Problem info

Problem type: AC Magnetics , frequency: 1 Hz,
Geometry model class: Axisymmetric
Problem database file names:

- Problem: *multi_layer_shield_gap.pbm*
- Geometry: *Multi_layer_shield_gap.mod*
- Material Data: *Multi_layer_shield_gap.dhe*
- Material Data 2 (library): *none*
- Electric circuit: *none*

Results taken from other problems:

- *none*

Geometry model

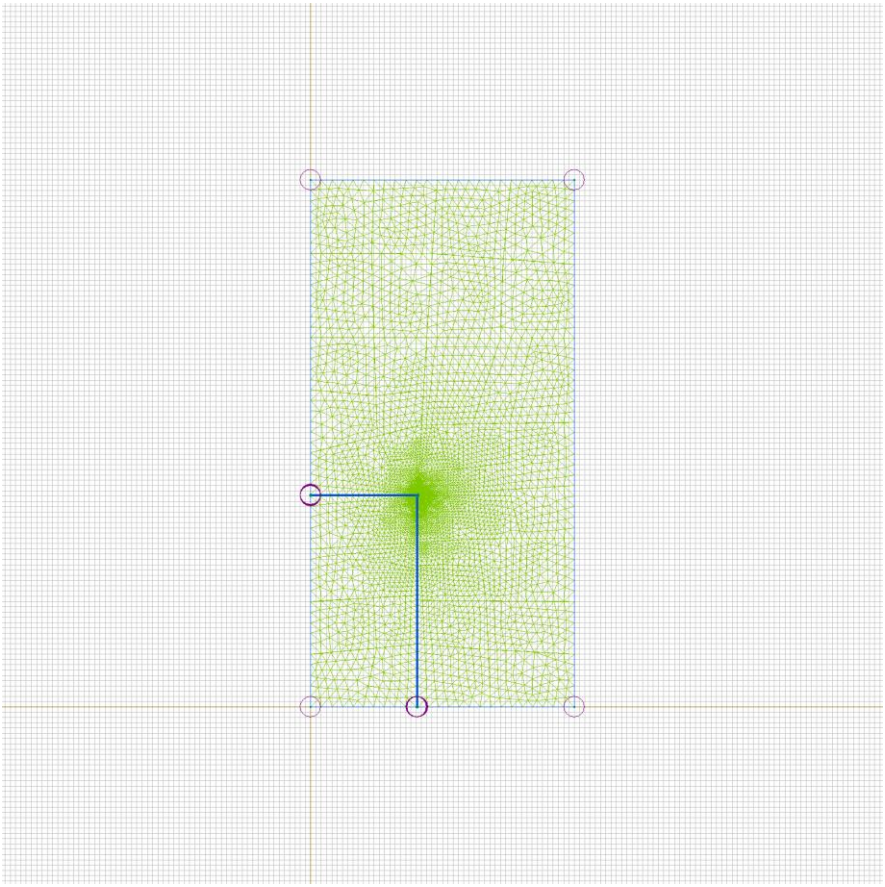


Table 1. Geometry model statistics

	With Label	Total
Blocks	3	11
Edges	3	38
Vertices	1	28

Number of nodes: 7654.

Labelled objects

There are following labelled objects in the geometry model (Material Data file could contain more labels, but only those labels that assigned to geometric objects are listed)

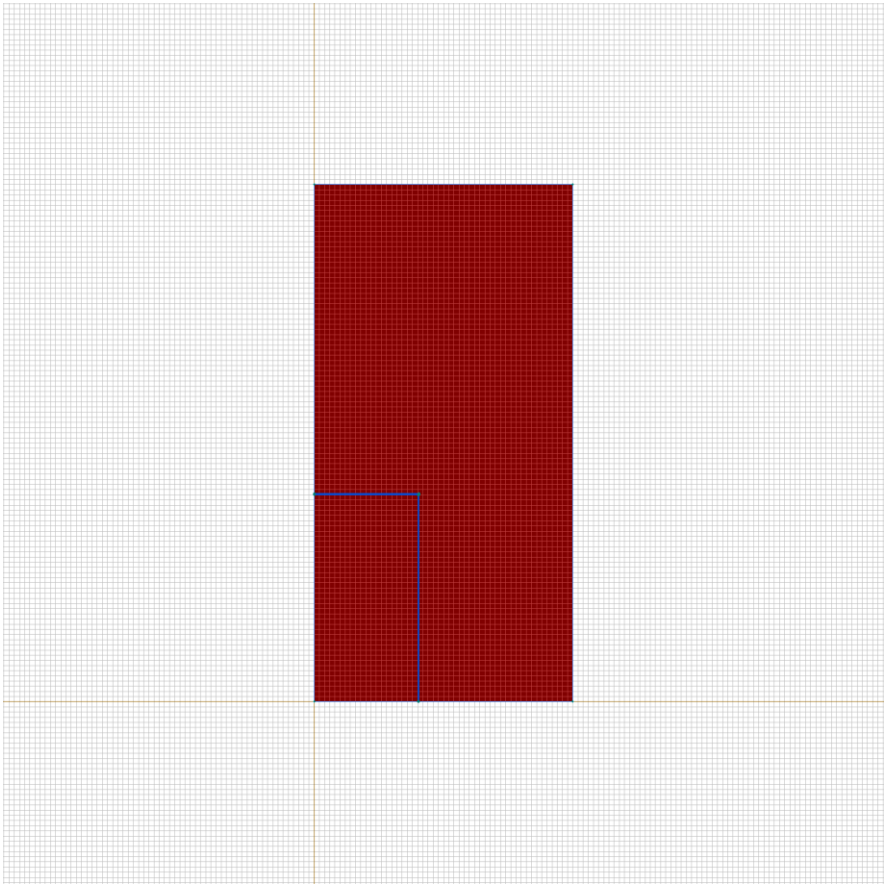
Blocks:	Edges:	Vertices:
• air • mu_metal • copper •	• side • bottom • top •	• testpt •

Detailed information about each label is listed below.

Labelled objects: block "air"

There are (5) objects with this label

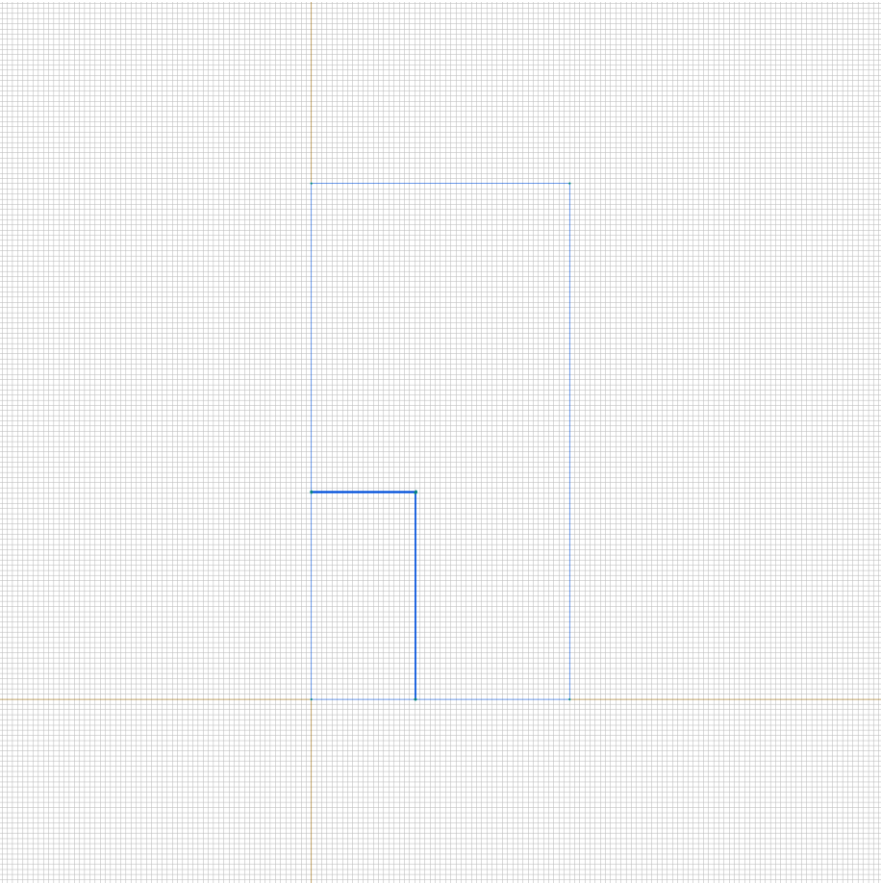
Relative magnetic permeability: mu_x=1, mu_y=1
Electric conductivity: sigma=0 [S/m]
Current density: j=0 [A/m2], phase 0 [deg]
Conductor's connection: in parallel



Labelled objects: block "mu_metal"

There are (2) objects with this label

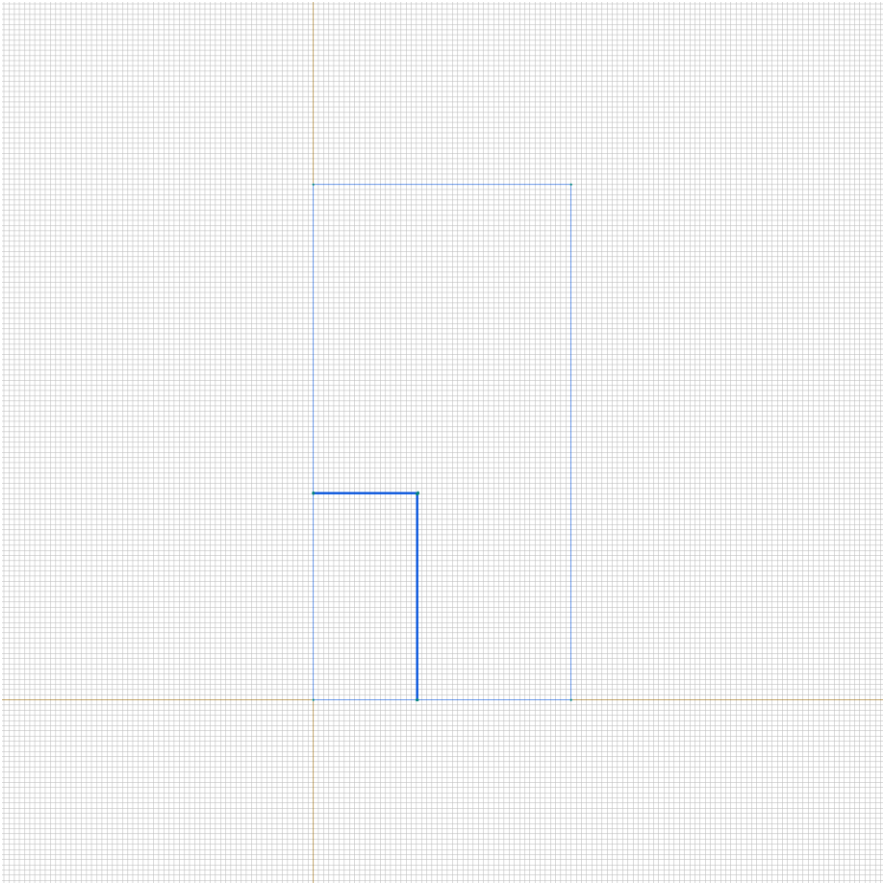
Relative magnetic permeability: mu_x=10000, mu_y=10000
Electric conductivity: sigma=1000000 [S/m]
Current density: j=0 [A/m2], phase 0 [deg]
Conductor's connection: in parallel



Labelled objects: block "copper"

There are (4) objects with this label

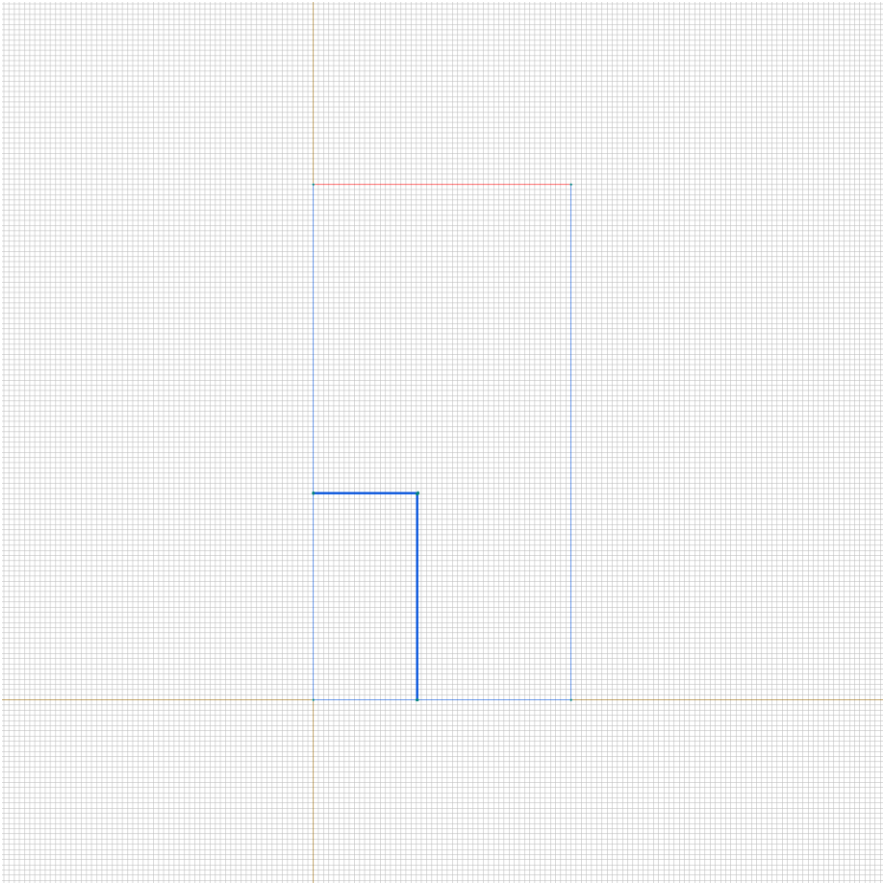
Relative magnetic permeability: mu_x=1, mu_y=1
Electric conductivity: sigma=100000000 [S/m]
Current density: j=0 [A/m2], phase 0 [deg]
Conductor's connection: in parallel



Labelled objects: edge "side"

There are (1) objects with this label

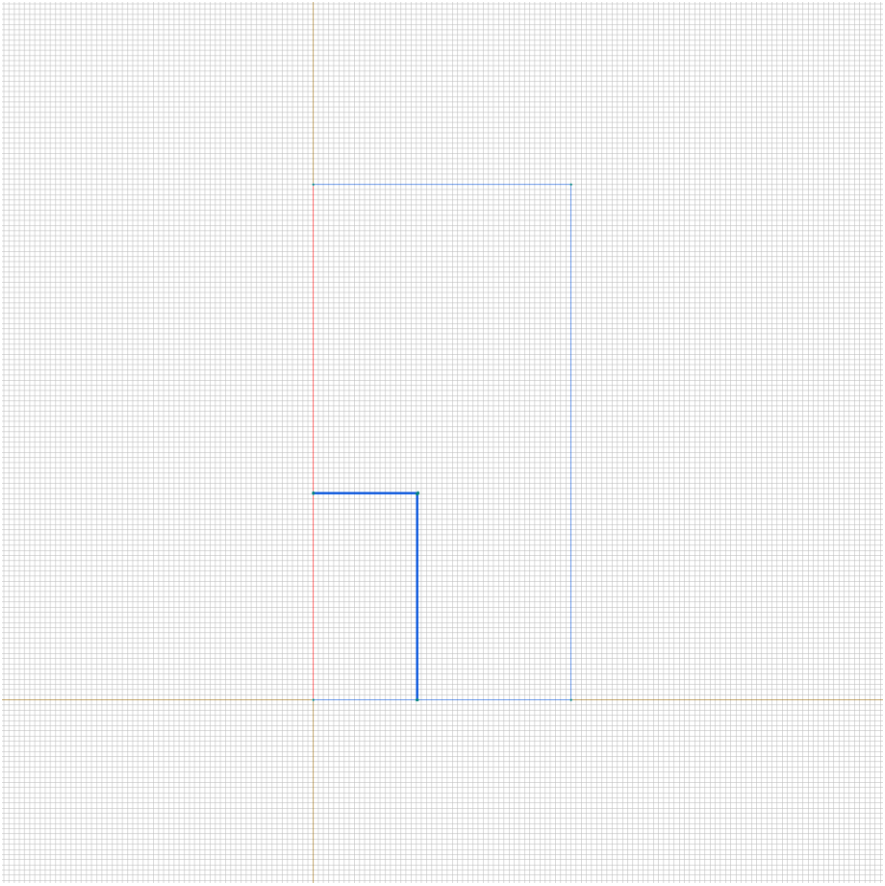
Magnetic potential: A=0.000001 [Wb/m], phase 0 [deg]



Labelled objects: edge "bottom"

There are (7) objects with this label

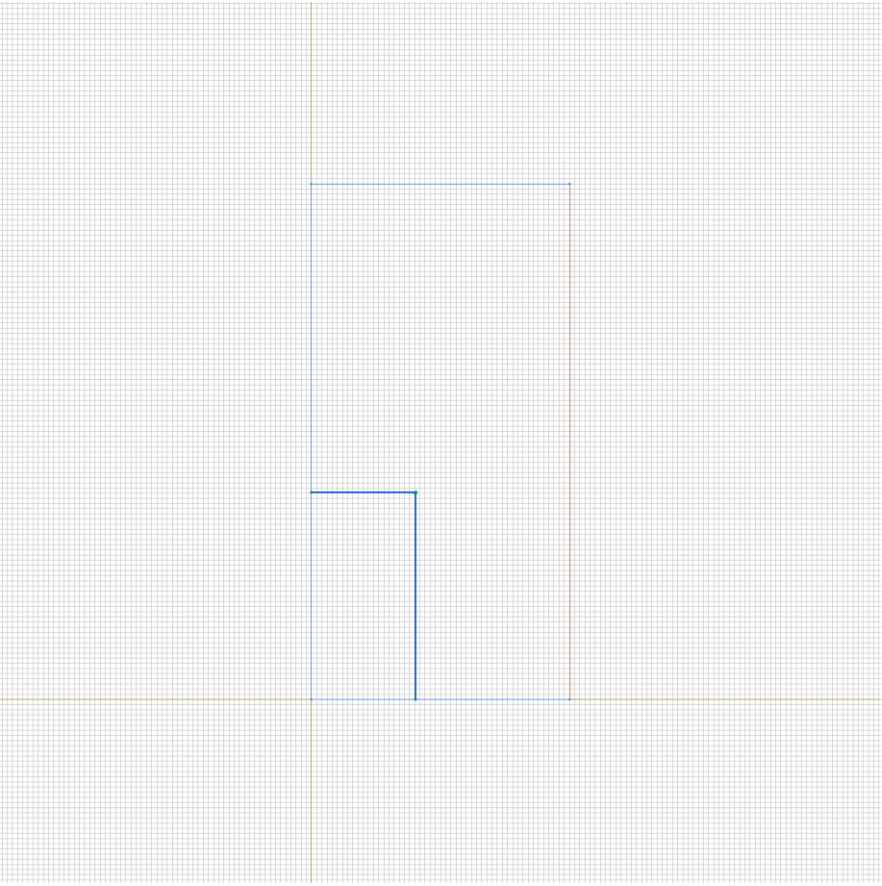
Tangential field: Ht=0 [A/m], phase 0 [deg]



Labelled objects: edge "top"

There are (1) objects with this label

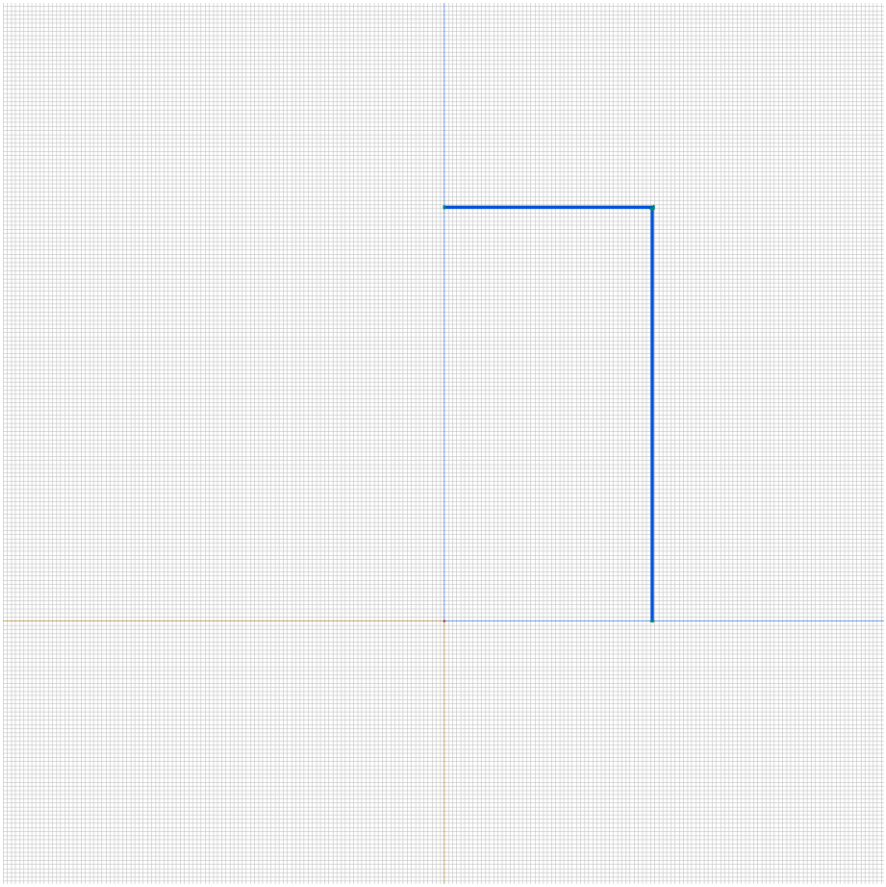
Tangential field: Ht=0 [A/m], phase 0 [deg]



Labelled objects: vertex "testpt"

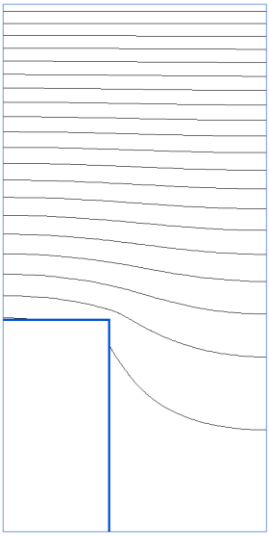
There are (1) objects with this label

No material data (boundary conditions) are specified



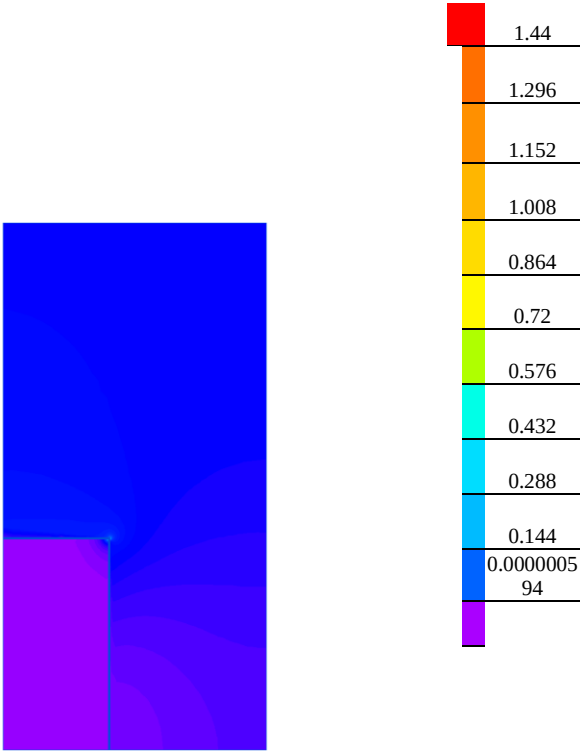
Results

Field lines



Results

Color map of Strength |H| [A/m]



Nonlinear dependencies

No non-linear dependencies are used in this problem data