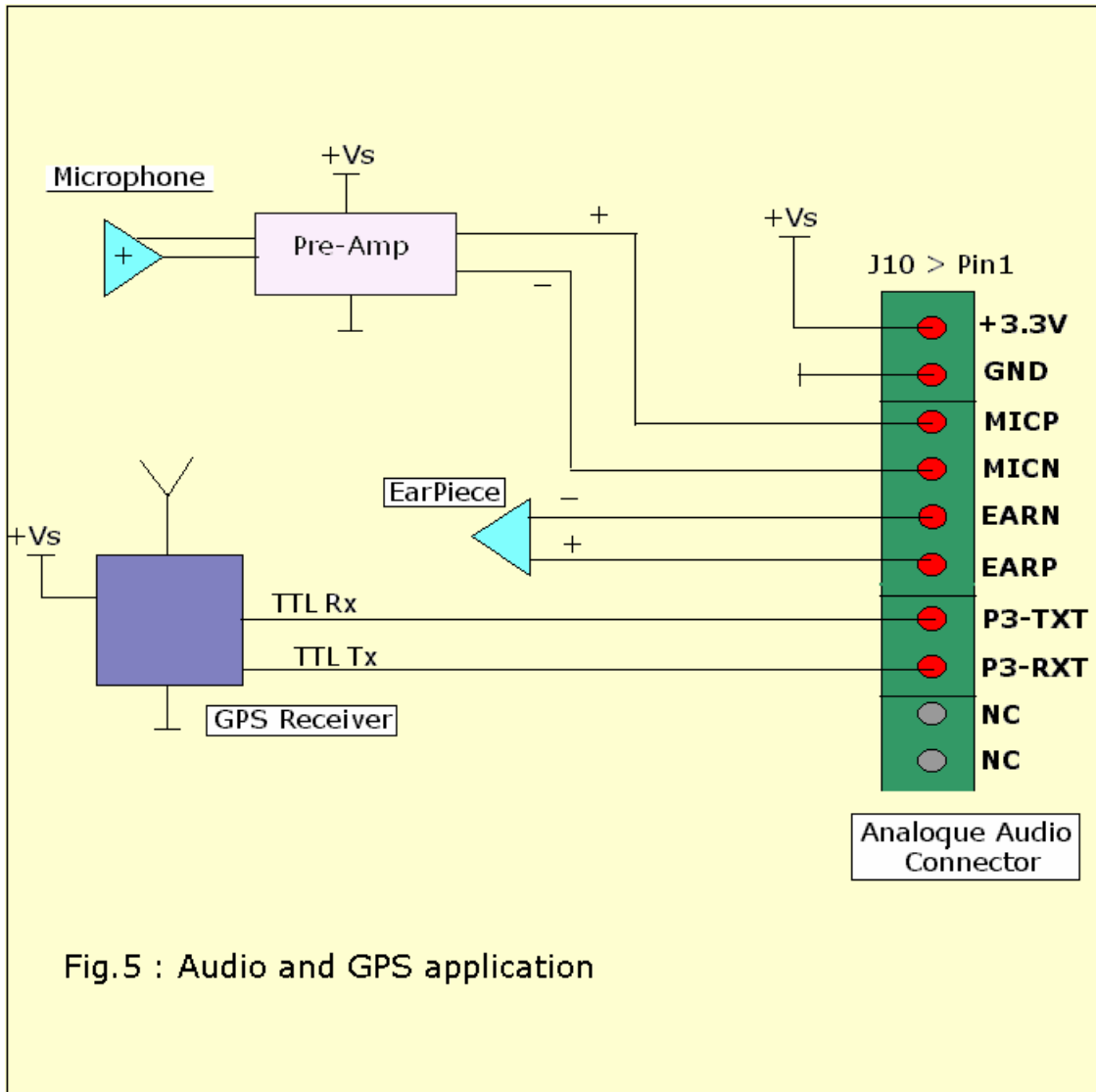


Fig.4 : Analogue Inputs(Current)

- Analogue Inputs can be current output sensors eg. flowmeter
- Sensor can be loop powered from +VP (18V dc output max.)
- Isolator is used for galvanic isolation of remote sensor
- Isolator can be powered from remote sensor side
- All inputs are buffered and filtered
- AIN1- and AIN2- are internally connected to REF1 and REF2
- REF1 and REF2 are used to reference AIN1- and AIN2-
- Usually REF1 and REF2 are connected to AGND



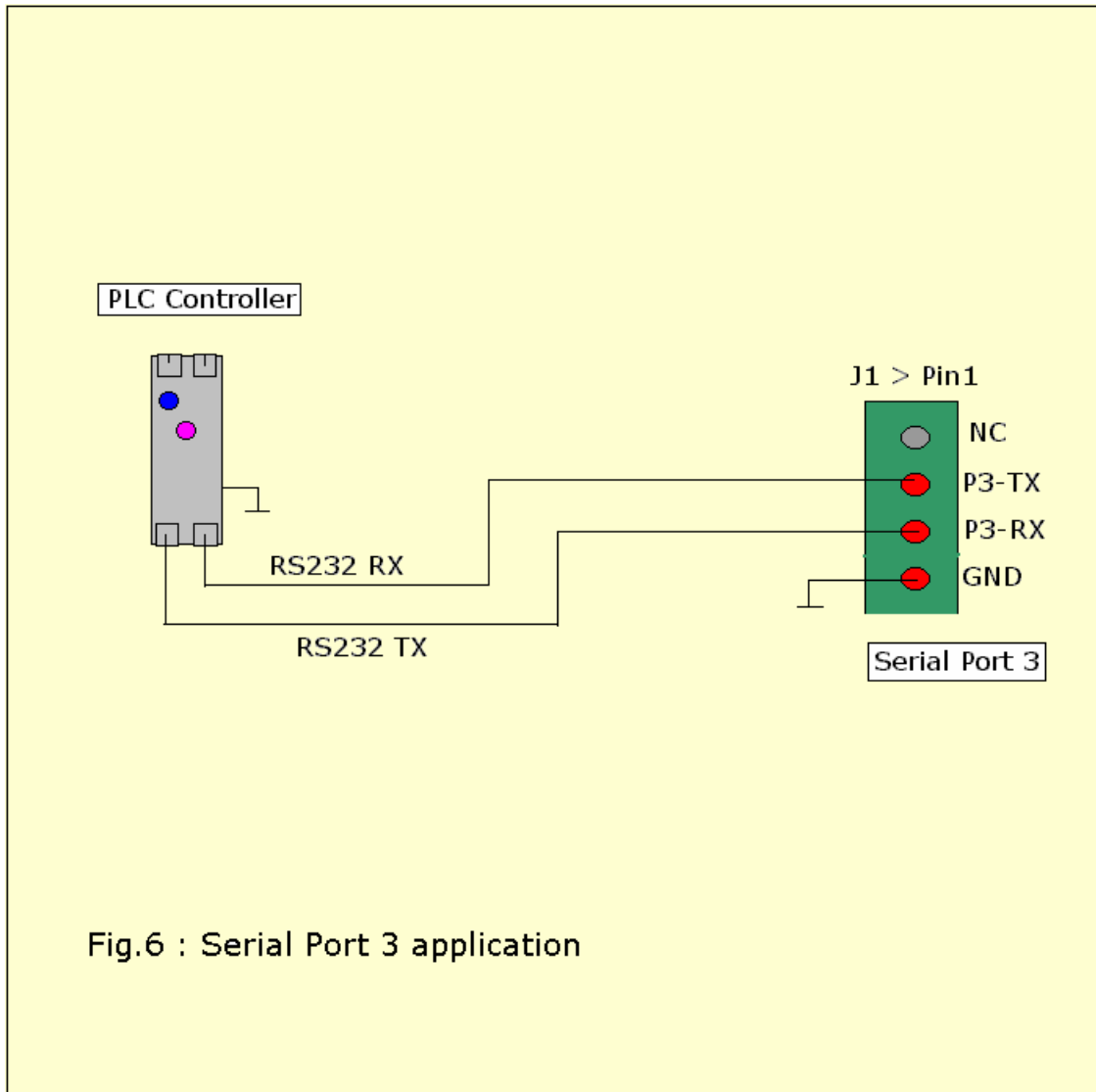
Audio and GPS application



- Audio differential input can be microphone with pre-amp
- Audio differential output can be direct earpiece connection
- GPS receiver supplies location information via TTL serial link
- TTL levels are 3.3V standard and 5V optional
- NB. To use port 3(TTL & RS232)-you need to disable IN8 by link
- TTL Serial link uses Java serial port 3
- Serial port 3 (TTL) can also be used for custom applications
- +VS is 3.3V standard and 5V optional @ 70mA max.



Serial Port 3 (RS232)



- Serial port 3 can interface with RS232 serial devices
- RS232 serial devices include PLC and data loggers
- Serial port 3 is a Java enabled serial port
- RS485 serial option available instead of RS232
- Remote serial data can be sent to Internet via GPRS
- NB. To use port 3(TTL & RS232)-you need to disable IN8 by link
- Serial ports 1&3 TTL signals available on Expansion connector
- Serial port 3 (RS232) connector is a 4 way RJ type socket