

# **Structured Electronic Design**

EE3C11

Amplifier Port Isolation

*Anton J.M. Montagne*

# Ground node

# Ground node

 Safety ground: zero-voltage reference node

# Ground node

- ⏏ Safety ground: zero-voltage reference node
- ⊥ Signal ground: signal return path

# Ground node

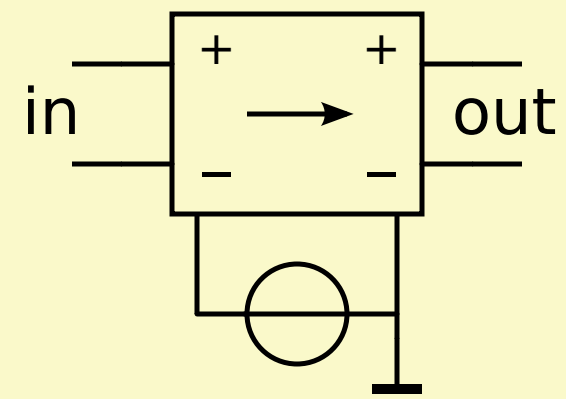
⏏ Safety ground: zero-voltage reference node

⊥ Signal ground: signal return path

May be shared by amplifier ports

# Port Isolation Configurations

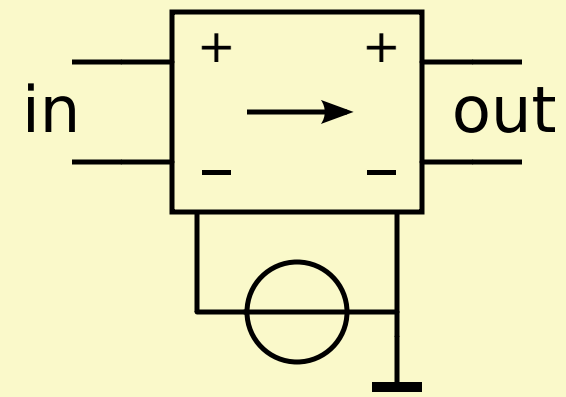
differential  
receiver-driver



power  
supply

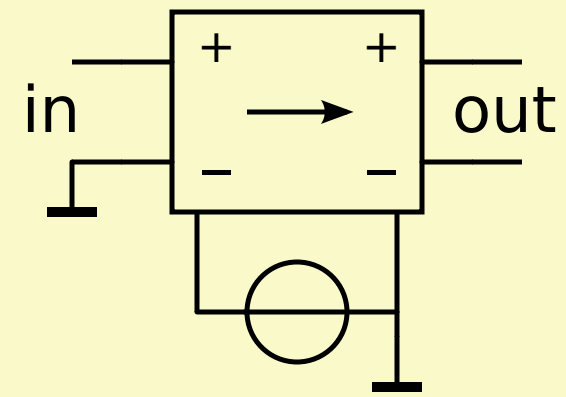
# Port Isolation Configurations

differential receiver-driver



power supply

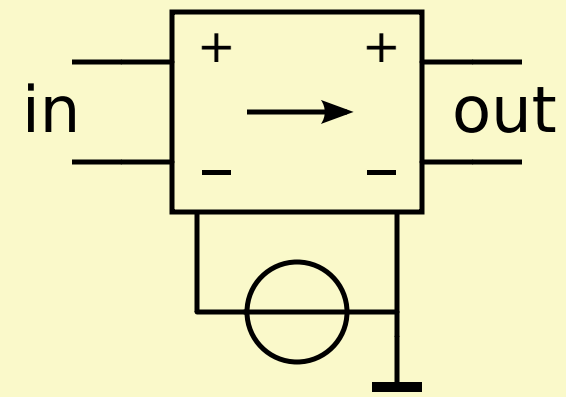
differential driver



power supply

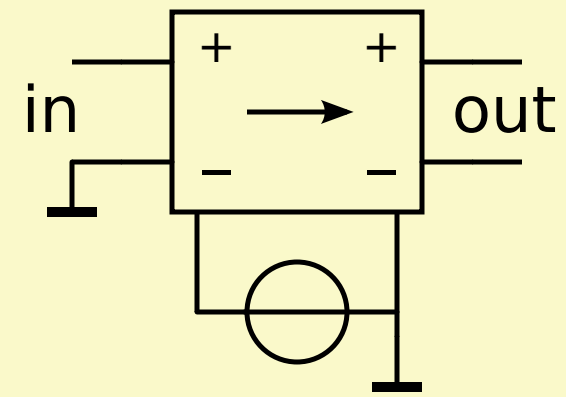
# Port Isolation Configurations

differential receiver-driver



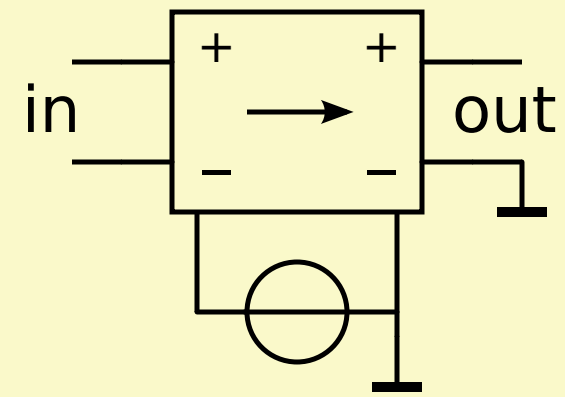
power supply

differential driver



power supply

differential receiver or instrumentation amplifier

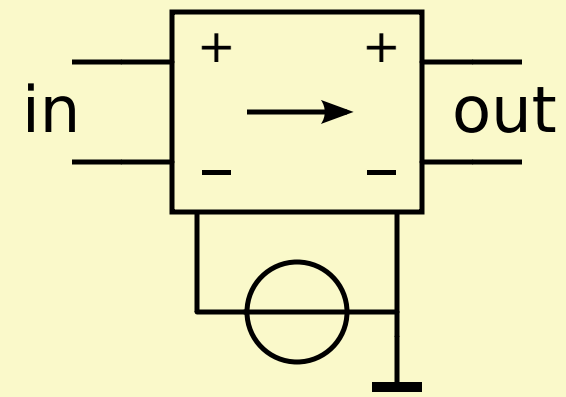


power supply



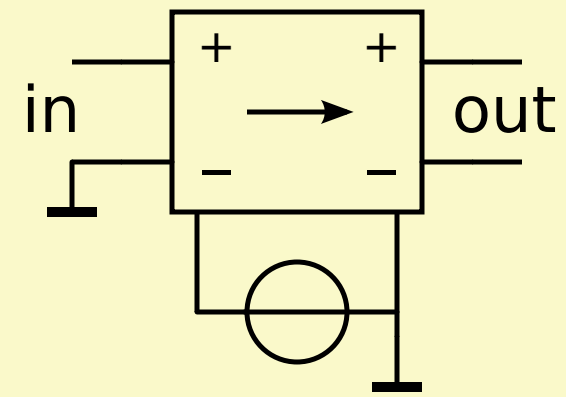
# Port Isolation Configurations

differential receiver-driver



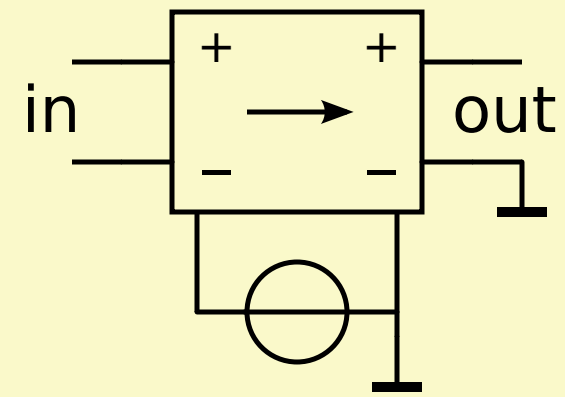
power supply

differential driver



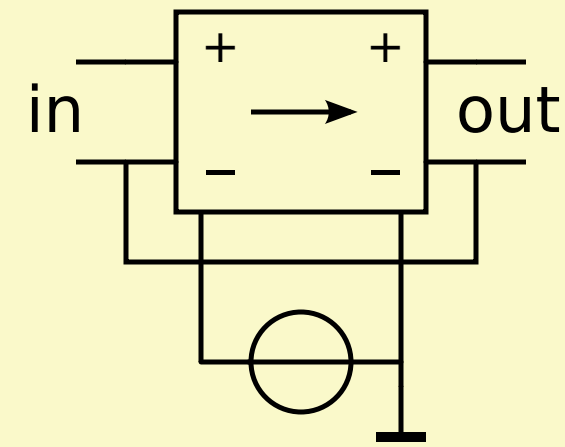
power supply

differential receiver or instrumentation amplifier



power supply

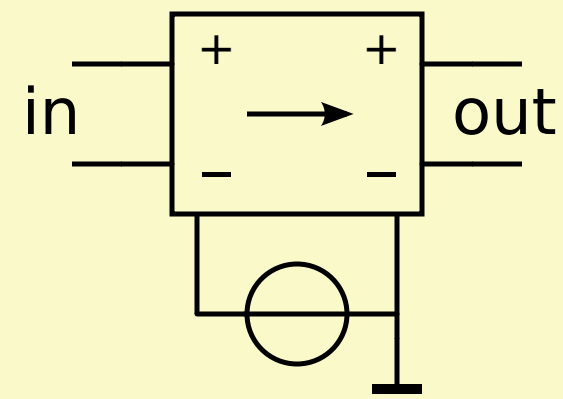
isolated power



power supply

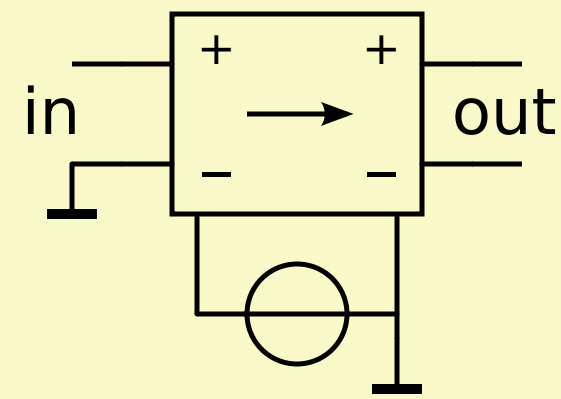
# Port Isolation Configurations

differential receiver-driver



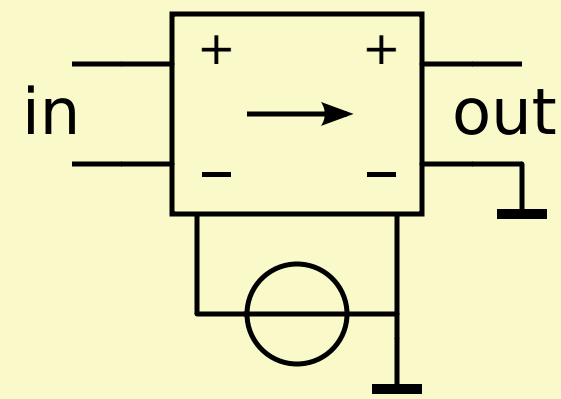
power supply

differential driver



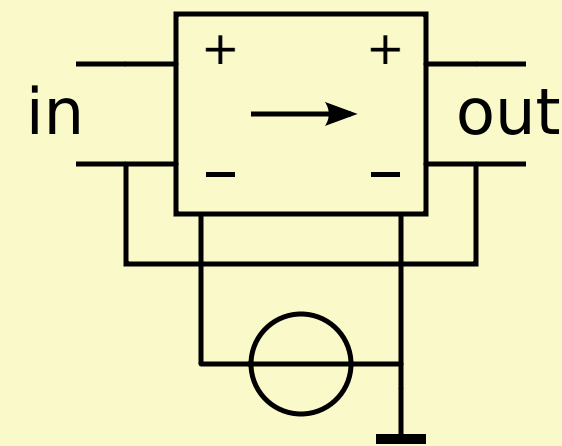
power supply

differential receiver or instrumentation amplifier



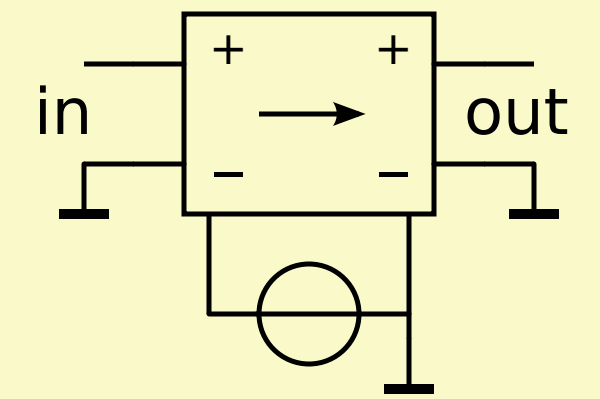
power supply

isolated power



power supply

common ground



power supply