Thermal Sensor

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

The Green Drive ISO 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.