

# RASWIN Module SRS PL Calculation: Manual Mode

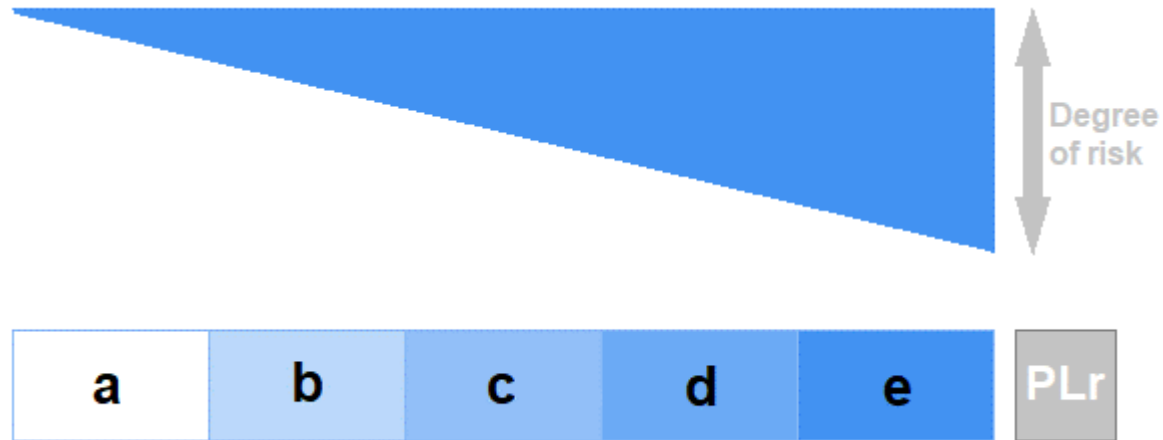
# Performance Level?

## PL Gfx Module

PL is a measure of the reliability of a safety function. This value depends on different parameters as Probability of failure or Mean time to failure.

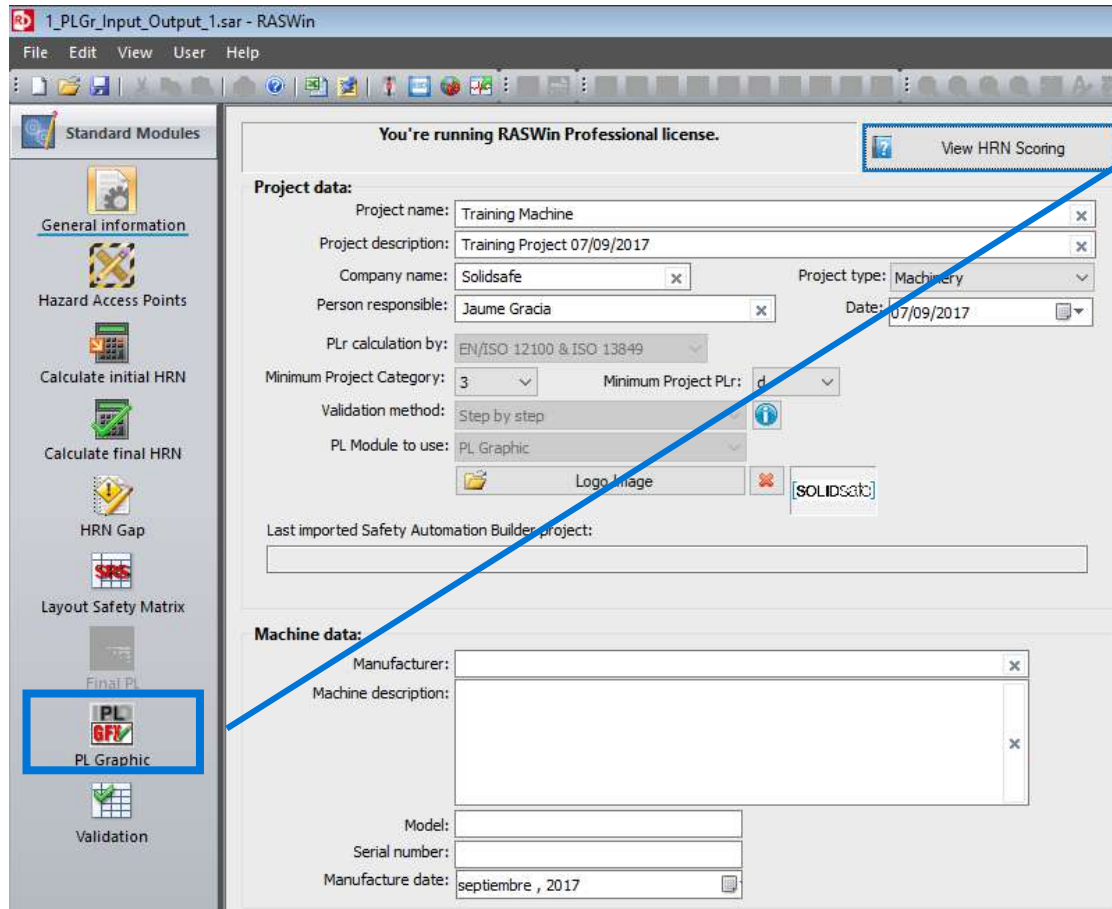
PL is divided into five levels (a-e).

PL e gives the best reliability and is equivalent to the required at the highest level of risk



# How to calculate the PL in RASWin?

## PL Gfx Module



1. Click on PL Gfx Module icon.

# How to calculate the PL in RASWin?

## PL Gfx Module

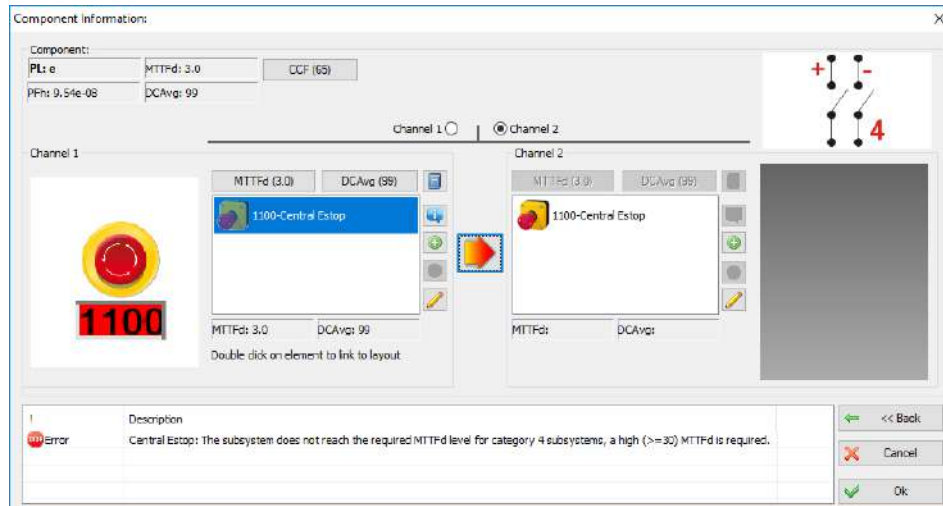
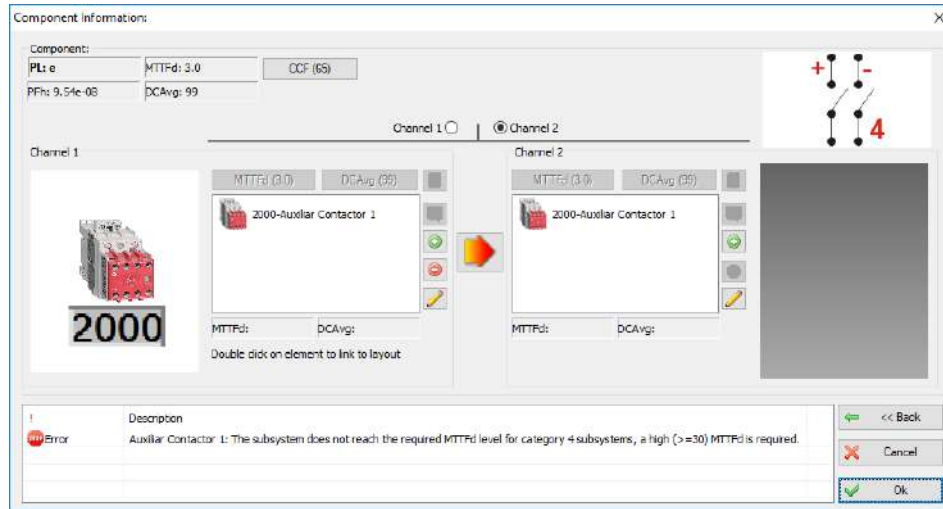


There are two options to calculate the PL of a Safety Function:

1. Automatically (from SRS Links)
2. Manually

# How to calculate the PL in RASWin?

## PL Gfx Module



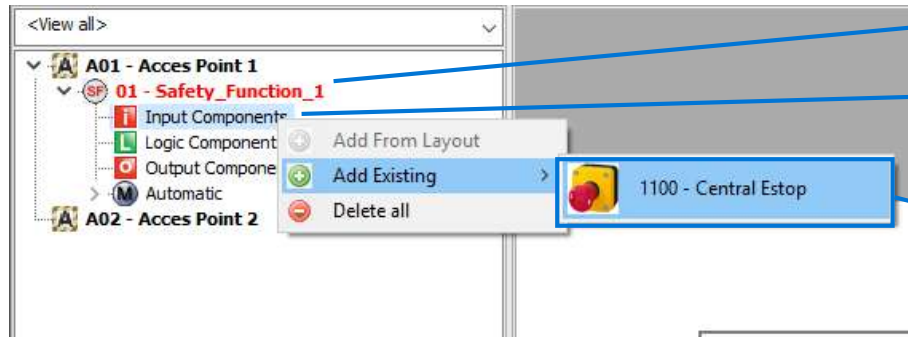
1. Add element to the layout
2. Enter the Safety Parameters of the elements

Step 0: Previous Knowledge

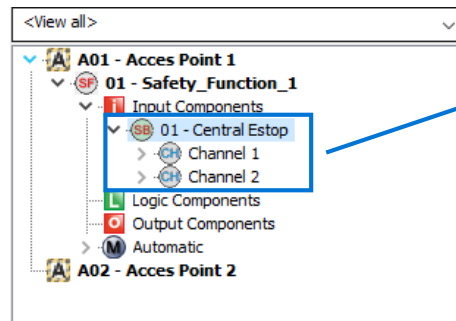
# How to calculate the PL in RASWin?

## PL Gfx Module

### Option 2: Manually

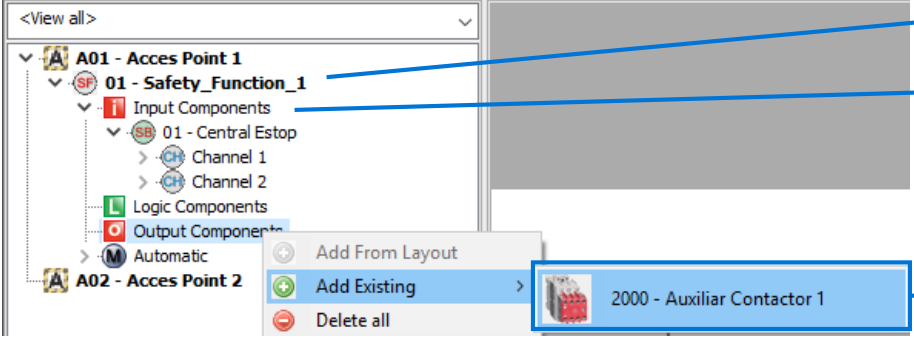


1. Select the Safety Function.
2. Select the element type (Input/Logic/output).
3. Select "Add Existing".
4. Select the element that will be added to the Safety Function.
5. The element has been added to the Safety Function.



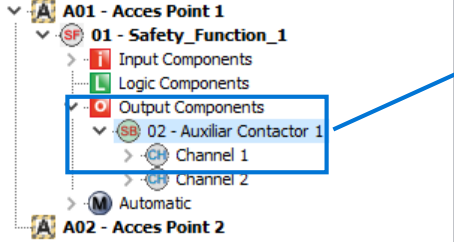
# How to calculate the PL in RASWin?

## PL Gfx Module



The screenshot shows the RASWin interface with a tree view on the left. Under 'A01 - Acces Point 1', '01 - Safety\_Function\_1' is expanded. It contains 'Input Components', 'Logic Components', and 'Output Components'. A context menu is open over 'Output Components', with 'Add Existing' selected. A dialog box shows '2000 - Auxiliar Contactor 1' selected. Blue arrows point from the '01 - Safety\_Function\_1' node, the 'Output Components' folder, the 'Add Existing' menu item, the '2000 - Auxiliar Contactor 1' dialog, and the '02 - Auxiliar Contactor 1' node in the second screenshot to the numbered steps on the right.

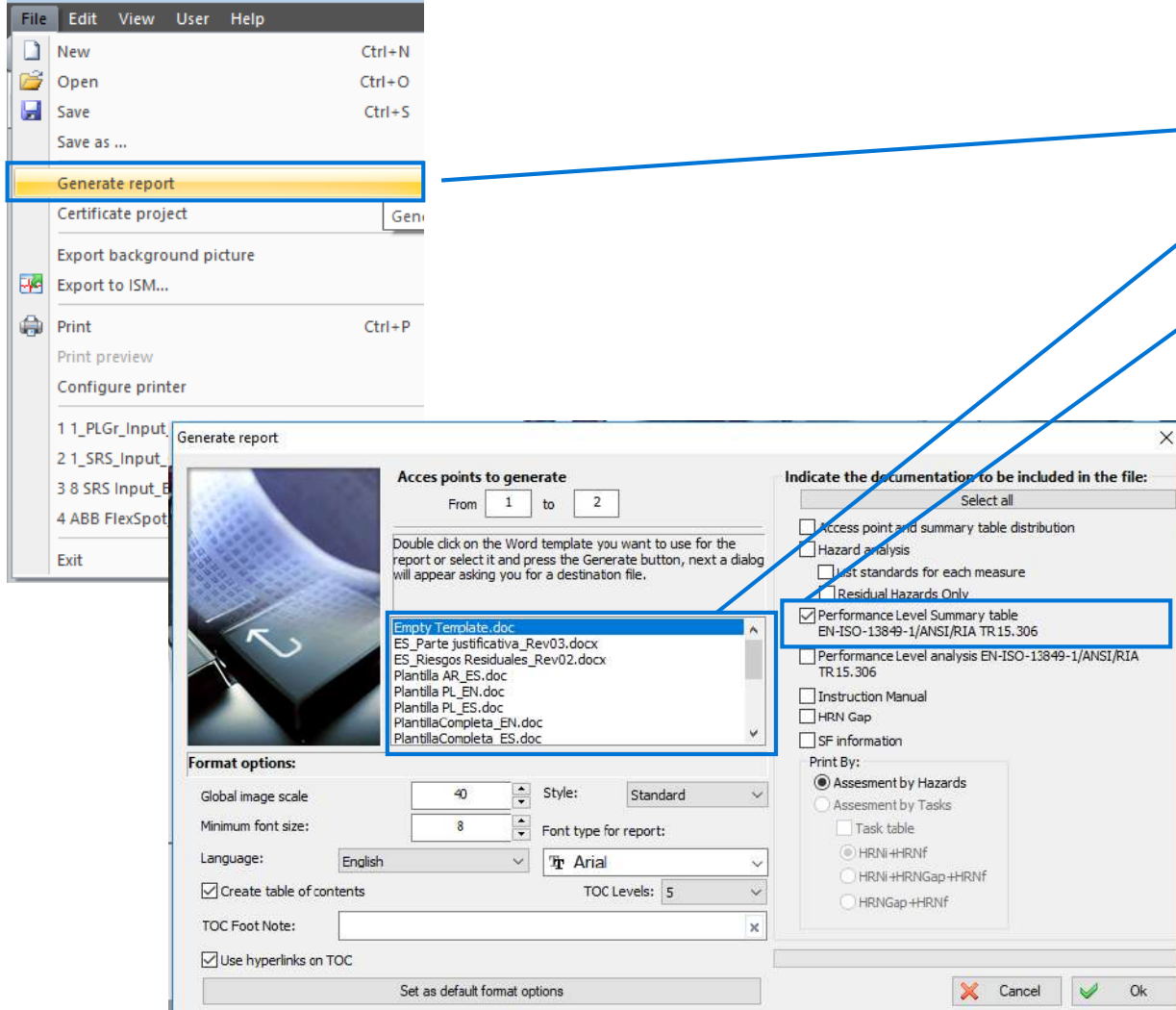
1. Select the Safety Function.
2. Select "Output Components"
3. Select "Add Existing".
4. Select the element that will be added to the Safety Function.
5. The element has been added to the Safety Function.



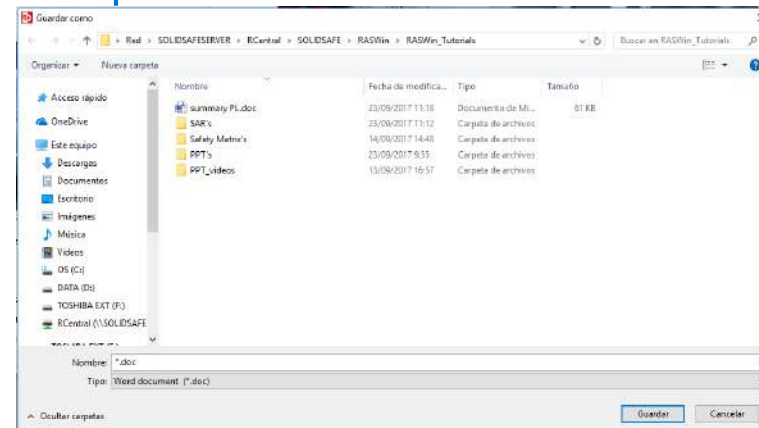
The second screenshot shows the same tree view, but now '02 - Auxiliar Contactor 1' is listed under 'Output Components' in the '01 - Safety\_Function\_1' node. A blue box highlights this new entry, with an arrow pointing to step 5.

# How to calculate the PL in RASWin?

## PL Gfx Module



1. Click on "File"
2. Select "Generate report"
3. Select the Word Template
4. Select "Performance level Summary table"
5. Click "Ok"
6. Save the document



Step 3: Generating report



# How to calculate the PL in RASWin?

## PL Gfx Module

Access point	Function	Subsystem	PL <sub>r</sub>	PL	PFh
A01-Access Point 1	A01.01 - Safety_Function_1		d	e	4.00e-09
		Central Estop			3.10e-09
		Auxiliar Contactor 1			9.06e-10

The summary of the PL has been created

PL Summary generated