

STANDARD ANALOG CURRENT INPUT MODULES

Features

- > Single channel of optically-isolated current-to-digital conversion
- > AD3T and AD2T modules offer additional channel-to-channel isolation
- > "T" modules provide 4,000 Vrms channel-to-channel isolation which eliminates ground loop problems

DESCRIPTION

Each Opto 22 AD3, AD3T, and AD2T analog input module provides a single channel of optically-isolated current-to-digital conversion. The AD3T and AD2T modules offer additional channel-to-channel isolation. For the AD3 and AD3T modules, the nominal input range is 4 to 20 mA with an under/over range capability from less than 3 mA to greater than 35 mA. The AD2T module has a nominal input range of 0 to 20 mA with an under/over range capability from less than -1.25 mA to greater than 35 mA. The "T" modules also provide 4,000 Vrms channel-to-channel isolation which eliminates ground loop problems. These modules plug into a Classic Standard analog I/O rack and are secured by a captive screw.



AD3T

Part Numbers

| Part | Description |
|------|---------------------------|
| AD3 | 4 to 20 mA Input |
| AD3T | 4 to 20 mA Input Isolated |
| AD2T | 0 to 20 mA Input Isolated |



SPECIFICATIONS

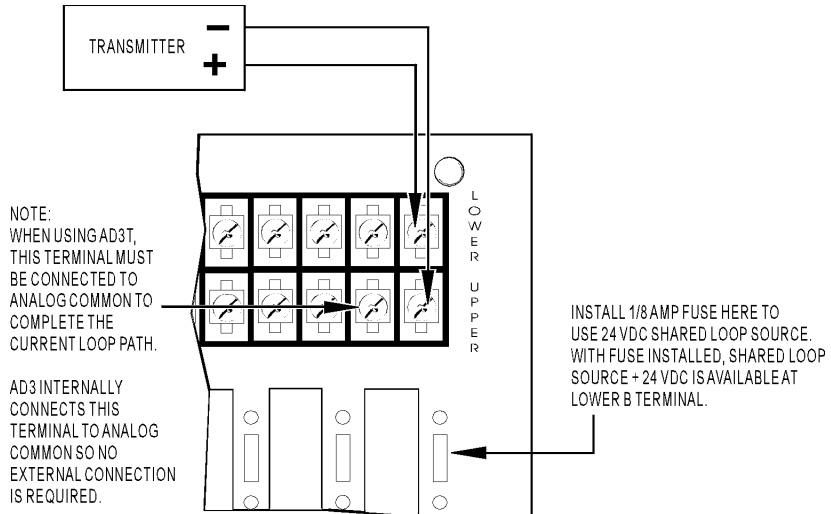
| | AD3 | AD3T | AD2T |
|---|---|--|--|
| Input Impedance | 249 Ohms | 249 Ohms | 50 Ohms |
| Nominal Input Range | 4 to 20 mA | 4 to 20 mA | 0 to 20 mA |
| Over/under Range | 3 to 35 mA | 3 to 35 mA | -1.25 to 35 mA |
| Accuracy | 0.016 mA (0.1% of span) | 0.016 mA (0.1% of span) | 0.020 mA (0.1% of span) |
| Resolution | 12 bits (0.0039 mA) | 12 bits (0.0039 mA) | 12 bits (0.0049 mA) |
| Response Time | Full-scale step change in 3 ms | | |
| Isolation Transient | | | |
| Input-to-Output | 4,000 Vrms | 4,000 Vrms | 4,000 Vrms |
| Input-to-Analog-Supply | n/a | 4,000 Vrms | 4,000 Vrms |
| Power Requirements | 13 mA at +15 (+/- 0.25) VDC 7.5 mA at -15 (+/- 0.25) VDC | 35 mA at +15 (+/- 0.25) VDC 35 mA at -15 (+/- 0.25) VDC | 35 mA at +15 (+/- 0.25) VDC 35 mA at -15 (+/- 0.25) VDC |
| Ambient Temperature: | | | |
| Operating | 0 to 70 °C | | |
| Storage | - 25 to 85 °C | | |
| *Accuracy figures assume use of Gain and Offset commands. | | | |

CONNECTIONS

AD3 Modules Using Shared Loop Service

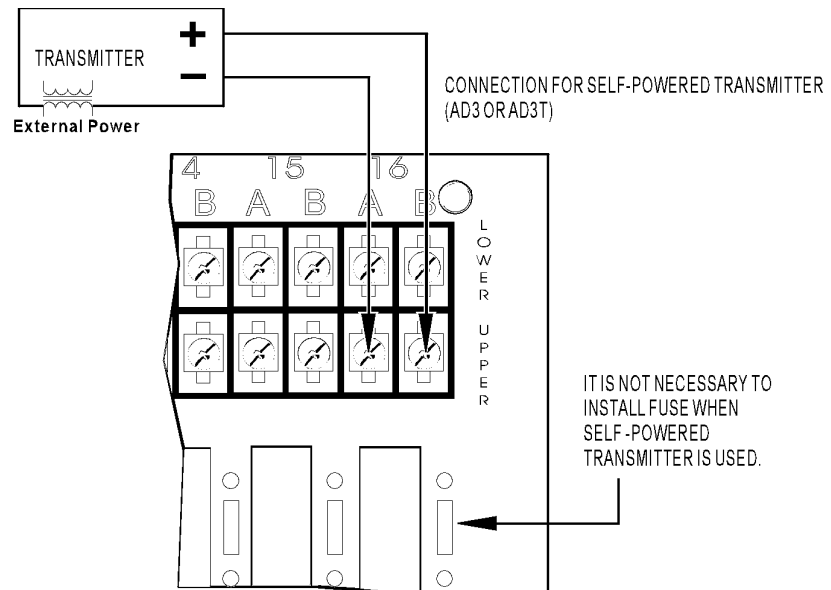
NOTE: For connecting the AD2T module, use AD3T module diagrams and instructions.

AD3T: All of the lower A terminals on the mounting rack are tied together. These provide a convenient tie point for shared loop source return. To use the AD3T module with a common loop power supply, connect any one lower A terminal to the shared loop source “-”, then jumper upper A to lower A for each AD3T.



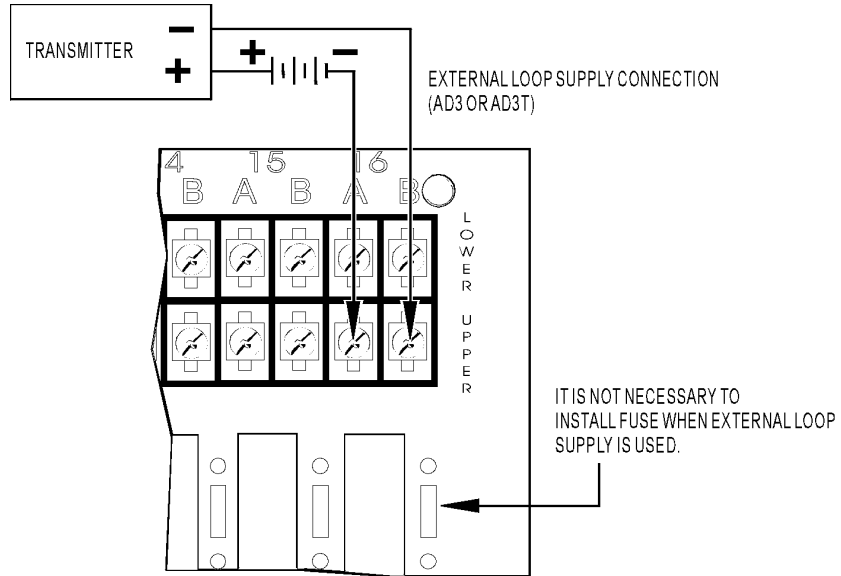
AD3 Modules Using Self-powered Transmitter

NOTE: For connecting the AD2T module, use AD3T module diagrams and instructions.

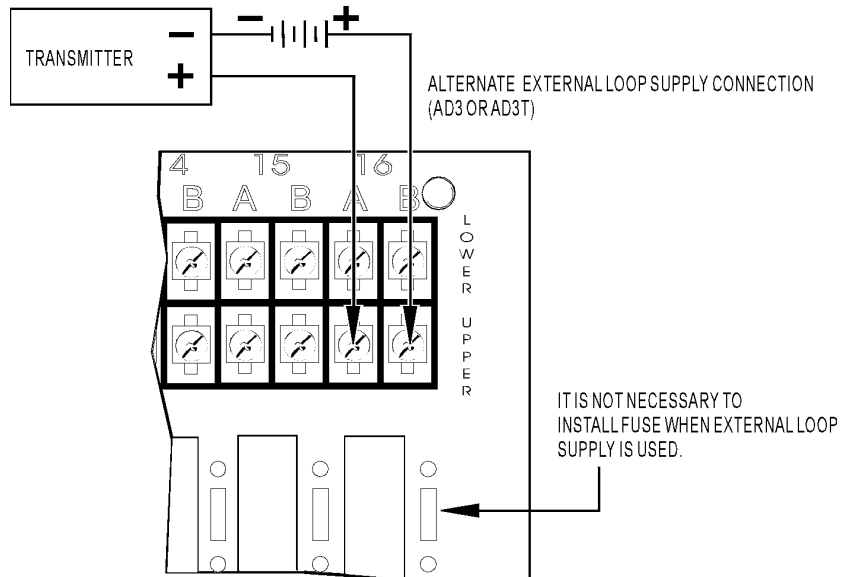


CONNECTIONS (CONT)

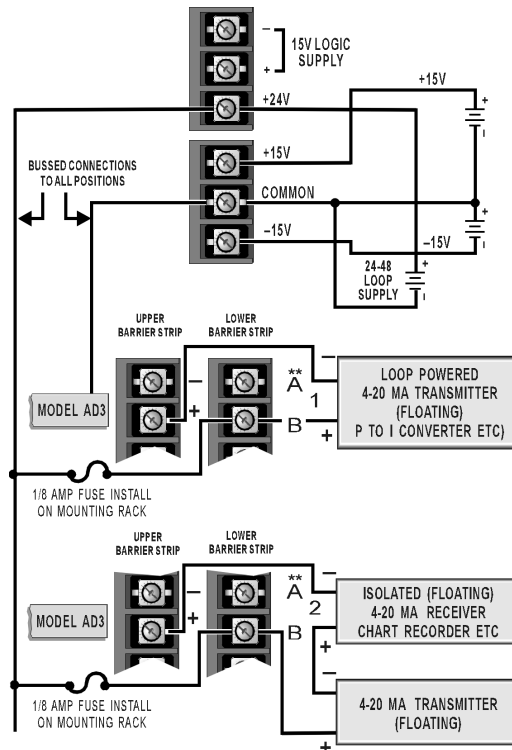
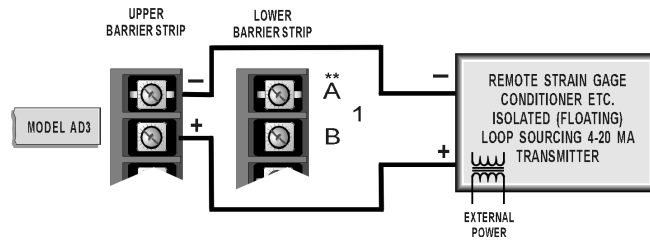
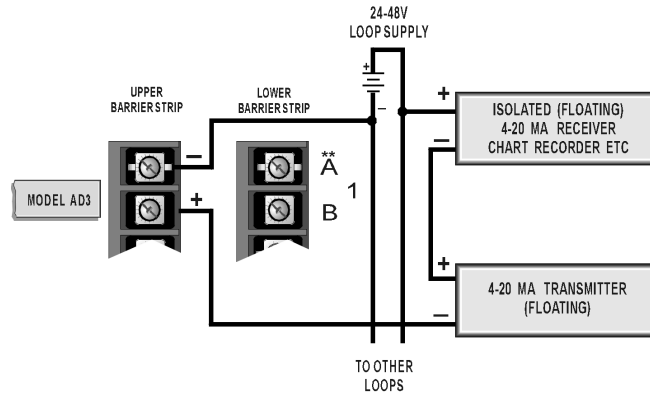
NOTE: For connecting the AD2T module, use AD3T module diagrams and instructions.



NOTE: For connecting the AD2T module, use AD3T module diagrams and instructions.

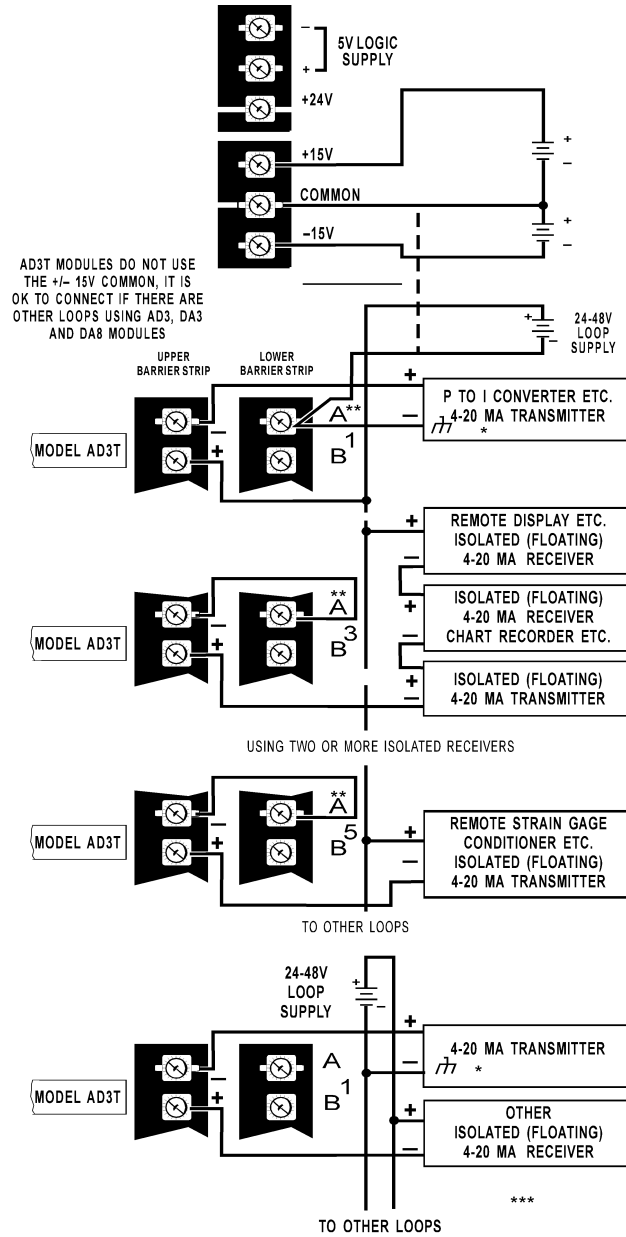


CONNECTIONS, LOOP SUPPLY



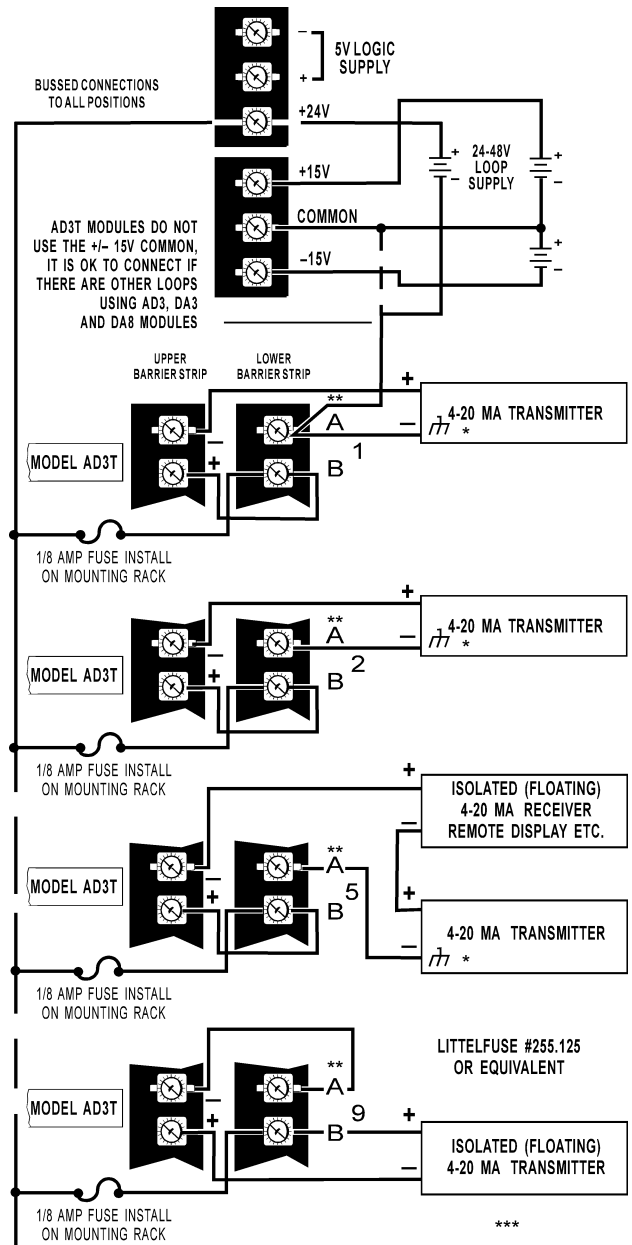
CONNECTIONS, LOOP SUPPLY (CONT.)

NOTE: For connecting the AD2T module, use AD3T module diagrams and instructions.



CONNECTIONS, LOOP SUPPLY (CONT.)

NOTE: For connecting the AD2T module, use AD3T module diagrams and instructions.



SCHEMATICS

ANALOG MOUNTING RACK SCHEMATIC (PB4AH, PB8AH, PB16AH)

