



## Input specifications

Sensor temperature coefficient		Input range	Excitation current	Display resolution	Measurement resolution	Electronic accuracy
Diode	negative	0 V to 2.5 V	10 $\mu$ A $\pm$ 0.05% <sup>9</sup>	100 $\mu$ V	20 $\mu$ V	$\pm$ 200 $\mu$ V $\pm$ 0.01% of rdg
		0 V to 7.5 V	10 $\mu$ A $\pm$ 0.05% <sup>9</sup>	100 $\mu$ V	20 $\mu$ V	$\pm$ 350 $\mu$ V $\pm$ 0.02% of rdg
PTC RTD	positive	0 $\Omega$ to 250 $\Omega$	1 mA $\pm$ 0.3% <sup>10</sup>	10 m $\Omega$	2 m $\Omega$	$\pm$ 0.06 $\Omega$ $\pm$ 0.02% of rdg
		0 $\Omega$ to 500 $\Omega$	1 mA $\pm$ 0.3% <sup>10</sup>	10 m $\Omega$	2 m $\Omega$	$\pm$ 0.06 $\Omega$ $\pm$ 0.02% of rdg
		0 $\Omega$ to 5000 $\Omega$	1 mA $\pm$ 0.3% <sup>10</sup>	100 m $\Omega$	20 m $\Omega$	$\pm$ 0.4 $\Omega$ $\pm$ 0.04% of rdg
NTC RTD	negative	0 $\Omega$ to 7500 $\Omega$	10 $\mu$ A $\pm$ 0.05% <sup>9</sup>	100 m $\Omega$	50 m $\Omega$	$\pm$ 0.8 $\Omega$ $\pm$ 0.04% of rdg

<sup>9</sup> Current source error has negligible effect on measurement accuracy

<sup>10</sup> Current source error is removed during calibration

## Sensor input configuration

Diode/RTD	
Measurement type	4-lead differential
Excitation	8 constant current sources
Supported sensors	Diodes: Silicon, GaAlAs RTDs: 100 $\Omega$ Platinum, 1000 $\Omega$ Platinum, Germanium, Carbon-Glass, Cernox <sup>®</sup> , and Rox <sup>™</sup>
Standard curves	DT-470, DT-500D, DT-670, CTI-C, PT-100, and PT-1000
Input connector	25-pin D-sub

## Interface

### IEEE-488.2 interface (218S)

Features	SH1, AH1, T5, L4, SR1, RL1, PPO, DC1, DTO, C0, E1
Reading rate	To 16 rdg/s
Software support	LabVIEW <sup>™</sup> driver

### Serial interface

Electrical format	RS-232C
Max baud rate	9600 baud
Connector	9-pin D-sub
Reading rate	To 16 readings per s (at 9600 baud)
Printer capability	Support for serial printer through serial interface port used with data log parameters

### Alarms

Number	16: high and low for each input
Data source	Temperature, sensor units, and linear equation
Settings	Source, high setpoint, low setpoint, deadband, latching or non-latching, and audible on/off
Actuators	Display annunciator, beeper, and relays (218S)

### Relays (218S)

Number	8
Contacts	Normally open (NO), normally closed (NC), and common (C)
Contact rating	30 VDC at 5 A
Operation	Each input may be configured to activate any or all of the eight relays—relays may be activated on high, low, or both alarms for any input, or manually
Connector	Detachable terminal block

### Analog voltage output (218S)

Number	2
Scale	User selected
Update rate	To 16 rdg/s
Data source	Temperature, sensor units, and linear equation
Range	$\pm$ 10 V
Resolution	1.25 mV
Accuracy	$\pm$ 2.5 mV
Min load resistance	1 k $\Omega$ (short-circuit protected)

### Data logging

Channels	1 to 8
Operation	Data log records can be stored in memory or sent to the printer; stored data may be displayed, printed, or retrieved by computer interface

Data memory	Maximum of 1500 single reading records, non-volatile
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## General

**Ambient temperature** 15 °C to 35 °C at rated accuracy, 10 °C to 40 °C at reduced accuracy

**Power requirement** 100, 120, 220, 240 VAC, (+6%, -10%), 50 or 60 Hz, 18 VA

**Size** 216 mm W  $\times$  89 mm H  $\times$  318 mm D (8.5 in  $\times$  3.5 in  $\times$  12.5 in), half rack

**Weight** 3 kg (6.6 lb)

**Approval** CE mark, RoHS

## Ordering information

### Part number Description

<b>218S</b>	Standard temperature monitor (8 inputs, IEEE-488 and serial interface, alarms, relays, corrected analog output, data logging)—includes two 25-pin D-sub sensor input plugs (G-106-253), two 25-pin D-sub sensor input shells (G-106-264), two 14-pin relay/analog output connectors (106-772), a calibration certificate and a user's manual
<b>218E</b>	Economy temperature monitor (8 inputs, serial interface, alarms, data logging)—includes same accessories as the 218S

### Please indicate your power/cord configuration:

- 100 V—U.S. cord (NEMA 5-15)
- 120 V—U.S. cord (NEMA 5-15)
- 220 V—Euro cord (CEE 7/7)
- 240 V—Euro cord (CEE 7/7)
- 240 V—U.K. cord (BS 1363)
- 240 V—Swiss cord (SEV 1011)
- 220 V—China cord (GB 1002)

## Accessories

<b>4005</b>	1 m IEEE-488 (GPIB) computer interface cable assembly—includes extender which allows connection of IEEE cable and relay terminal block simultaneously
<b>RM-1/2</b>	Kit for mounting one half rack instrument
<b>RM-2</b>	Kit for mounting two half rack instruments
<b>G-106-253</b>	DB-25 plug; qty 1
<b>G-106-264</b>	DB-25 hood; qty 1
<b>106-772</b>	Terminal block mating connector, 14-pin connector, 218S only
<b>8000</b>	The CalCurve <sup>™</sup> breakpoint table from a calibrated sensor loaded on a CD-ROM for customer uploading
<b>8002-05-218</b>	The breakpoint table from a calibrated sensor stored in a NOVRAM for installation at the customer location
<b>CAL-218-CERT</b>	Instrument calibration with certificate
<b>CAL-218-DATA</b>	Instrument recalibration with certificate and data
<b>119-007</b>	Model 218 temperature monitor manual

All specifications are subject to change without notice

