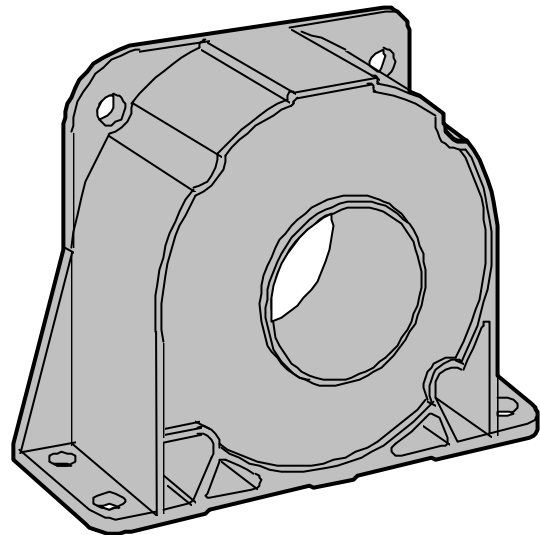


Current sensors CS2000 Mounting Instructions

TCP2CS2000.DOC
G:\L7\DOSSTECH\
02/02/98
Version 2.1

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Signature :

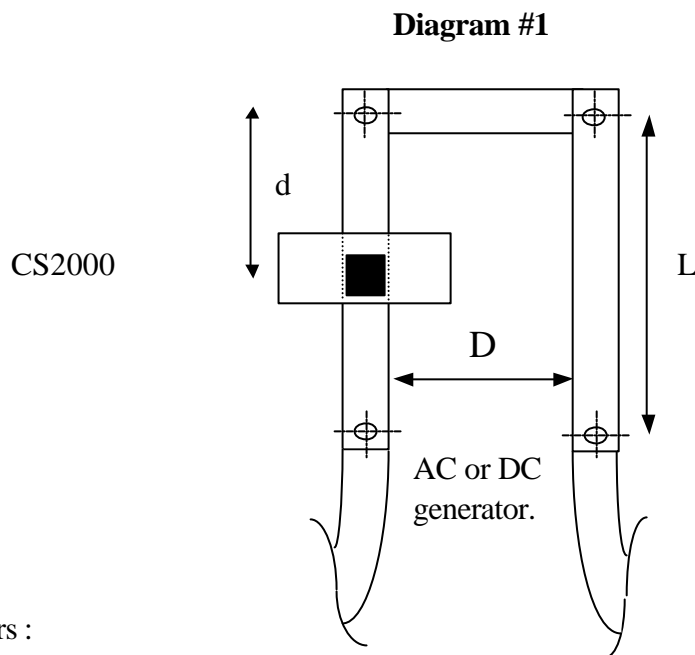
This document presents, following two mains configurations, the possible effects on the sensor measuring accuracy due to external magnetic fields.

This document is valid for all CS2000 current sensors.

I. CONFIGURATIONS

A. Influence of the proximity of a conductor, on the sensor:

Parallel rod configuration :



Parameters :

D is variable.

L = 600 mm. d=130 mm

Diameter of rod = 60 mm.

We used this configuration to realise the accuracy map, given in page 7 and 8.

We made turn the sensor of each 15° angle, and we move the the distance D in order to got an accuracy of 0.5%. We realize it for AC and DC current.

The minimum distance (D) is 140 mm.

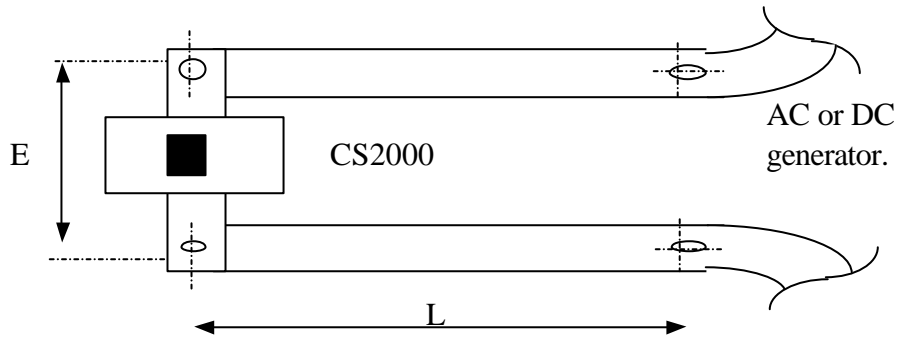
Electrical conditions :

Voltage supply : ± 24 V; $R_m = 0$.

Turns ratio : 1/5000

In AC current : ($f = 50$ Hz) $I_p = 1500$ Arms; 2000 Arms and 2500 Arms.

In DC current : $I_p = 1000$ A; 2000 A; 3000 A.

B. Lateral rods configuration:**Diagram #2****Parameters :**

E = 290 mm.

L = 600 mm.

Diameter of rod = 60 mm.

Electrical conditions :Voltage supply : ± 24 V; $R_m = 0$.

Turns ratio : 1/5000.

In AC current : ($f = 50$ Hz) $I_p = 2000$ Arms.In DC current : $I_p = 2000$ A.

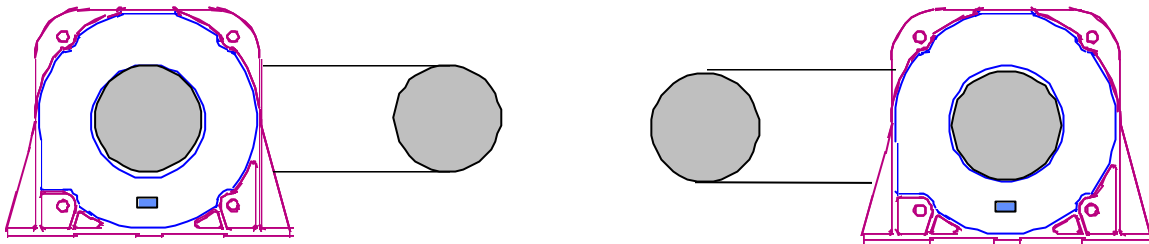
In a such configuration, we made turn the sensor of 90° , and we measure the accuracy of the sensor. The result is given in the following pages.

II. Results:

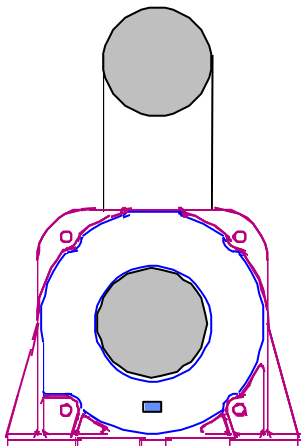
A. Parallels rods configuration:

For this configuration, we obtain the following results:

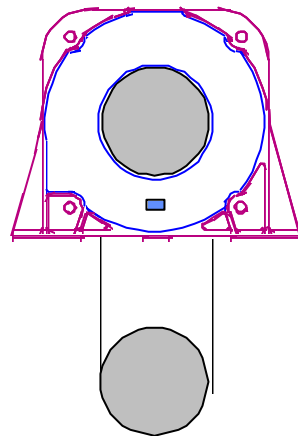
Good behaviour in AC and DC



Lightly unfavourable



Unfavourable in AC
Lightly unfavourable in DC

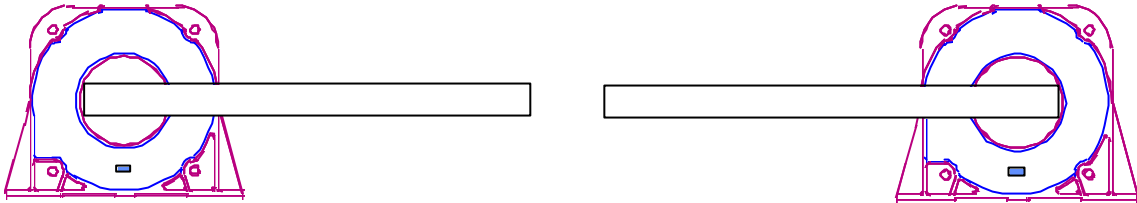


The details results, for this configuration, are in page 7 and 8.

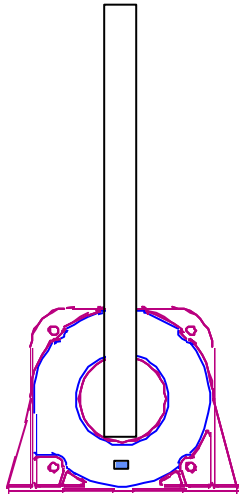
B. Lateral rods configuration:

For this configuration, we obtain the following results:

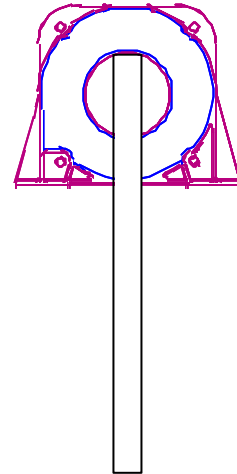
Good behaviour in AC and DC



lightly Unfavourable in AC:
good in DC



unfavourable in AC
lightly unfavourable in DC



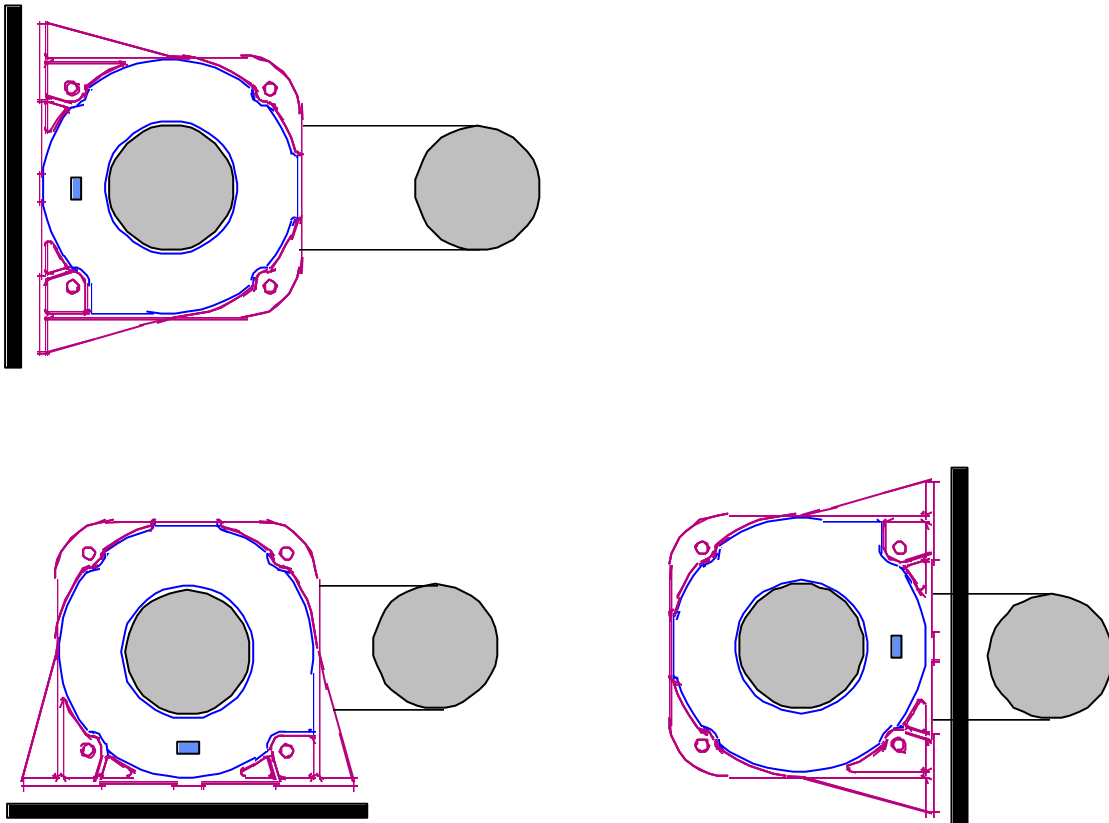
C. *Use of ferromagnetic iron_plate:*

In the two configurations (diagram #1 and # 2), if a iron_plate is put under the sensor, the accuracy is a slightly modified, but the convenient zone is the same.

If the plate_iron is put to one side, there have two situations (in the first configuration) :

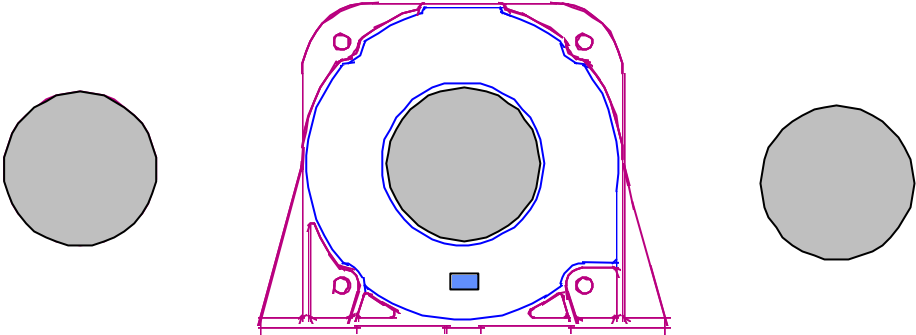
Good :

Unfavourable :

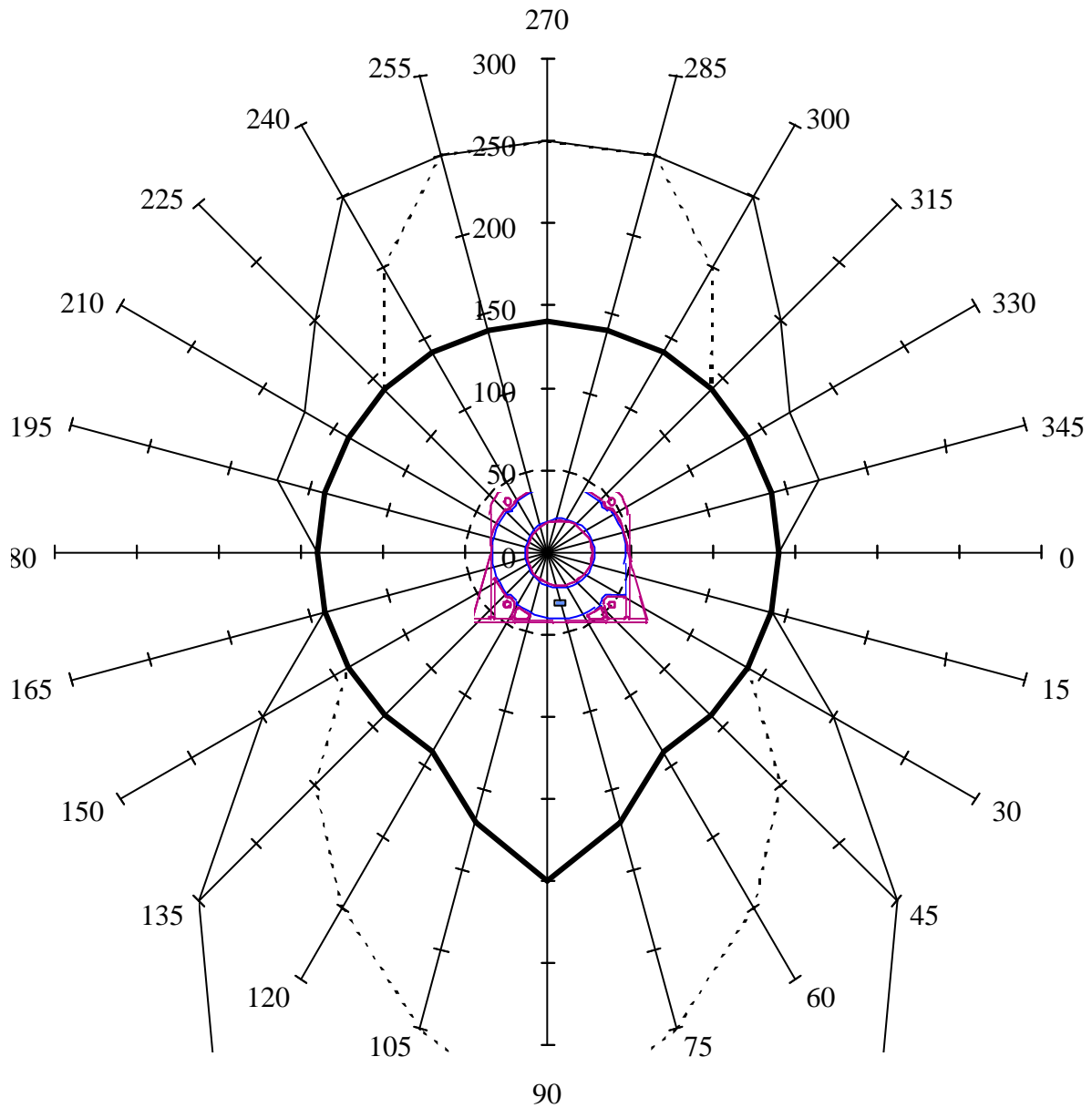


D. *Proximity of other conductors:*

For this configuration, all positions is unfavourable if the current, in the conductor, is superior to the value of the nominal current, and if the distance d is below 140 mm.



CS2000. Influence of the proximity of a conductor, on sensor. AC measurement. Parallel rod configuration.



— d(mm) à 1500A rms d(mm) à 2000A rms — d(mm) à 2500A rms

CS2000. Influence of the proximity of a conductor, on sensor.

DC measurement. Parallel rod configuration.

