






Precision Digital Thermometer Thermocouple & RTD
**INFT Input**

- ✓ 0.01° Resolution
- ✓ 0.2°C Accuracy
- ✓ 9 Thermocouple Types
- ✓ °C/°F/K Units
- ✓ Full Thermocouple Ranges
- ✓ 2-, 3- or 4-wire RTD
- ✓ DIN and NIST curves
- ✓ Pt RTD Sensors from 6 to 6,000 Ohms, 10 Ohm Copper Elements

NEWPORT PRODUCT INFO

- [MANUAL PDF](#) 
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- [QUICK START THERMOCOUPLE](#) 
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The **INFT thermocouple meter** offers very high accuracy ensured by an advanced (patent applied for) thermocouple linearizing system. Accuracy for most thermocouple types is 0.2°C. The meter is front panel programmable for any of 9 thermocouple types. The INFT RTD input meter is programmable for any 6 to 6000ohm DIN or NIST platinum RTD. It provides a precision ultra-low constant current excitation to minimize self-heating errors and maximize stability.

SPECIFICATIONS

Thermocouple Input: J, K, T, E, R, S, B, N, J DIN

RTD Input: 100ohm Pt (385 or 392 curve) any 6 to 6Kohm NIST or DIN Pt and any linear RTD (10ohm Cu, etc); 2, 3 or 4 wire

Step Response: 1 sec to 99.9%

Warmup to Rated Accuracy: 50 min

Operating Ambient: 0 to 50°C (32 to 122°F), 95%RH, non-condensing

Storage Ambient: -40 to 85°C (-40 to 185°F)

Power: 115 or 230 Vac, 49-400 Hz; 10 to 32 Vdc

Power Consumption: 6 W nominal, 10 W max.

Normal Mode Rejection: 60 dB

Common Mode Rejection: 120 dB

Common Mode Voltage: 1500 V peak per Hv test

Resolution: 15-bit

Conversion: dual-slope technique

Reading Rate: 3/sec or 13/sec, 60 Hz; 3/sec or 12/sec, 50 Hz

Input Configuration: single-ended Polarity: unipolar/bipolar, programmable

Span Adjustment: +0.00001 to 500,000, programmable

Offset Adjustment: 0 to 999,999 or 0 to -99,999; programmable

Sensor Excitation: 24 V at 25 mA 160 mA for 100ohm RTD 1.6 mA for 10ohm Cu

Display: red or green 6-digit, 14-segment, 13.7 mm (0.54"); 4 alarm indicators

Dimensions: 48 H x 96 W x 165 D mm (1.89" x 3.78" x 6.5")

Panel Cutout: 45 H x 92 W mm (1.772" x 3.622"); 1/8 DIN

Weight: 574 g (1.27 lb)

TTL Outputs: four, isolated open collector; rated 150 mA at 1 V sink, 30 V open

Dual Relays: form C, 7 A at 30 Vdc, 115 or 230 Vac

BCD Output: isolated, tri-state, TTL/CMOS compatible; external 5 V supply for isolated; internal 5 V supply for non-isolated

Four Relay Option: dual 7A relays and dual 1 A relays

Analog Output: 0-5 V/1-5 V/0-10 V/0-20 mA/4-20 mA, user selectable; 354 Vp isolation; 14-bit resolution; 0.1% accuracy, 50 msec step response

RS-232 Communications: 300/600/1200/2400/4800/9600/19.2k baud; RJ11 4-wire connection; complete program setup and message display capability; programmable to transmit current display, alarm status, min / max, actual measured input value and status, supports continuous or command mode

RS-485 Communications: 300/600/1200/2400/4800/9600/19.2k baud; RJ12 6-wire connection; addressable from 0 to 199

	Input Type	Range, °F	Range, °C	Range, K	Accuracy*
J	Iron-Constantan	-346 to 1400°F	-210 to +760°C	63.2 to 1673.2K	0.2°C/0.3°F/0.2K
K	Chromel-Alumel	-454 to 2500°F	-270 to 1372°C	3.2 to 1645.2K	0.2°C/0.3°F/0.2K
T	Copper-Constantan	-454 to 752°F	-270 to 400°C	3.2 to 673.2K	0.2°C/0.3°F/0.2K
E	Chromel-Constantan	-454 to 1832°F	-270 to 1000°C	3.2 to 1273.2K	0.2°C/0.3°F/0.2K
R	Pt13%Rh-Pt	-58 to 3214°F	-50 to 1768°C	223.2 to 2041.2K	0.2°C/0.3°F/0.2K
S	Pt10%Rh-Pt	-58 to 3214°F	-50 to 1768°C	223.2 to 2041.2K	0.2°C/0.3°F/0.2K
B	Pt30%Rh-Pt6%Rh	+212 to 3300°F	+100 to 1820°C	373.2 to 2093.2K	0.3°C/0.5°F/0.3K
N	OMEGALLOY *1 Nicrosil-Nisil	-454 to 2372°F	-270 to 1300°C	3.2 to 1573.2K	0.2°C/0.3°F/0.2K
J DIN	Iron-Constantan	-328 to 1652°F	-200 to 900°C	73.2 to 1173.2K	0.6°C/1.0°F/0.6K

*1 - Registered Trademark of **OMEGA ENGINEERING, INC.**

*Accuracy (all±) includes maximum linearization error

	Input Type	Range, °F	Range, °C	Range, K	Accuracy*
RTD 1 - 10ohm Copper		-328 to 392°F	-200 to 200°C	73.2 to 473.2K	1.0°C/2.0°F/1.0K
RTD 2 - 0.00385 100ohm Pt		-328 to 1652°F	-200 to 900°C	73.2 to 1173.2K	0.2°C/0.3°F/0.2K
RTD 3 - 0.00392 100ohm Pt		-328 to 1562°F	-200 to 850°C	73.2 to 1123.2K	0.2°C/0.3°F/0.2K

To Order (*insert number code to complete model number)

Basic Model	Power/ Display	Control Output	Analog Output	Serial Output	Input Signal	Description
INFT	(*)	(*)	(*)	(*)	(*)	Temperature panel meter
INFZT	(*)	(*)	(*)	(*)	(*)	Split meter with remote display
	0					115 Vac power, red LED display
	1					230 Vac power, red LED display
	2					115 Vac power, green LED display
	3					230 Vac power, green LED display
	4					10-32 Vdc power, red LED display**
	5					10-32 Vdc power, green LED display**
		0				Four NPN open collector transistors
		1				Isolated parallel BCD
		2				Two 7 A relays

		3			Two 7 A relays and two 1 A relays**
			0		No analog output
			1		Isolated analog output
				0	No serial output
				1	Isolated RS-232
				2	Isolated RS-485
				(*)	Specify range signal from chart below.*

** 4 Relay option is not available with 10-32 Vdc Power Option

Range Code	Range	Range Code	Range
J (*)	Iron-Constantan	S (*)	Pt10%Rh-Pt
K (*)	Chromel-Alumel	N (*)	Nicrosil-Nisil
E (*)	Chromel-Constantan	J DIN (*)	Iron Constantan
T (*)	Copper-Constantan	RTD (*)	RTD, 10ohm Copper
B (*)	Pt30%Rh-Pt6%Rh	RTD (*)	RTD, 100ohm Pt 0.00385
R (*)	Pt13%Rh-Pt	RTD (*)	RTD, 100ohm Pt 0.00392

* Specify C (°Celsius), F (°Fahrenheit), or K (Kelvin)

Product Selection (Specify Model Number, see variations below in partnumber builder table)		
Part Number	Description	Qty.
INFT-0000-KF	INFINITY® Temperature meter, 115 Vac power, red LED display, open collector transistors, configured for type K thermocouple and °F display	
INFT-0010-RTD2C	INFINITY® Temperature meter, 115 Vac power, red LED display, open collector transistors, analog output, configured for 100 ohm Pt RTD (0.00385 alpha) and °C display	
INFT-0200-TC	INFINITY® Temperature meter, 115 Vac power, red LED display, two 7 A relays, configured for type T thermocouple and °C display	
INFT-0210-JF	INFINITY® Temperature meter, 115 Vac power, red LED display, two 7 A relays, analog output, configured for type J thermocouple and °F display	
INFT-0211-JC	INFINITY® Temperature meter, 115 Vac power, red LED display, two 7 A relays, analog output, RS-232 serial output, configured for type J thermocouple and °C display	

Part Number Builder

(1)		(2)	(3)	(4)	(5)		(6)	(7)	
	INFT	-	0	0	0	0	-	RTD1	C

Option Descriptions

(1) Meter Type*Select***INFT** for INFINITY® TEMPERATURE input meter**INFZT** for TEMPERATURE input split meter with remote display**(2) Power and LED Color***Select***0** for Designates 115 Vac power and red LED display**1** for Designates 230 Vac power and red LED display**2** for Designates 115 Vac power and green LED display**3** for Designates 230 Vac power and green LED display**4** for Designates 10-32 Vdc power and red LED display**5** for Designates 10-32 Vdc power and green LED display**(3) BCD and Control Outputs***Select***0** for Four optically isolated open-collector outputs**1** for Isolated parallel BCD output (BCD1)**2** for Isolated dual 7 A relays (REL1)**3** for Isolated dual 7 amp and dual 1 amp relays (REL4), not available with DC power**(4) Analog Output***Select***0** for No analog output**1** for Isolated analog output (AN03)**(5) Serial Outputs***Select***0** for No serial output**1** for Isolated RS-232 serial output (RS24)**2** for Isolated RS-485 serial addressable output (RS24)**(6) Input Options***Select***RTD1** for 10 ohm Copper RTD**RTD2** for 100 ohm Pt RTD with 0.00385 alpha**RTD3** for 100 ohm Pt RTD with 0.00392 alpha**J** for Iron-Constantan**K** for Chromel-Alumel**E** for Chromel-Constantan**T** for Copper-Constantan**B** for Pt30%Rh-Pt6%Rh**S** for Pt10%Rh-Pt**N** for Nicrosil-Nisil**DIN J** for Iron-Constantan**(7) Temperature Units (Thermocouple/RTD configurations)***Select***C** for °C (Celsius)**F** for °F (Fahrenheit)**K** for Kelvin

NOTE: All combinations may not be valid, check spec sheet for valid part numbers.