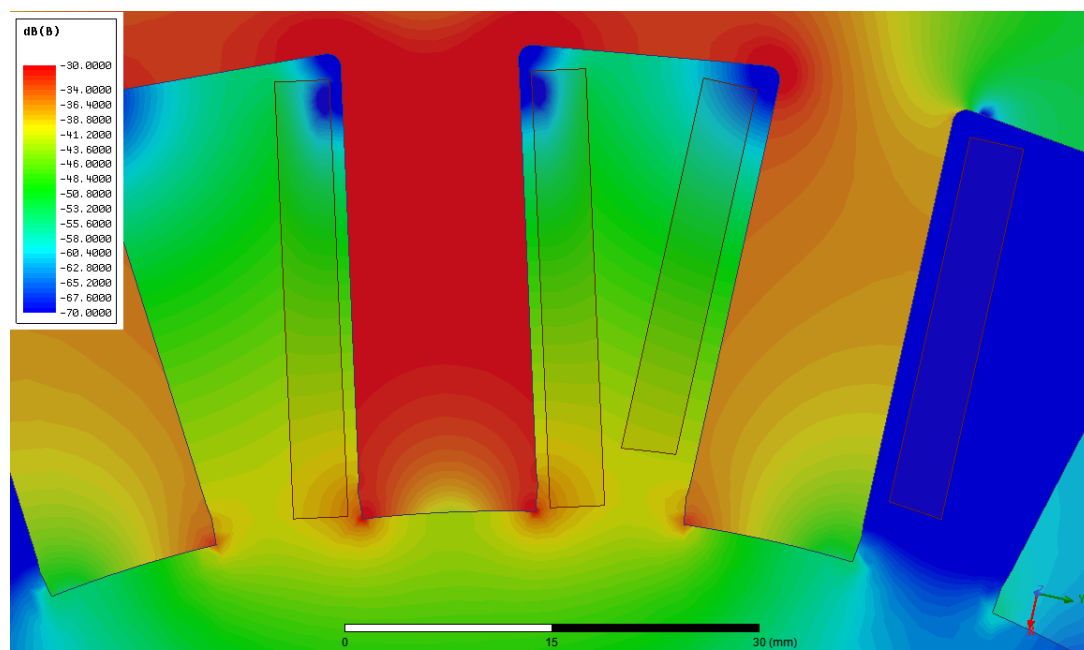
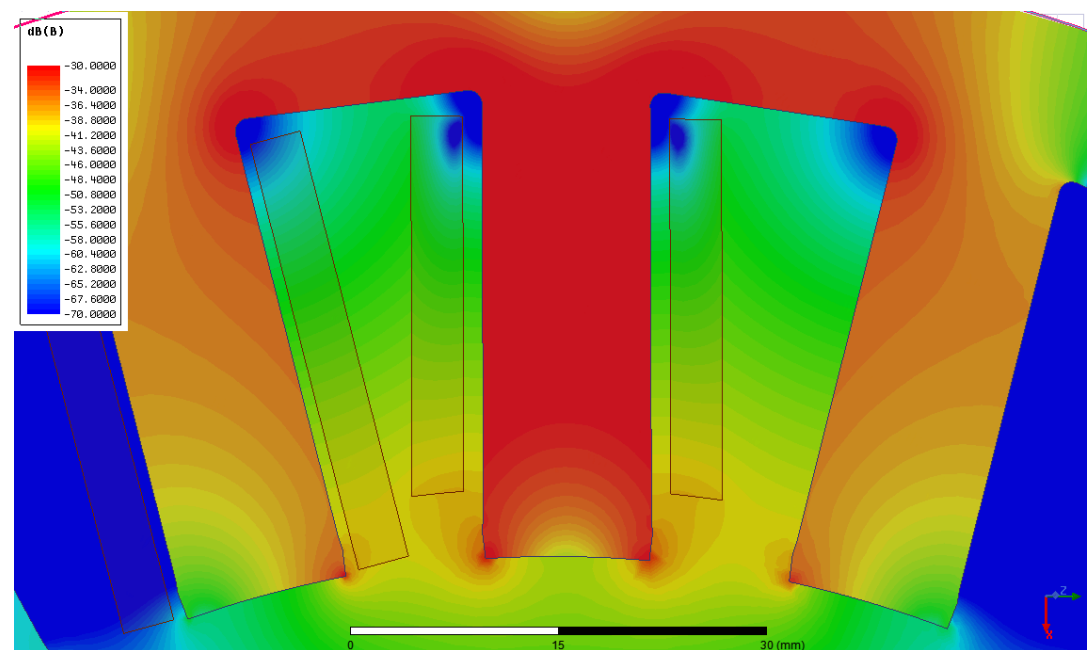


## Longer Window

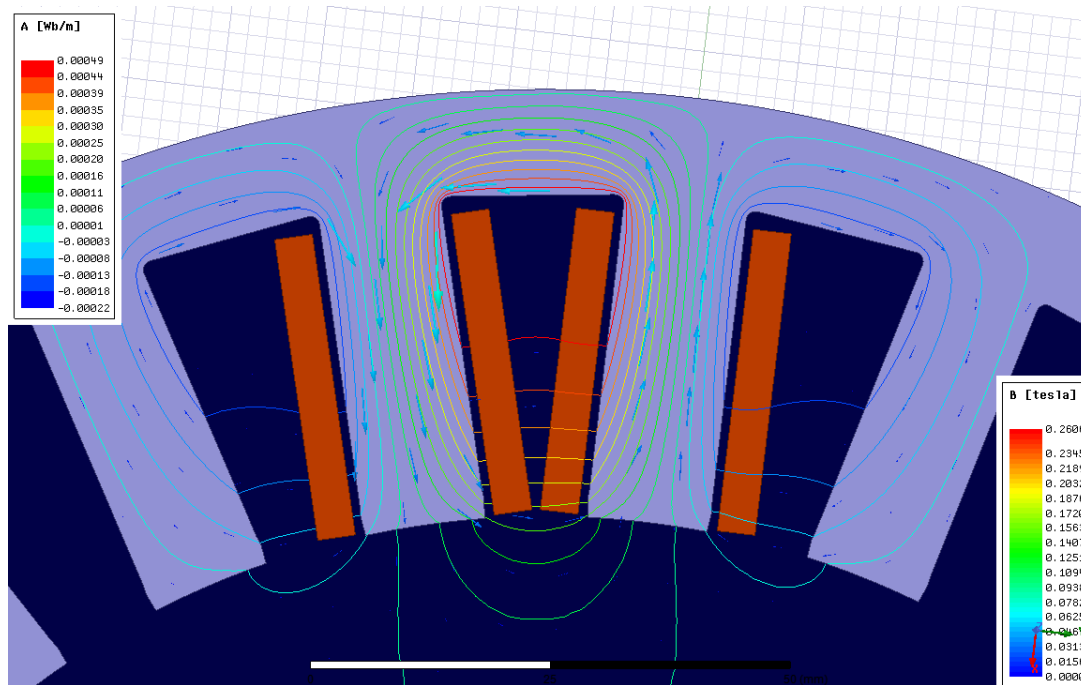


## Shorter Window

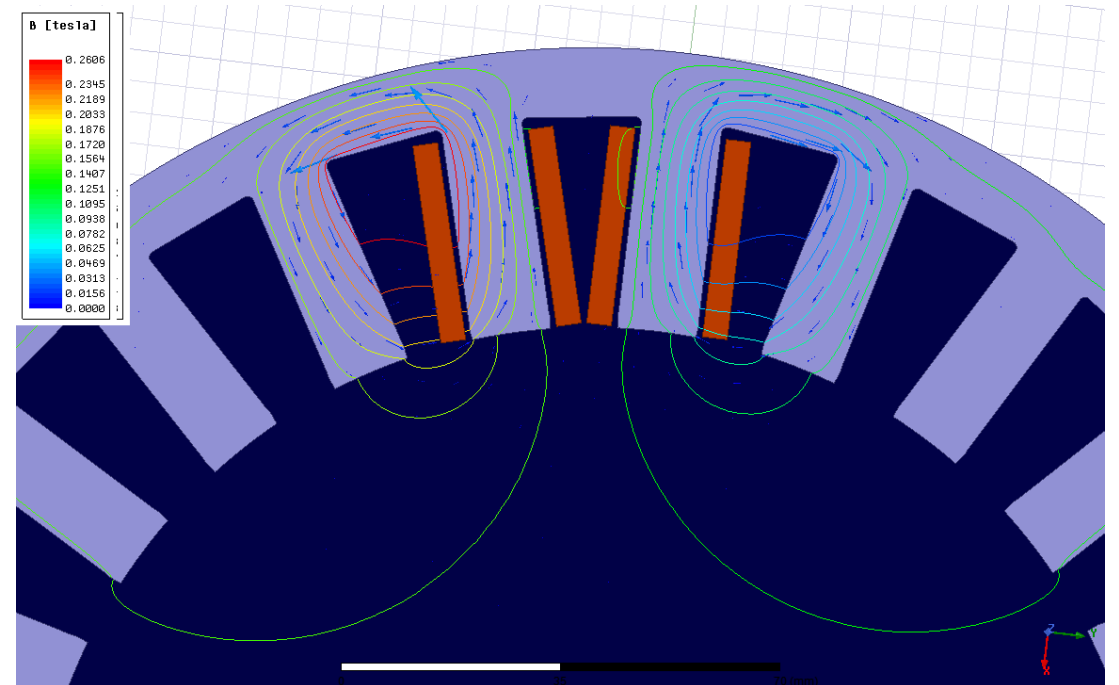


# Flux Paths of Different End Winding Connection Types

## Opposite Direction



## Same Direction



# Calculations

## Single Coil

Magnetic Circuit:

- $MMF = NI$
- Reluctance:  $R/2$
- Flux:  $2\Phi$
- Flux Linkage:  $2\lambda$
- Inductance:  $2L$

Maxwell: 1.10 mH

## Opposite Direction

Magnetic Circuit:

- $MMF = 2NI$
- Reluctance:  $R$
- Flux:  $2\Phi$
- Flux Linkage:  $4\lambda$
- Inductance:  $4L$

Maxwell: 3.12 mH

## Same Direction

Magnetic Circuit:

- $MMF = NI$
- Reluctance:  $R$
- Flux:  $\Phi$
- Flux Linkage:  $\lambda \times 2$
- Inductance:  $L \times 2$

Maxwell: 1.18 mH

# Measurement

Single Coil



Opposite Direction



Same Direction

