Thermal Sensor

This page describes the **thermal sensor** of the Green Drive tubular linear motor. The sensor monitors the winding temperature and provides the signal to the servo drive for overload protection.

The Green Drive tubular linear motor uses **PTC600** as the standard thermal sensor.

Here are the characteristics, resistance value vs. temperature detected.
The standard value for the warning threshold is 1 kΩ and for the alarm threshold 1.1 kΩ.

Temperatur in °C	%/(K)	Widerstand (Ohm)			(K)
		Min.	Nor.	Max.	
-40	0.84	350	368	386	±5.82
-30	0.83	381	400	419	±5.69
-20	0.82	415	435	455	±5.57
-10	0.80	451	472	492	±5.46
0	0.79	489	511	532	±5.35
10	0.77	530	552	574	±5.25
20	0.75	573	595	618	±5.14
25	0.74	595	618	641	±5.08
30	0.73	618	641	665	±5.03
40	0.71	665	689	713	±4.91
50	0.70	715	740	764	±4.78
60	0.68	767	792	817	±4.64
70	0.66	822	847	872	±4.50
80	0.64	879	904	929	±4.34
90	0.63	938	963	989	±4.17
100	0.61	1000	1025	1050	±3.98
110	0.60	1060	1089	1117	±4.37
120	0.58	1123	1155	1187	±4.77
130	0.57	1187	1223	1259	±5.19
140	0.55	1254	1294	1334	±5.62
150	0.54	1322	1357	1412	±6.07

How the thermal sensor works

- The PTC600 sensor increases its resistance with temperature. - The servo drive evaluates the resistance to detect the winding temperature. - The **warning threshold** (1 kΩ) triggers a warning; the **alarm threshold** (1.1 kΩ) triggers a fault and stops the drive. - Connect the sensor to the drive according to the connection page; the wiring is shown there.