INTRODUCTION

FieldLogger is a versatile, powerful and yet cost effective data logger handling analog, digital and other types of variables with high resolution and speed. It is a high performance and high connectivity equipment and yet easy to configure and operate.

It has 8 configurable analog inputs that can read thermocouples, Pt100, Pt1000, voltage and current signals. It also has 2 relay outputs and 8 digital ports individually configurable as inputs or outputs.

Up to 128 mathematical channels can be used to perform operations on the measured values. Up to 32 alarm events can be detected, allowing output activations, e-mails and SNMP traps sending.

Its RS485 interface can operate as a Modbus RTU master or slave. As a master, it can read and log up to 64 external channels. It has a 10/100 Mbps Ethernet interface that allows for access through a browser (HTTP), FTP (client and server), e-mails sending (SMTP), SNMP and Modbus TCP.

FieldLogger has one USB interface to be connected to a computer (for configuration, monitoring and data download) and another USB port for plugging a flash driver for data retrieval. The 512k logging basic memory is used to store data and it can be greatly expanded with an SD card.

An exclusive color HMI can be attached or remotely installed for local indication or configuration. A user friendly configurator software can be accessed by Ethernet, USB or RS485 and also

FEATURES

- 8 universal analog input channels:
    - Thermocouples, V, mV, mA, Pt100 and Pt1000
    - Reading and logging rates of up to 1000/second
    - 24 bit A/D conversion resolution
- 8 digital I/Os (individually configured as input or output)
- 2 relay outputs (NO, NC and common)
- RS485 interface (Modbus master or slave)
    - When acting as a master, can read up to 64 registers from other slaves
    - Registers read can be used in logging, alarms or mathematical operations
- Ethernet interface with a lot of services available:
    - Sends alarm warning e-mails (SMTP)
    - Provides web pages with channels and status information (HTTP)
    - Allows logged data download via FTP (client and server)
    - Accesses status and channels values through network management software (SNMP and traps)
    - Allows Modbus comunication by ethernet interface (Modbus TCP)
- USB-device interface for configuring, monitoring and download
- USB-host interface for logged data retrieval through a USB flash drive
- Up to 32 configurable alarms
    Alarm actions can include:
    - Activating relays
    - Activating digital outputs
    - E-mails sending to multiple receivers
    - Sending SNMP traps
    - Starting and/or stopping loggings
- Up to 128 virtual channels
    - Basic mathematical functions to be applied on other channels: sum, subtraction, multiplication, division, logic (AND, OR and exclusive OR), square root and power
- 24 Vdc output for powering up to eight 4-20 mA transmitters
- Power: 100 to 240 Vac or 24 Vdc
- Detachable human-machine interface (optional)
    - Keypad and color TFT QVGA display
    - RS485 communication with FieldLogger
- Loggings:
    - Up to 100 channels can be logged at a configurable rate
    - Data download through the configuration software or through the freely distributed download DLL

INPUTS AND MAXIMUM RANGES

| INPUT	MEASURING RANGE
Thermocouple J	-120 to 1000 °C (-184 to 1832 °F)
Thermocouple K	-130 to 1372 °C (-202 to 2501.6 °F)
Thermocouple T	-130 to 400 °C (-202 to 752 °F)
Thermocouple E	-130 to 780 °C (-202 to 1436 °F)
Thermocouple N	-130 to 1300 °C (-202 to 2372 °F)
Thermocouple R	20 to 1768 °C (68 to 3214.4 °F)
Thermocouple S	20 to 1768 °C (68 to 3214,4 °F)
Thermocouple B	100 to 1820 °C (212 to 3308 °F)
Pt100	-200 to 850 °C (-328 to 1562 °F)
Pt 1000	-200 to 850 °C (-328 to 1562 °F)
Linear 0 to 20 mA	Configurable
Linear 4 to 20 mA	Configurable
Linear 0 to 20 mV	Configurable
Linear 0 to 50 mV	Configurable
Linear 0 to 60 mV	Configurable
Linear -20 to 20 mV	Configurable
Linear 0 to 5 V	Configurable
Linear 0 to 10 V	Configurable

SPECIFICATIONS

- Power:
  100 to 240 Vac, 50/60 Hz
  Consumption: 8 VA (Max)
- Environmental conditions:
  Operating temperature: 0 to 50 °C
  Relative humidity: 80 % up to 30 °C. For temperatures higher than 30 °C, dicrease 3% for °C
- Altitude < 2000 m
- Protection: IP20
- Accuracy
  Thermocouples J, K, T, E and N: 0.2 % of the span ± 1 °C.
  Thermocouples R, S and B: 0.2 % of the span ± 3 °C.
  Pt100, Pt1000, 0-20 mA, 4-20 mA, 0-20 mV, 0-50 mV, 0-60 mV, -20-20 mV, 0-5 V and 0-10 V: 0.15 % of the span.
- Analog channels input impedance:
  Thermocouples / Pt100 / Pt1000 / mV: > 2 MΩ
  mA: 15Ω + 1.5 V
  V: 1.1 M Ω
- Excitation current:
  Pt100s: 360 µA; Pt1000s: 320 µA
- Maximum Pt100/ Pt1000 compensated cable resistance: 40 Ω
- Digital inputs:
  Logic level "0": from 0 to 0.8 Vdc
  Logic level "1": from 2 to 30 Vdc
  Maximum input voltage: 30 Vdc
  Input current @ 30 Vdc (tipical): 3 mA
- Digital outputs:
  Maximum output voltage: 30 Vdc
  Maximum output current: 200 mA
- Maximum relay current: 3 A @ 250 Vac; 3 A @ 30 Vdc
- Configurable logging rate, with logging intervals from 1 ms to 24 hours
- Maximum channel amount allowed to be logged: 100
- Supported Modbus commands:
  Read Coil Status (01h)
  Read Holding Registers (03h)
  Write Single Coil (05h)
  Write Single Register (06h)
  Write Multiple Registers (0Fh)
- Maximum TCP simultaneous connections: 10
- Maximum UDP simultaneous connections: 10
- FTP (FieldLogger as a server):
  Supported mode: passive
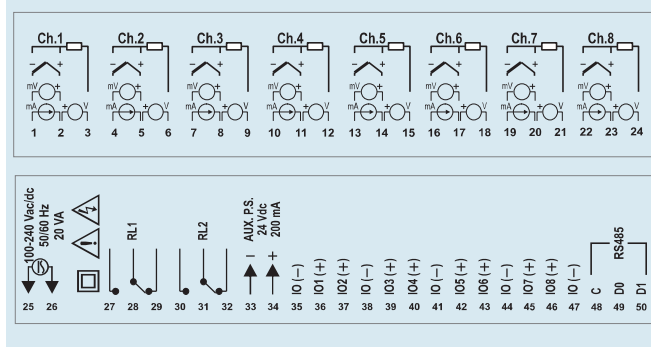 Standard: UNIX
  Maximum simultaneous connections: 1

CONFIGURATION

An intuitive configuration software goes along with the equipment, allowing an easy configuration due to its wizard-like step-by-step system. Users can save the configuration in files and load it at a later time. Communication with the equipment can be done through USB, RS485 or even Ethernet (Modbus TCP) interface.

Besides configuring, it also allows to view the configured channels, alarms state and a lot more status information. It still allows logged data download and export them to several known formats. Compatible with Windows XP, Vista and 7.
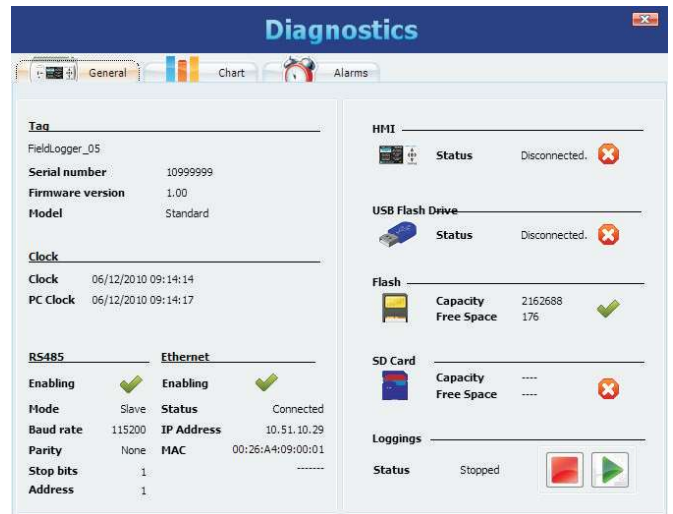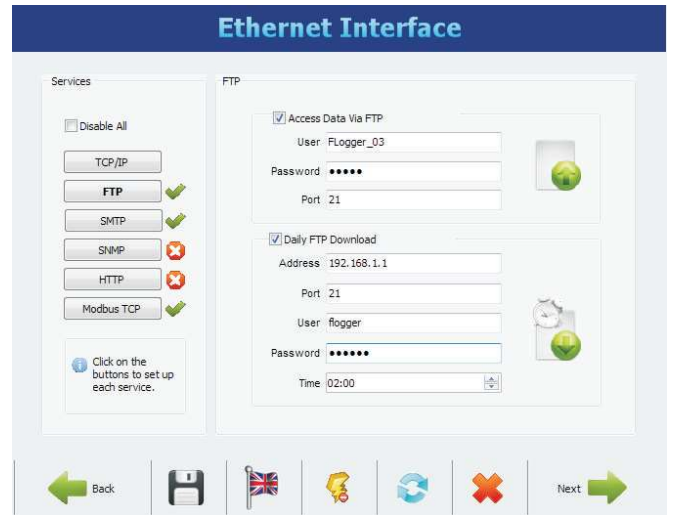
ELECTRICAL CONNECTIONS

DIMENSIONS

117 mm

162,5 mm

70 mm