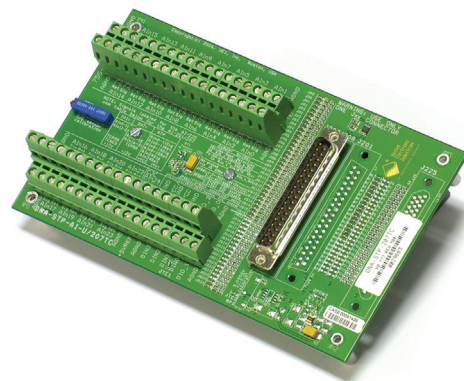


# DNA-STP-207TC

## PowerDNA Thermocouple Input Terminal Panel

- Supports DNA-AI-207 analog input layer
- Embedded CJC sensor with calibration
- CJC sensor in isothermal bar
- Open TC detection
- Wide operating temperature range
- DIN-rail-compatible Phoenix housing

10-Year  
Availability  
Guarantee



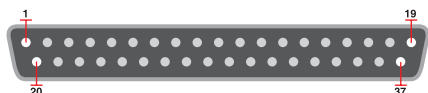
### General Description:

The DNA-STP-207TC is a screw-terminal panel designed to allow users to connect thermocouples to the DNA-AI-207 PowerDNA analog input layer. Unlike most of the conventional STP panels, the DNA-STP-207TC uses a 4-layer PCB design which ensures the highest quality low-level analog signals. This terminal panel features open TC detection circuitry and RC filter on every channel. The terminal panel also incorporates an isothermal block and calibratable CJC (cold-junction compensation) sensor mounted directly on the panel.

### Pinout Diagram:

J207/208 — DB-37 (male)  
37-pin connector:

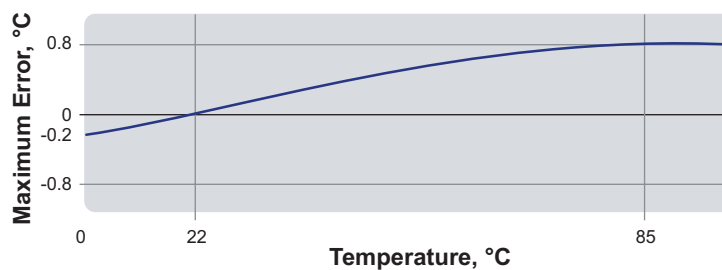
AIN-N15	20	1	DIO1 TRIG
AIN-N14	21	2	AIN-P15
+VA13/AGND	22	3	AIN-P14
AIN-P13	23	4	AIN-N13
AIN-P12	24	5	AIN-N12
AIN-P11	25	6	AIN-N11
AIN-P10	26	7	AIN-N10
AIN-N9	27	8	AGND
AIN-N8	28	9	AIN-P9
AIN-N7	29	10	AIN-P8
AIN-N6	30	11	AIN-P7
AIN-P24/AGND	31	12	AIN-P6
AIN-P5	32	13	AIN-N5
AIN-P4	33	14	AIN-N4
AIN-P3	34	15	AIN-N3
AIN-P2	35	16	AIN-N2
AIN-N1	36	17	AGND
AIN-N0	37	18	AIN-P1
		19	AIN-P0



### Technical Specifications:

Number of channels	16 differential
CJC sensor	AD590 (installed inside the isothermal plate), calibrated to $\pm 0.1^\circ\text{C}$ at ambient
CJC channel	routed to dedicated Ain24 channel
Open TC detection and RC filter (22.1 $\Omega$ /0.1 $\mu\text{F}$ )	10M $\Omega$ pull-up to 1/101 of the power supply
Constant open TC detection offset	< 0.1 $^\circ\text{C}$
$\pm\text{VCC}$ max current	140mA, PTC resettable fuse
Physical dimensions	7" x 4.2" x 1.1"
Operating temp. range	Tested -40 to +85 $^\circ\text{C}$
Operating humidity	90%, non-condensing

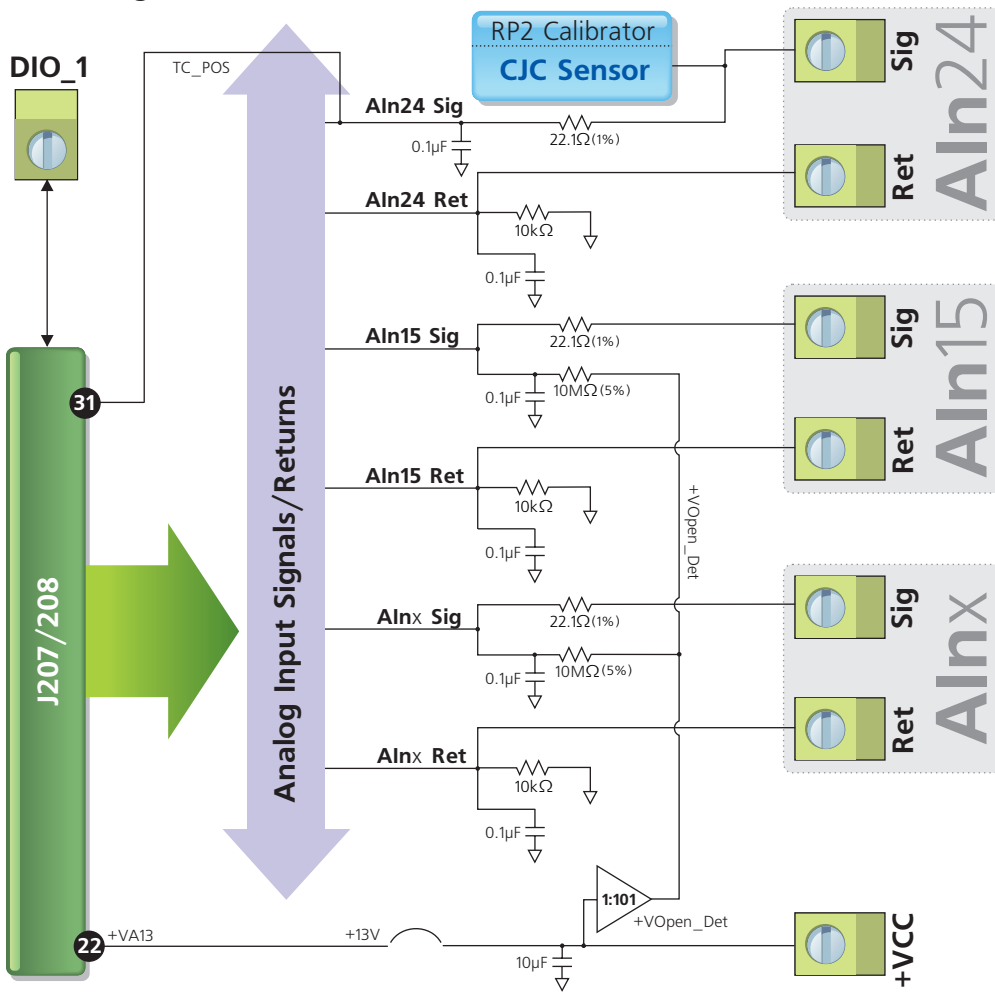
**CJC Sensor Absolute Temperature Error vs Temperature**  
(Calibrated to  $\pm 0.1^\circ\text{C}$  at 22 $^\circ\text{C}$  temperature, error at -40 $^\circ\text{C}$  may be up to 1.8  $^\circ\text{C}$ )



### Ordering Information:

Part Number	Description
DNA-STP-207TC	Screw Terminal Panel for the DNA-AI-207 when used with thermocouples
DNA-CBL-37	37-pin cable to connect DNA-AI-207 to DNA-STP-207TC

**Block Diagram:**



**Layer-to-Panel Pins Reference:**

Layer	Layer Pins	Panel Terminals
DNA-AI-207	AInx+	AInX Sig
	AInx-	AInX Ret
	+13V 50mA	+VCC
	CJC+	AIn24 Sig
	DIO1	DIO_1
	AGND	AGND