restart :

$V_{dc} := 15\,\mathrm{V}$:

$V_{simac} := \frac{V_{dc}}{1.654} \cdot \sqrt{3.} = 15.70783683\ \mathrm{V}$

$V_{ac} := \frac{V_{dc}}{1.654} = 9.068923821\ \mathrm{V}$

stjerne til delta transformer

$N_1 := 1 : N_2 := 8$:

$V_2 := V_{ac} \cdot \sqrt{3.} = 15.70783683\ \mathrm{V}$

$\frac{V_2}{V_1} = \frac{N_2}{N_1}$

$V_1 := \frac{V_2}{\frac{N_2}{N_1}} = 1.963479604\ \mathrm{V}$

$n = \frac{V_{ac}}{V_1} = k = 4.618802152$

$rpm_{no\_load} := V_1 \cdot 924. \frac{\mathrm{rpm}}{\mathrm{V}} = 1814.255154\ \mathrm{rpm}$

rpm test 12v dc

$rpm_{dc} := \frac{632 \cdot 60}{\frac{14}{2.}}\,\mathrm{rpm} = 5417.142859\ \mathrm{rpm}$

$rpm_{ac} := rpm_{dc}$:

$\frac{rpm_{ac}}{924. \frac{\mathrm{rpm}}{\mathrm{V}}} = 5.862708721\ \mathrm{V}$

$V_{ff} := 5.99\,\mathrm{V}$:

$V_{ll} := 12.0\,\mathrm{V}$:

$kv := \frac{rpm_{dc}}{V_{ff}} = \frac{904.3644172}{\mathrm{V}}\ \mathrm{rpm}$