

# DataNet

## Wireless intelligent logging network

### Specifications

#### INPUTS

- 4 channel inputs
- Selectable type for each input: 4 to 20 mA, 0 to 50 mV, 0 to 1 V, PT-100, Thermocouple, Pulse counter (Input 4 only), Channel 4 - frequency (Input 4 only) and user defined sensors

#### INPUT TYPES

##### 4 to 20 mA

- Range: 4 to 20 mA
- Resolution: 0.47  $\mu$ A
- Accuracy:  $\pm 0.5$  %
- Loop impedance: 21  $\Omega$
- Maximum load: 30 mA, 5.2 V

##### 0 to 50 mV

- Range: 0 to 50 mV
- Resolution: 3  $\mu$ V
- Accuracy:  $\pm 0.5$  %
- Input impedance: 25 M $\Omega$
- Maximum voltage: 5.2 V

##### 0 to 1 V

- Range: 0 to 1 V
- Resolution: 200  $\mu$ V
- Accuracy:  $\pm 0.5$  %
- Input impedance: 25 M $\Omega$
- Maximum voltage: 5.2 V

##### Temperature PT100 (2 wires)

- Range: -200 to 400  $^{\circ}$ C
- Resolution: 0.1  $^{\circ}$ C
- Accuracy: -200 to -60  $^{\circ}$ C  $\pm 0.5$  %  
60 to 400  $^{\circ}$ C  $\pm 0.5$  %  
-60 to 60  $^{\circ}$ C  $\pm 0.3$   $^{\circ}$ C

##### Temperature Thermocouple J

- Range: -200 to 1,000  $^{\circ}$ C
- Resolution: 0.1  $^{\circ}$ C
- Accuracy: -200 to -60  $^{\circ}$ C  $\pm 0.5$  %  
60 to 1,000  $^{\circ}$ C  $\pm 0.5$  %  
-60 to 60  $^{\circ}$ C  $\pm 0.3$   $^{\circ}$ C
- Cold junction compensation:  $\pm 0.3$   $^{\circ}$ C

##### Temperature Thermocouple K

- Range: -200 to 1,000  $^{\circ}$ C
- Resolution: 0.1  $^{\circ}$ C
- Accuracy: -200 to -60  $^{\circ}$ C  $\pm 0.5$  %  
60 to 1,000  $^{\circ}$ C  $\pm 0.5$  %  
-60 to 60  $^{\circ}$ C  $\pm 0.3$   $^{\circ}$ C
- Cold junction compensation:  $\pm 0.3$   $^{\circ}$ C

##### Temperature Thermocouple T

- Range: -200 to 400  $^{\circ}$ C
- Resolution: 0.1  $^{\circ}$ C
- Accuracy: -200 to -60  $^{\circ}$ C  $\pm 0.5$  %  
60 to 400  $^{\circ}$ C  $\pm 0.5$  %  
-60 to 60  $^{\circ}$ C  $\pm 0.3$   $^{\circ}$ C
- Cold junction compensation:  $\pm 0.3$   $^{\circ}$ C

##### Pulse Counter (input 4 only)

- Zero crossing detector
- Range: 1 to 65,536 counts
- Resolution: 1 count
- Frequency range: 0 to 4,000 Hz
- Input signal: 0 to 5 V
- Input impedance: 470  $\Omega$

#### Frequency (input 4 only)

- Zero crossing detector
- Range: 20 Hz to 4 KHz
- Input signal: 0 to 4,000 Hz
- Input impedance: 470  $\Omega$

#### Internal Temperature

- Type: DNL 910: PT100  
DNL 920: Digital
- Range: -20 to 50  $^{\circ}$ C  
[-5 to 50  $^{\circ}$ C while using the batteries w/o AC]
- Resolution: 0.1  $^{\circ}$ C
- Accuracy: DNL 910:  $\pm 0.3$   $^{\circ}$ C  
DNL 920:  $\pm 0.5$   $^{\circ}$ C

#### Internal Humidity

- Range: 5 to 95 %
- Resolution: 0.5 %
- Accuracy:  $\pm 3$  % at 10-90 %

#### EXTERNAL SENSORS

##### PT100 Sensor

- Range: -70 to 400  $^{\circ}$ C
- Cable length: 2.5m/4m/6m
- Teflon cable range: -65 to 200  $^{\circ}$ C
- Probe: Diameter 6mm,  
Length 81mm

(see Ordering Information section)

#### CONNECTIVITY

##### External Power Excitation (transducers usage)

- 12 VDC @ 2 A

##### Alarm Output (output 1)

- Open collector
- Close position resistance: 50  $\Omega$
- Max. Load: 50 mA, 3 V DC
- Overload protection
- 50mA reset fuse

##### PC Communication

- USB 2.0 compliance

##### Type of USB Cable

- Mini USB type B

##### RF Network Communication

- Frequency: 2.4 GHz
- Network units: 65,000
- Data rate: 250 Kbps
- Full mesh network architecture supported
- 128-bit network security encryption
- Worldwide license-free
- RF Transmission range boost mode 80 m (line of sight)
- RF Transmission range power amplifier 800 m (line of sight)

##### Sampling Features

- Memory capacity: 59,000 samples
- Sampling rate: 1 per sec to 1 per every 2 hours

(For PT100 or Thermocouple sensors:

Max Sampling rate with more than two sensors connected 1 sample per 2 secs)

- Sampling resolution: 16 bit
- Channel separation: 80 dB

#### Man Machine Interface

- Full keyboard operation

#### Display

- 2 row LCD
- 16 characters display

#### Power Supply

- Internal rechargeable 4.8 V NiMH battery
- Built-in battery charger
- External 12 V DC input

#### Operating Temperature Range

- -20 to 50  $^{\circ}$ C

#### Casing

- Plastic ABS box
- Dimensions: 97 x 93 x 27 mm
- Weight: 200 gr

#### Standards Compliance

- CE, FCC

- Internal battery specs: 4.8 V 800 mAh NiMH battery (2 batteries in series)

- External voltage specs: DC 12 V @ 300 mA 3.6 VA

#### GSM MODEM EZ-10

##### Frequency Bands

- GSM-850/EGSM-900/DCS-1800 PCS-1900 MHz Quad-Band

##### GPRS

- Class 10

##### RJ11 AUX Connector

- GPIO

##### Interface Configurations

- RS232: Serial Interface
- Power: 12V DC

##### Dimensions

- 83 x 107 x 64 x 33 mm

##### Temperature Range

- Normal: -10 to +55  $^{\circ}$ C
- Extreme: -20 to +70  $^{\circ}$ C
- Storage: -30 to +85  $^{\circ}$ C

#### DATANET SOFTWARE

##### Main Features

- Windows<sup>®</sup> based software
- Data displayed in numeric or graphical display of all inputs
- On-line retrieval and display of the collected data in real-time
- Definition of new sensors
- Ability to read the defined sensor's units on the logger's display
- Full calibration of the loggers via the software
- Documentation and filing
- Alarm levels on graphs
- Export to spreadsheets
- Analytical functions, for professional analysis of the collected data
- Manual backup of calibration settings
- Over-the-air firmware update

For more information visit [www.fouriersystems.com](http://www.fouriersystems.com)  
or Contact [info@fouriersystems.com](mailto:info@fouriersystems.com)