ZESTA
Industrial Thermal Technologies

DATASHEET
PAN-D4T-0119

D4T Benchtop Datalogger

- ☑ Robust, Portable Design
- ☑ Intuitive 4.3” Touch-Screen UI
- ☑ 1 to 24 Channels
- ☑ Log up to 128 Points Simultaneously
- ☑ Programmable Function Blocks

Available From Stock

Zesta’s D4T Benchtop Datalogger is loaded with powerful features, yet its intuitive navigation allows for quick setup and easy operation. It is equipped with a 4.3-inch, colour, graphical touch-screen interface. Users can fully personalized the user interface by renaming channels, alarms, inputs and outputs with user defined names.

Completely flexible, it can be configured with channels ranging from 1 to 24, and can log up to 128 parameters simultaneously, depending on configuration. It records as fast as one time per 0.1 second or as slow as one time per hour.

The D4T Benchtop Datalogger easily complies with regulatory standards with ability to choose encrypted, .CSV or both types of file formats for tamper proof record needs. It enables security using lock-out security levels for different user groups.

The D4T Benchtop Datalogger is field expandable. Many optional features (encryption, graphical trend charts, function block sets, additional channels etc.) can be activated instantly in the field. Inputs and outputs are also field expandable. Ask your Zesta sales representative for details.

From laboratory to the field, Zesta’s D4T Benchtop Datalogger delivers complete flexibility and simplicity to your most demanding data logging application.

FEATURES:

- 4.3-inch color graphical touch panel
- Data logging with encrypted files
- Graphical trend charts
- Inputs and outputs from 1 to 24
- Intuitive user interface with screen personalization. Channels, alarms, inputs and outputs can be personalized with user defined names
- Programmable timers, counters, math and logic
- Log temperature, altitude, relative humidity and Vaisala® humidity compensation, AC current and other 0-10VDC or 0-20mA process units
- USB port for recording to memory stick
- Configuration settings can be stored and recalled
- Ethernet Modbus® TCP connectivity
- Agency approvals: CSA/UL508 NRTL/C, File No.LR91385

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D4T Benchtop Datalogger

SPECIFICATIONS

Power
- 120V, 50/60Hz, 5ft power cord & 125VAC plug
- 240V, 50/60Hz, 5ft power cord & 250VAC plug

User Interface
- 4.3 inch TFT PCAP color graphic touch screen
- LED backlife >50K hours
- 4 keys: Home, Main Menu, Back, Help
- On/Off button on front plate

Data Logging
- User selectable parameters: Up to a maximum of 128 active parameters depending on configuration
- Logging interval: Programmable increments between 0.1 seconds and 60 minutes if logging to internal memory. Logging directly to USB; 1.0 seconds to 60 minutes
- File types: .CSV for standard data logging or proprietary format for encrypted data log option
- Storage: 80MB internal memory or to USB memory stick
- File transfer: Internal memory to USB host port or to Ethernet Modbus® TCP
- Transfer options: On demand by user or user programmable based on when a new data log file record is available. Utilizes TFTP and Samba protocols
- Record: Date and time stamped
- Data retention upon power failure via nonvolatile memory

Trending Option
- 4 user programmable charts
- 6 pens available per chart
- View analog sensors, process values, set points and power

Calibration Accuracy
- Calibration accuracy and sensor conformity: ±0.1% of span, ±1°C at the calibrated ambient temperature and rated line voltage
- Types R, S, B: ±0.2%
- Type T below -50°C: ±0.2%
- Calibration ambient temperature at 77°F ±5°F (25°C ±3°C)
- Accuracy span: 1000°F (540°C) min.
- Temperature stability: Typical ±0.1°F/°F (±0.1°C/°C) rise in ambient max.

Real Time Clock with Battery Backup
- Accuracy (typical): +/-3ppm over -15 to 50°C
- Typical battery life: 10 years at 77°F (25°C)
- Field replaceable lithium battery

Alarm
- User programmable alarms

Communications
- Ethernet Modbus® TCP
- Isolated communications

Environment
- NEMA Type 1 Enclosure
- Operating temperature: 0 to 104°F (-18 to 40°C)
- Storage temperature: -40 to 185°F (-40 to 85°C)
- Relative humidity: 0 to 90%, non-condensing

Dimensions
- 12" x 10" x 7" (H x W x D) nominal

Signal Input
Thermocouple, grounded or ungrounded.
- Accepts all standard size and miniature male connectors.
- Type J: -346 to 2192°F (-210 to 1200°C)
- Type K: -454 to 2500°F (-270 to 1371°C)
- Type T: -454 to 750°F (-270 to 400°C)
- Type E: -454 to 1832°F (-270 to 1000°C)
- Type N: -454 to 2372°F (-270 to 1300°C)
- Type C: 32 to 4200°F (0 to 2315°C)
- Type D: 32 to 4200°F (0 to 2315°C)
- Type F (PTII): 32 to 2449°F (0 to 1343°C)
- Type R: -58 to 3214°F (-50 to 1767°C)
- Type S: -58 to 3214°F (-50 to 1767°C)
- Type B: 32 to 3300°F (0 to 1816°C)

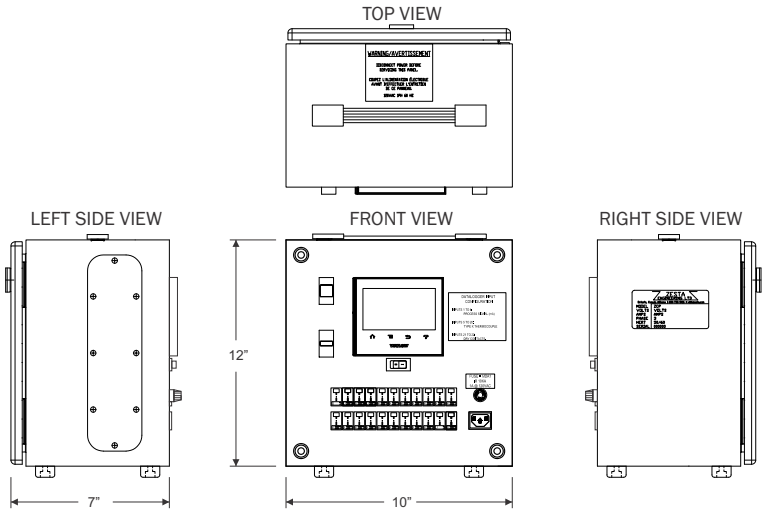
RTD, 2-wire or 3-wire
- RTD 100-ohm: -328 to 1472°F (-200 to 800°C)
- RTD 1000-ohm: -328 to 1472°F (-200 to 800°C)

Thermistor *(custom option, consult factory)*
- 0-40kΩ, 0-20kΩ, 0-10kΩ, 0-5kΩ
- 2.252kΩ and 10kΩ base at 77°F (25°C)
- Linearization curves built in

Universal Process
- Process, 0-20mA @ 100Ω, or 0-10VDC @ 20kΩ input impedance; scalable, 0-50mV, 0-1000Ω
- Process: -1999 to 9999 units

Agency Approval
- CSA/UL508 NRTL/C, File No.LR91385

CSA File No.LR91385
NRTL/C



D4T Benchtop Datalogger

SPECIFICATIONS (cont'd)

Function Blocks

Number of Function Blocks by Ordering Option

Function Block	Basic	Set 1	Set 2
Alarm	6	8	14
Compare	None	4	16
Counter	None	4	16
Linearization	4	4	8
Logic	None	12	24
Math	None	12	24
Process Value	4	4	8
Special Output Function (including compressor)	None	2	4
Timer	None	6	16
Variable	4	12	24

Compare
- Greater than, less than, equal, not equal, greater than or equal, less than or equal

Counters
- Counts up or down, loads predetermined value on load signal

Linearization
- Interpolated or stepped

Logic
- And, nand, or, nor, equal, not equal, latch, flip-flop

Math
- Average, process scale, switch over, deviation scale, differential (subtract), ratio (divide), add, multiply, absolute difference, minimum, maximum, square root, sample and hold, pressure-to-altitude and dew point

Process Value
- Sensor backup, average, crossover, wet bulb-dry bulb, switch over, differential (subtract), ratio (divide), add, multiply, absolute difference, minimum, maximum, square root, altitude, Vaisala® relative humidity and pressure-to-altitude

Special Output Function
- Compressor control (cool and/or dehumidify with single compressor), motorized valve, sequencer

Timers
- On pulse, delay, one shot or retentive

Variable
- User value for digital or analog variable

ORDERING INFORMATION

To order, complete the code number to the right with the information below:

ZCPD4T □□□□□□□

AC Power Input:
- 1 = 120VAC, 50/60Hz
- 2 = 240VAC, 50/60Hz

Data Logging and Graphic Trend Charts:
- J = Data logging
- K = Data logging with encrypted files
- L = Data logging with graphical trend chart
- M= Data logging with encrypted files and graphical trend chart

Function Blocks:
- A = Function Blocks: Basic Set
- B = Function Blocks: Set 1
- C = Function Blocks: Set 2

Note: Refer to top of page 3 "Number of Function Blocks by Ordering Option" for quantities and types of functions blocks in each set.

Number of Logging Channels:

U1	=	1 channel	04	=	4 channels
U2	=	2 channels	08	=	8 channels
U3	=	3 channels	12	=	12 channels
U4	=	4 channels	16	=	16 channels
U5	=	5 channels	20	=	20 channels
U6	=	6 channels	24	=	24 channels
			XX	=	Different channel quantity

Input Type:
- J = Type J Thermocouple(s)
- K = Type K Thermocouple(s)
- T = Type T Thermocouple(s)
- E = Type E Thermocouple(s)
- N = Type N Thermocouple(s)
- C = Type C Thermocouple(s)
- D = Type D Thermocouple(s)
- F = Type F Thermocouple(s)
- R = Type R Thermocouple(s)
- S = Type S Thermocouple(s)
- B = Type B Thermocouple(s)
- 2 = 2 Wire RTD(s) PT100
- 3 = 3 Wire RTD(s) PT100
- 4 = 2 Wire RTD(s) PT1000
- 5 = 3 Wire RTD(s) PT1000
- 6 = Process 0-20mA
- 7 = Process 0-10VDC
- X = Different input combinations. Thermistor input(s) also available. Contact factory for assistance.

Custom Options:

Options below are not available with 6 or 24 channel input models
- 0 = None
- D = 6 digital I/O
- E = 1 alarm output, mechanical relay 5A
- F = Universal retransmit, up to 3 signals
- J = 4 alarm outputs, mechanical relay 5A
- M= Modbus RTU 232/485 communications
- X = Custom Option (consult factory)

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