Model 218
Temperature monitor

Input specifications

	Sensor temperature coefficient	Input range	Excitation current	Display resolution	Measurement resolution	Electronic accuracy
Diode		0 V to 2.5 V	10 μA ±0.05%[9]	100 μV	20 μV	±200 μV ±0.01% of rdg
	negative	0 V to 7.5 V	10 μA ±0.05%[9]	100 μV	20 μV	±350 μV ±0.02% of rdg
PTC RTD		0 Ω to 250 Ω	1 mA ±0.3%[10]	10 mΩ	2 mΩ	±0.06 Ω ±0.02% of rdg
	positive	0 Ω to 500 Ω	1 mA ±0.3%[10]	10 mΩ	2 mΩ	±0.06 Ω ±0.02% of rdg
		0 Ω to 5000 Ω	1 mA ±0.3%[10]	100 mΩ	20 mΩ	±0.4 Ω ±0.04% of rdg
NTC RTD	negative	0 Ω to 7500 Ω	10 μA ±0.05%[9]	100 mΩ	50 mΩ	±0.8 Ω ±0.04% of rdg

[9] Current source error has negligible effect on measurement accuracy
[10] 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 Ω Platinum, 1000 Ω Platinum, Germanium, Carbon-Glass, Cernox®, and Rox™
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, PP0, DC1, DT0, C0, E1
Reading rate To 16 rdg/s
Software support LabVIEW™ 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 ±10 V
Resolution 1.25 mV
Accuracy ±2.5 mV
Min load resistance 1 kΩ (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

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 × 89 mm H × 318 mm D (8.5 in × 3.5 in × 12.5 in), half rack
Weight 3 kg (6.6 lb)
Approval CE mark, RoHS

Ordering information

Part number	Description
218S	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 conectors (106-772), a calibration certificate and a user's manual
218E	Economy temperature monitor (8 inputs, serial interface, alarms, data logging)—includes same accessories as the 218S

Please indicate your power/cord configuration:

1 100 V—U.S. cord (NEMA 5-15)
2 120 V—U.S. cord (NEMA 5-15)
3 220 V—Euro cord (CEE 7/7)
4 240 V—Euro cord (CEE 7/7)
5 240 V—U.K. cord (BS 1363)
6 240 V—Swiss cord (SEV 1011)
7 220 V—China cord (GB 1002)

Accessories

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

All specifications are subject to change without notice

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