

# Use Case: Servo Drive Motor Communication

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# Motion Control Introduction

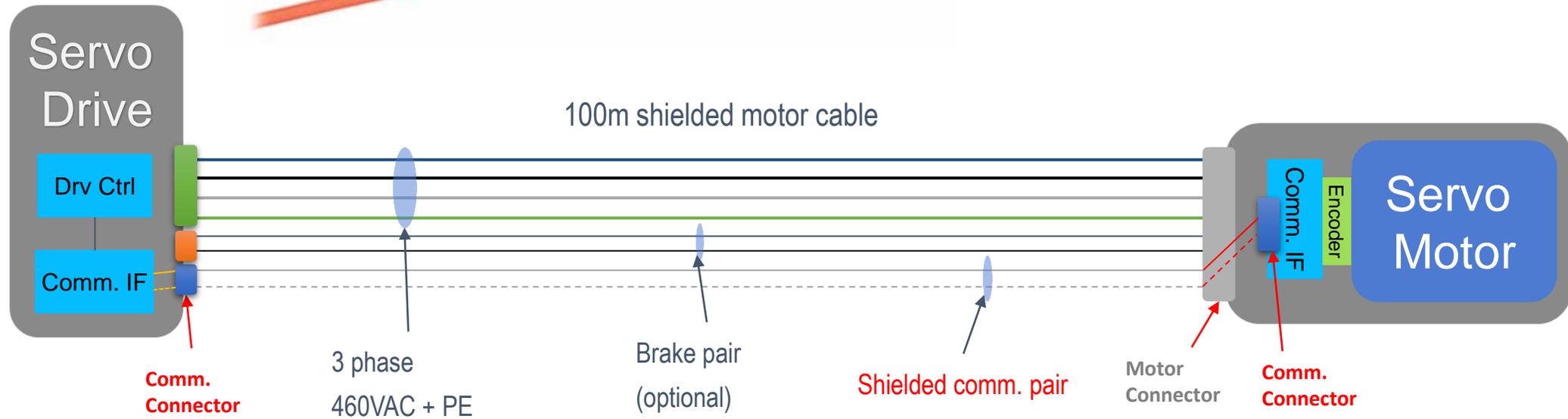


## Motion Control:

- Is the process of controlling a change in position of machinery or equipment
- Provides machine movement that is accurate (exact) and precise (repeatable)

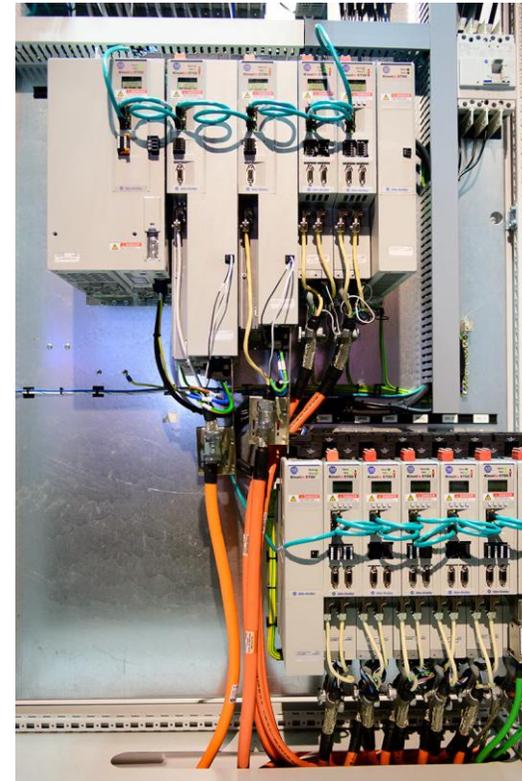
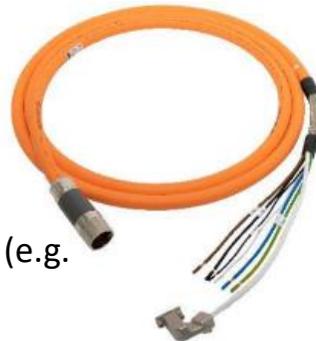
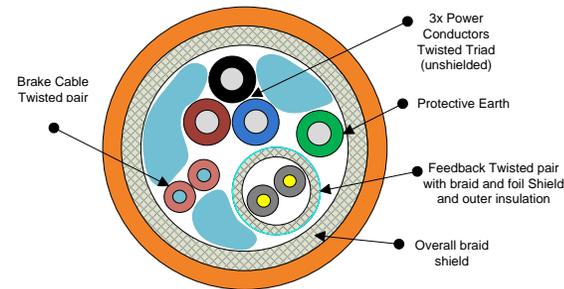


# Servo Drive Motor Communication



# Servo Drive Motor Communication Requirement

- Hybrid motor cable
  - Single shielded twisted pair for SPE communication
  - 460VAC power wires
  - Outer shield
- Minimum cycle time: 31.25us
- Minimum speed: 100Mb/s
- Maximum length: 100m
- Full duplex
- Power delivery over SPE pair
- 12VDC desirable, 24VDC acceptable
- Minimum 500mA
- Use the PHY chip that is used for other industries (e.g. automotive, building)
- Operate under very noisy servo drive-motor operation environment



# General Motion Control Market Size

- **By Volume**

- General motion control servo drive: 2021 forecast unit shipment: 11,128,000
- General motion control servo motor: 2021 forecast unit shipment: 14,054,000

- **By Revenue**

- General motion control servo drive: 2021 forecast \$4.1B
- General motion control servo motor: 2021 forecast \$4.5B

Src: IHS Markit, Motion Control Report - 2019

# Thank You