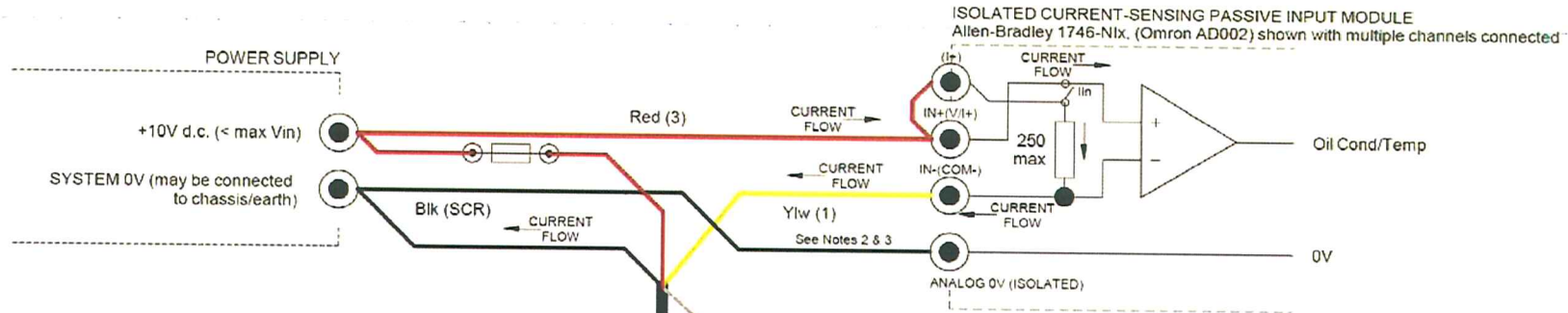


## OQS MONITORING CIRCUIT SUGGESTED SCHEMATIC AND ALTERNATIVES

### ISOLATED PASSIVE CURRENT-SENSING INPUT MODULE (PLC TYPE) PSU VOLTAGE 10V MAXIMUM



#### SUGGESTED MONITORING CIRCUIT FOR OQS PROBE

Oil Condition/Temperature is a 4-20mA current sink output and needs a current sense circuit similar to that shown to generate voltage outputs. ZeroCal/Switch is an input (between 5V and 30V) and serves two purposes: To switch from Oil Condition to Oil Temperature output, hold this line high. To perform a zero calibration on new oil, take this line high and then low for between one and two seconds each and repeat this twice to make three full cycles.

Note that during a calibration cycle the 4-20mA output will output the half-cycle number from 1 to 6 in mA for feedback purposes. The oil condition cannot be monitored during calibration.

#### IMPORTANT NOTES

- 1) Differential Input modules only must be used.
- 2) If PSU voltage exceeds common-mode range of input module (typ. +/-10V), SYSTEM 0V must not be connected to AN 0V to avoid damage to input module, and IN- to AN 0V link must be fitted. Other input channels which are not isolated from each other must not be connected.
- 3) If PSU voltage is within common-mode range, SYSTEM 0V should be connected to AN 0V and the link omitted. Additional channels may then be used.
- 4) If Temperature reading or system calibration is required, SWITCH line must be connected as shown and 4-20mA signal interpreted as Condition or Temperature according to state of SWITCH line. If this line is left unconnected, only Oil Condition will be returned.
- 5) SYSTEM 0V will be connected to machine chassis/earth through probe!



#### DIGITAL OUTPUT MODULE

Wht (2)  
See Note 4  
Zero Cal/Switch

#### SENSOR CONNECTIONS & WIRE COLOURS (NUMBERS)

Pin 1 - Yellow (1) - Output  
 Pin 2 - White (2) - Switch  
 Pin 3 - Red (3) - V+

Pin 4 - Black (SCR) - 0V  
 Pin 5 - Blue (4) - RXD  
 Pin 6 - Green (E) - TXD

