

PDF export example

Revision history

| Version | Description | Author | Date |
|---------|------------------|------------|------------------|
| 1.0 | Initial revision | Plinsboorg | October 23, 2022 |
| 1.1 | Your application | You | Today |





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1 Foumula

```
[13]: function Rcoil = res_from_temp (T)

Tref=25;  # [°C] Reference temperature at which the resistance is specified.

R20=3.76;  # [Ohm] Nominal resistance of copper wire.

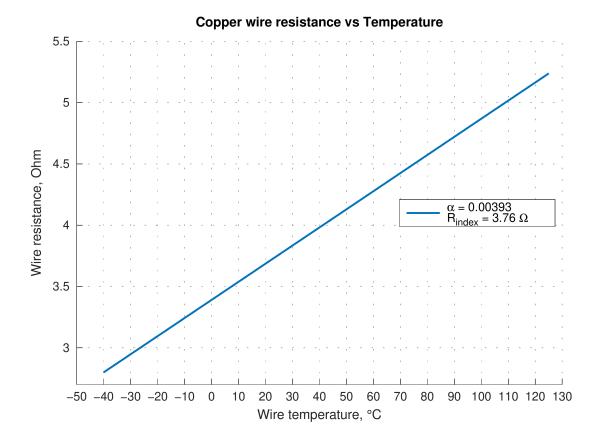
a=0.003930;  # [°C^(-1)] Thermal coefficient of resistance of the copper

Rcoil=R20*(1+a*(T-Tref));
endfunction
```

$$R(T) = R_{REF} * (1 + \alpha (T - T_{ref})) \tag{1}$$

1.1 Graph

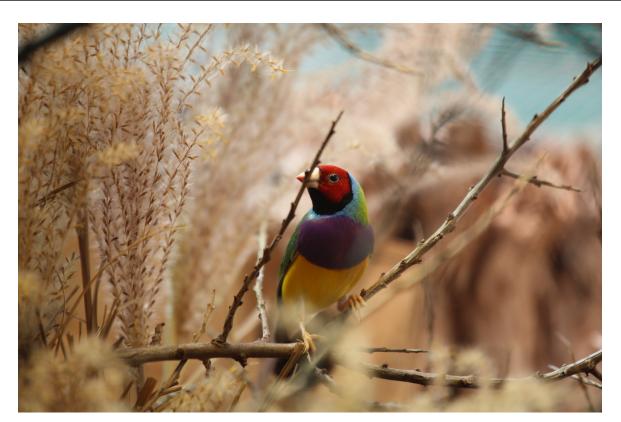
```
[5]: graphics_toolkit("gnuplot")
     %position: four-element vector, def. [300 200 560 420]
     %set style line 101 lc rgb '#808080' lt 1 lw 1
     %figure(1, 'position',[0,0,400,300]);
     fplot(@res_from_temp,[-40, 125], "linewidth", 5);
     legend (cstrcat('\alpha = 0.00393',"\n", 'R_{index} = 3.76 \Omega'));
     hl = legend();
     set(hl, "fontsize", 9, "location", "east");
     %set(gca, "positon", [300 200 560 420])
     set(gca, "fontsize", 9)
     set(gca, 'xtick', -50:10:130);
     set(gca, 'ytick', 2.5:0.5:10);
     axis ([-50, 130, 2.7, 5.5]);
     set(gca, 'GridLineStyle', ':');
     title ("Copper wire resistance vs Temperature");
     xlabel ('Wire temperature, {\circ}C');
     ylabel ("Wire resistance, Ohm");
     %xticks ("auto");
     grid on;
     set (gca, 'gridcolor', [0.5,0.5,0.5], "linewidth", 1);
```



2 Picture

This is how you insert pictures







3 References section

- 1. Ref1
- 2. Ref2
- 3. Ref3
- 4. Ref4