DI1 RS-485 Data Collection Recorder

■ Products

DL1 is design to communicate through RS485 to read variety of devices (Such as instrumentation, PLC, A / D conversion card ....) and stored the data collected into a SD card .Data can then be converted to Excel file format on a computer to perform analysis and production of related reports needed by users.

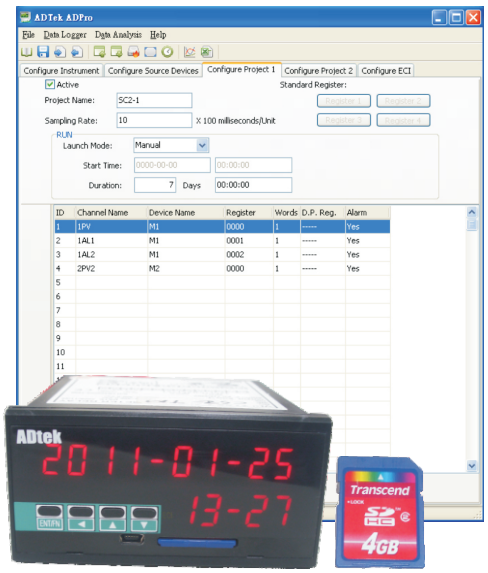
This product not only read and record data speed up to 0.1 seconds, and its flexible software setting allows in many ways for easy planning. For multiple projects user, DL1 provide two project planning procedures which stored the data into two separate files. After all setting on software, parameter can be upload/download to DL1 using a USB interface cable. Recording can be start by external DI contact or by meter button.

ADPro is the software provided with the hardware for setting parameters and procedures planning through the USB interface cable to the DL1

Ethernet to link trends, DL1 also designed an Ethernet interface, can measure the underlying data storage device completed by DL1 and convert uploaded to the Ethernet, the site is very easy to measure the upload unit Data to the Ethernet layer, to facilitate remote data transfer unbounded ◦

Today there are lots of field (such as industrial, energy, environment monitoring, commercial information ....),needs record process data, providing DL1 is rather inexpensive solution compare to present industrial recorder.

DL1 give a simple, convenient and economical solution for all.



■ Product Features

■ Input-output interface

- 1 group RS485 Master Communication port (Modbus RTU mode), can connect from 1 (standard) to 32 devices (Devices), maximum read speeds from 0.1 seconds
- Display window showing Multiple name tags and information in the Same loop for users to understand the recording status.
- Optional two groups relay outputs, all data can be arbitrarily set alarm values corresponding
- Two external control inputs can be arbitrarily set to automatic record count input or frequency input, and other related functions
- Optional 1 group RS485 Slave Communication port (Modbus RTU mode),communication speed up to 38400bps, to connect the upper PC, PLC, DCS ... etc.RS485 Master Communication port, the data were uploaded to the top of the control unit
- Optional 1 group Ethernet interface, can measure the underlying device data storage and Converter completed by DL1 and uploaded to the Ethernet
- Innovative disk installation (96 x 48 mm), installation depth is only 120mm, with a variety of devices suitable for long-term record storage
- 1 group SD card slot, you can use 1 ~ 32G SD card to store and read the data
- 1 group USB interface, can be used with the ADPro software upload ,download and updating software to set parameters and software features
- Configuration software with operation (API), can be set on the PC and then sent to theDL1 implementing plan; download the data in the API to perform log analysis, or directly on-line monitoring display
- Choose different way to commence recording (manual, time clock, external control),by individual setting of the read devices and RS 485 address location, and also perform two different programs Project.

■ Applications

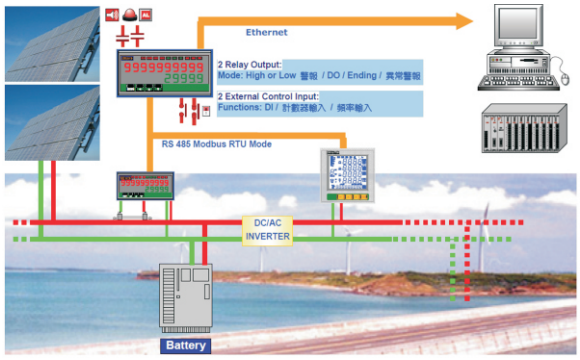
■ Features

- Security features high (or low) value alarm
- SD card data storage and record analysis Through the RS485 interface to record data on any device
- Communication Rs485 Master and an RS485 Slave, can be used as a relay unit of data collection, increasing communication effectiveness; and as a RS485/Ethernet converter, to transfer data to the Ethernet

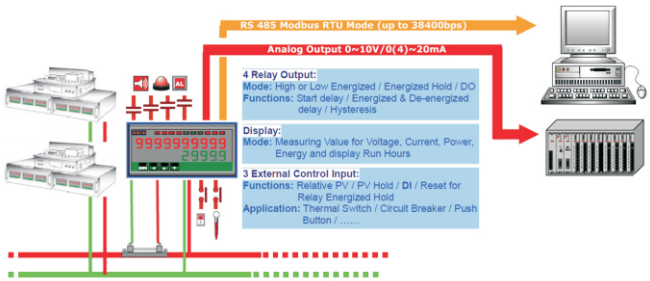
■ Occasions

- Production line test equipment, information and data system recording Online quality control data collection
- Test equipment Portable data logging devices measuring
- Production equipment PLC action program records and Abnormal ； Records of power consumption
- Solar Power System power generation records and efficiency

DL1 used in solar and wind power generation



DL1 used in production line quality control test records



■ ORDERING INFORMATIOM

DL1 - Rs485 sub-machine - Option 1 Multi-record - Option 2 OUTPUT - Option 3 RS485 Slave - Option 4 Ethernet Interface - Aux Power

CODE	Rs485 sub-machine
01	1 sub-machine
06	1~6 sub-machine
12	1~12 sub-machine
18	1~18 sub-machine
32	1~32 sub-machine

CODE	Multi-record
P1	Single-1 program
P2	can be set 2 Program

CODE	OUTPUT
RN	NONE
R3	3 Group relays

CODE	OUTPUT
8N	NONE
8S	RS485 Slave

CODE	Ethernet Interface
TN	NONE
T1	Ethernet Interface

CODE	Aux Power
ADH	AC 85~264V DC 100~300V
ADL	AC 20~56V DC 20~56V

Purchase parts and materials No: SD card reader : materials No:DL1-USB-SDR
USB download cable : materials No:DL1-USB-WIRE

Note: The light-colored part of the specifications for the new version of the word book additional features, is currently temporarily unavailable。

■TECHNICAL SPECIFICATION

Read

Read mode: RS485 Master Communication Interface
communication protocol: Modbus RTU mode
Baud rate: 1200/2400/4800/9600/19200/38400
Data bits: 7 or 8 bits can be setting
stop bits: 1 or 2 bits can be setting
Parity check: Odd or none can be setting
Address: 1 ~ 255 can be setting
Read address: Each unit can be individually set the read location (address)and length(words)
Wiring distance: 1200M max
Termination resistors: 150Ω.
Function: Automatically detect each unit (Devices) in the connection status

Data storage

Memory Card: Bundled with 4GB SDHC Class 4 memory card, maximum support to the 32GB
Storage: Through the RS485 port, the connection device will read the value stored in the SD
Save rate: 0.1 seconds Fast, can be set (storage unit number depending on connection speed, read the number and length change)
Save: Different Projects, individual storage for different file name; may by ADPro® software, management, analysis, or converted into Excell format
Functions: SD card automatically detects the available memory space and work status (whether it is normal) SD card space warning output
Date Time Memory: Plug-in coin-type lithium battery, the battery life of 3 years
(Note: Please state the header transmission installation or replacement of the battery, otherwise it will result in reduced battery life!!)

Display

Display LED: The upper 10-digits, 0.36"(9mm) high character, high brightness LED
The lower 5-digit, 0.4"(10mm) high characters, high brightness LED
Read information: Display window shows the cycle read
Value display range: A total of 10-digits, maximum support to 4 WORD data，
Maximum display range:-1999999999~+9999999999
Set the decimal point: Decimal places can be set arbitrarily(Set within the ADPro® software)
I / O status display: 4 square LED
Relay output status indication: 2 red LED
SD card status indicators: 1 green LED
RS 485 communications status indicators: 1 orange LED
Alarm buzzer: Built-in buzzer alarm prompted to provide a variety of error messages suggest that
SD card is an exception in package scratch, connection exception in the alarm tips
Prompted alarm state: Alarm channel name occurs, data values and alarm status and tone, and record the HI or LO alarm in the SD card
Connection exception in: Connection exception, will show the location and abnormal cell tone until the anomaly is eliminated
SD card is an exception in: SD card is abnormal, the abnormal state is displayed and the tone until the anomaly is eliminated

API Function

Editing software ADPro® pre-stored in the attached SD card, please use the SD card installed ，or to the Company web site:www.adtek.com.tw

External control input(ECI)

Input mode: 2 set of external control point, contacts or open collector input, potential trigger
External control input for each different functions can be individually set：
DI Function：External boot record, pause, record
Input Function：Counter input、frequency input
DI Function: DI：External control input contact state also recorded in the SD card
Input Function: External boot record ：Contact is turned on, start recording
Pause recording：Contact is turned on, Pause Recording
STOP recording： Contact is turned on, to stop recording
Counter input：External control input is used as counter input, when the contacts connected to 1, the count increased by 1, and records stored on SD card
Frequency input： Frequency of external control input is used as the input signal, DL1 will contact input of the frequency (times / sec) Records stored in the SD card

Control Function(Choose)

Relay: 2 group Relay；FORM-C,5A/230Vac,10A/115V
Each relay can be individually configured ADPro® software, read a number of different Functions alarm (upper and lower limits), SD card exception, RS485 connection exception, DL1 working properly, DO Functions
Alarm Functions: ADPro®software can be set to read all the alarm (upper and lower limits) function to read data points can be individually set the alarm action and alarm mode (upper or lower limit alarm alert); each relay can also set the alarm multiple tables Conditions
SD Card Abnormal output: SD card of any abnormality, the relay output
RS485 Abnormal output: RS485 connection exception, the relay output DL1 exception output: DL1 of any abnormality, the relay output
DO Function: RS 485 command by remote control relay output

Electrical Specifications

Aux. Power: AC/DC85~264V
OPTION:AC/DC20~56V
Power consumption:<5.0VA

Environmental

Work environment : temp -10~60℃/hum.20~85%，Non-condensing
Storage Environment: temp-20~70℃/hum.0~85%，Non-condensing

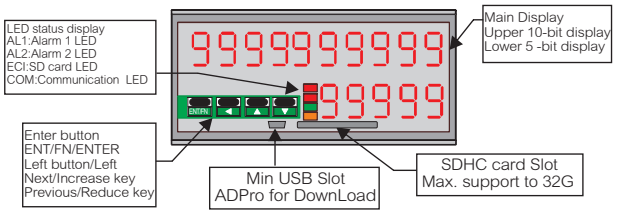
Electrical safety

Surge test: 12KV，1.2x50 usec
Common mode & differential mode
Insulation: ≧100M ohm，DC500V

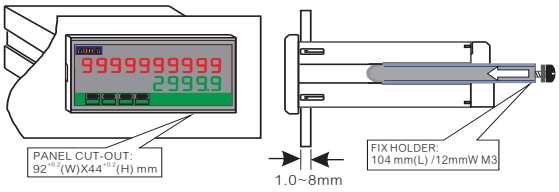
Mechanical

Dimensions: 96W/48H/120D mm
Materials of Housing : ABS Fire protection
Installation: Installation disk

■FRONT PANEL

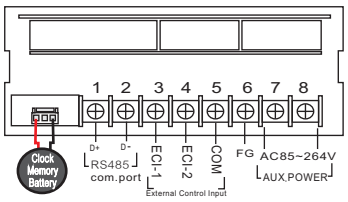


■INSTALLATION



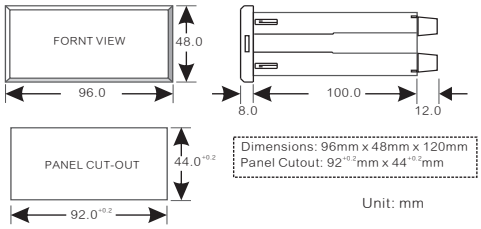
■CONNECTION DIAGRAM

Note: Please state the header transmission installation or replacement of the battery, otherwise it will result in reduced battery life!!



When wiring, make sure the power voltage is correct and the correct terminal number access ⏚ Safety equipment and instrumentation for the proposed installation of the instrument before the fuse or no-fuse breaker

■DIMENSIOM



■ USB CARD READER DL1-USB-SDR

Spec:

Single Slot Card Reader

Support memory card specification:

SD Slot: SDHC/SD/MMC (No transfer card)

MiniSD /RS MMC and Micro SD (T-Flash)(Need to transfer card)

Features:

Can read and write

Supports the following variety of operating systems

Windows 98 SE/98/2000/ME/XP/Vista/7 or Mac OS 8.6 × 10.3

No external power

USB connector ，support Plug and play Hot Swap ， Easy to install and use ， Use of small size,easy to carry

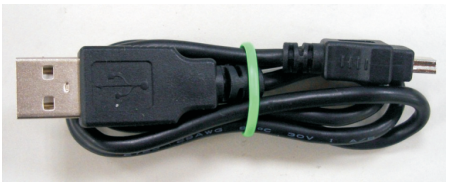
Datatransmission:

USB2.0 specification ， Data transfer rate up to480Mb/sec(Max.)

Operating temp:

0~60℃

■ USB download cable DL1-USB-WIRE



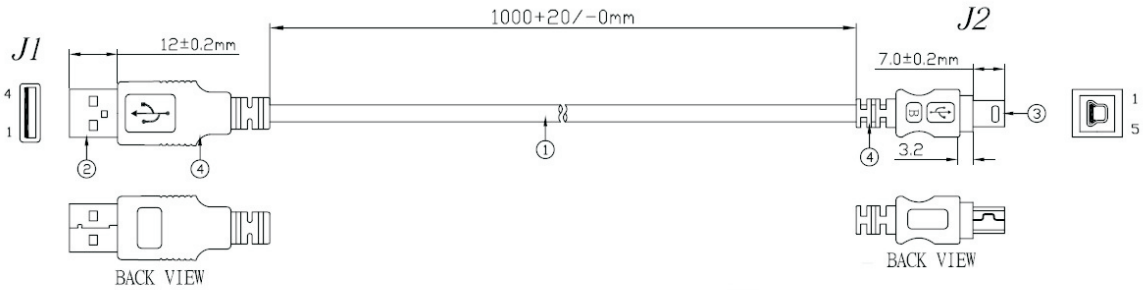
Spec:

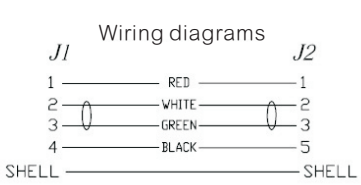
J1:USB Connector

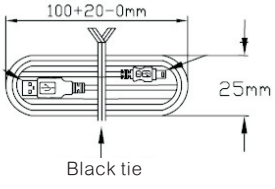
J2:Mini USB Connector

Length:

1M

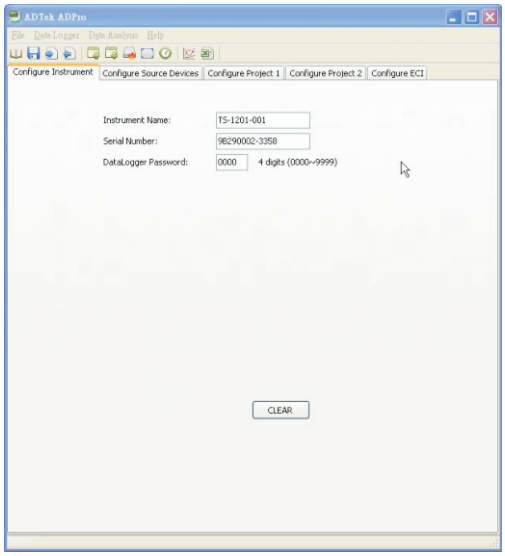




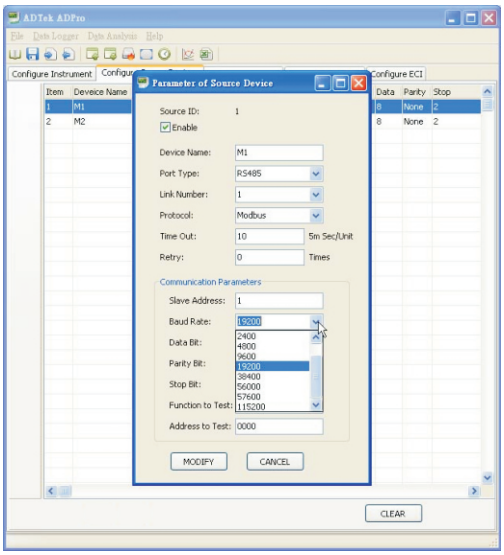


■ADPro® Software Screen Description

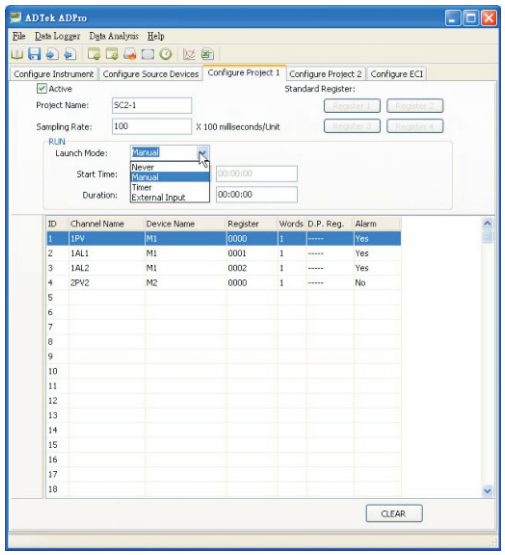
■ Configure Instument



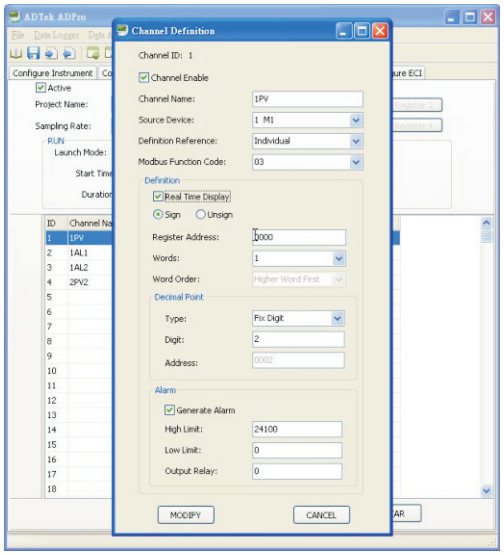
■ Configure Source Devices



■ Configure Project 1



■ Channel Definition



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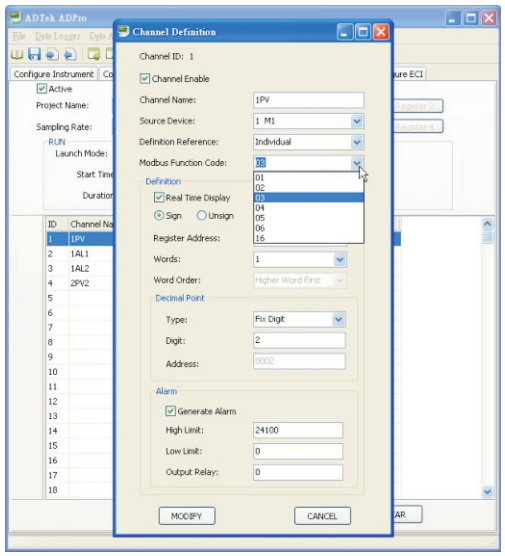

■ Configure ECI