

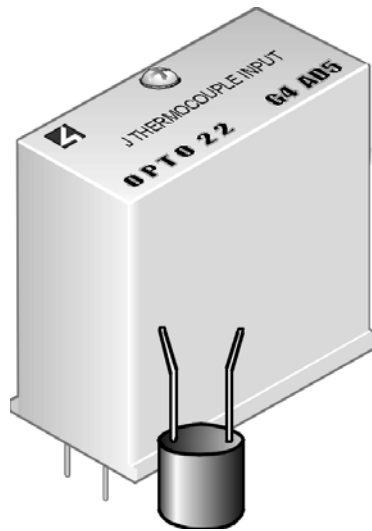
Form 422-050809

Description

Thermocouple analog modules provide a single channel of transformer and optically- isolated temperature-to-digital conversion. The modules offer wide nominal input range and special over/under range capabilities. The modules also include complete electrical channel-to-channel isolation that eliminates troublesome ground loop problems. Modules plug into an Opto 22 Modular controller or an analog I/O brick and are secured by a captive screw. The field connections are made through four contacts to the terminal strip located on the brick base or Modular Controller I/O board.

NOTE: Any system using analog sensors and input modules should be calibrated annually for analog signals. To do so, use OptoControl commands "Calculate and Set Analog Offset" and "Calculate and Set Analog Gain."

| Part Numbers | Description |
|--------------|-----------------------------|
| G4AD5 | Type "J" Thermocouple Input |
| G4AD8 | Type "K" Thermocouple Input |
| G4AD17 | Type "R" Thermocouple Input |
| G4AD18 | Type "T" Thermocouple Input |
| G4AD19 | Type "E" Thermocouple Input |
| G4AD23 | Type "S" Thermocouple Input |
| G4AD24 | Type "B" Thermocouple Input |



Features

- Rugged packaging
- 4000 Vrms Transient Isolation
- True Differential (Floating) Inputs
- 12-bit Resolution
- Factory-calibrated, no user adjustment necessary
- Operating temperature 0° to 70° C

DATA SHEET

Form 422-050809

Specifications

Module Specification

| | G4AD5 | G4AD8 | G4AD17 | G4AD18 | G4AD19 | G4AD23 | G4AD24 |
|--------------------------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------------|
| Thermocouple Type | J | K | R | T | E | S | B |
| Nominal Temperature Range °C | 0° to 485° | -100° to 460° | 0° to 960° | -200° to 224° | -100° to 435° | 0° to 1,034° | 42° to 1,491.85° |
| Nominal Temperature Range °F | 32° to 905° | -148° to 860° | 32° to 1,760° | -328° to 435.2° | -148° to 815° | 32° to 1,893.2° | 107.888° to 2,717.33° |
| Accuracy* | ± 1° C | ± 1° C | ± 2.5° C | ± 0.9° C | ± 0.9° C | ± 2.5° C | ± 5° C |
| Over/Under Range Capability °C | -32° to 1,200° | -150° to 1,372° | -50° to 1,768° | -270° to 400° | -155° to 1,000° | -50° to 1,768° | 42° to 1,820° |
| Over/Under Range Capability °F | -25° to 2,192° | -238° to 2,501° | -58° to 3,214° | -454° to 752° | -247° to 1,832° | -58° to 3,214° | 107.9° to 3,308° |
| Over/Under Range Accuracy | ± 2° C | ± 2° C | ± 5° C | ± 1.8° C | ± 1.8° C | ± 2.5° C | ± 5° C |

* Accuracy figure requires use of gain and offset commands.

General Specification

| | |
|--|---|
| Isolation (Transient) Input-to-output Input-to-analog supply | 4,000 Vrms 4,000 Vrms |
| Cold Junction Compensated | Yes |
| Open Thermocouple Detection | Yes |
| Input Response Time | 5% of scale change in 8.5 ms 63% of scale change in 165 ms |
| Ambient Temperature Operating Storage | 0° to 70°C -25° to 85°C |
| Resolution | 12 bits |