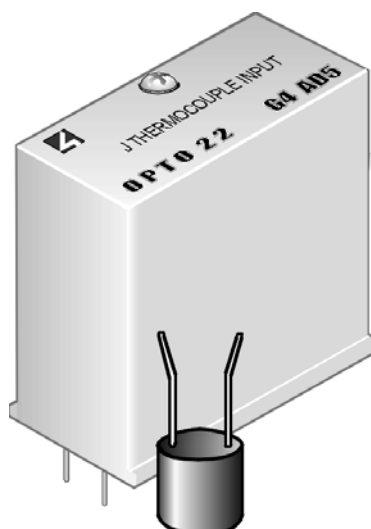


### Description

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

page 2/3

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

Form 422-050809

### Connections

