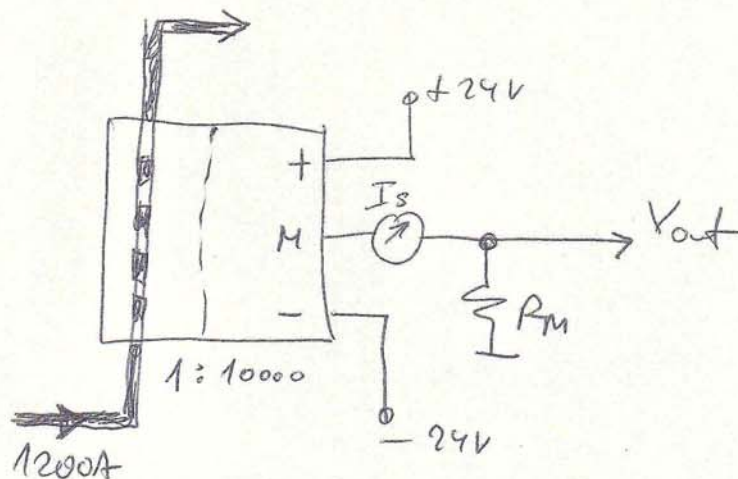
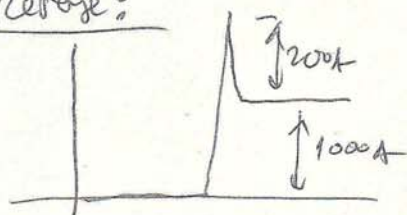


ZADATK 11

DAT je simulirani LEM modul. koji treba da meri merenu vrednost struje $1000\text{ A} \pm 20\%$. Prenosni odnos LEM modula je $1:10000$. Njegov napajanje je $\pm 24\text{ V}_{\text{max}}$. Izlazem struje je potrebno funkciji na opseg $0:10\text{ V DC}$. Dimenzionirati otpornik za napajanje R_M .

Refer:



$$I_p = 1200\text{ A} \quad n = 10000$$

$$I_s = \frac{I_p}{n} = \frac{1200}{10000} = 0,12\text{ A} = 120\text{ mA}$$

$$R_M \cdot I_s = V_{\text{out}} \quad V_{\text{out}} = 10\text{ V} \Rightarrow R_M = \frac{V_{\text{out}}}{I_s}$$

$$R_M = \frac{10}{0,12} = 83,3\ \Omega \rightarrow \text{koristiti } 82\ \Omega$$

$$R_M = 82\ \Omega \quad R_M \cdot I_s^2 = P_{R_M} = 82 \cdot 0,12^2 = 1,1\text{ W} \rightarrow \text{koristiti } 2\text{ W}$$

$$\text{Dakle } \underline{\underline{R_M = 82\ \Omega / 2\text{ W}}}$$