DL1 RS-485 Data Collection Recorder < User Manual>

Thank you for purchasing this instrument, PLEASE READ MANUAL before operating the instrument.
Safety Tips:

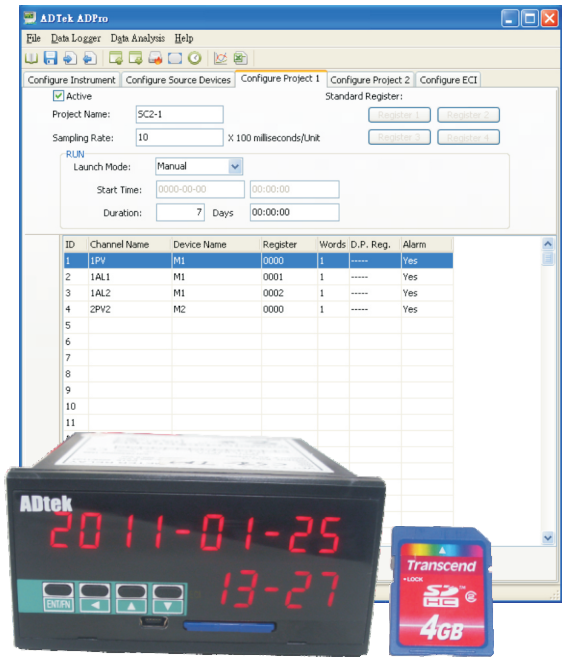
- Power OFF before any Installation and removal of the instrument
- Do not use under direct sunlight (ambient temperature is -10 ~ +60 ℃)
- Be sure to ground the instrument (ground resistance <10 ohms). Do not shared same ground with other large electrical load. Ungrounded or faulty grounding may lead to electric shock, malfunction and other faulty conditions occur
- The device uses single-phase AC power supply 85V ~ 264V.

■Product Description

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. 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.



■Features

◎Communication and display device

- 1 Group RS485 Master Communication port (Modbus RTU mode), connectfrom 1 (standard) to 32 devices. The maximum read speed of 0.1 second
- Circular display window showing the document reading position, and information for users to understand the recording status.
- Two external control inputs can be arbitrarily set to start recording or frequency input, and other related functions
- Innovative disk installation (96 x 48 mm), installation depth is only 120mm, suitable for installation in a variety of devices used for long-term record

◎Storage

- 1 Group SD card slot, you can use 2 ~ 32GB SDHC card to store the data
- 1 Group USB interface cable use with the ADPro® software uploading, downloading configuration parameters and updating software

◎Input and output control device

- 2 set of external control input(E.C.I.)

With the external contact control, instrument can start or stop recording

- Upper or lower limits can be set out warning buzzer to alert operators to abnormal conditions in time

■Applications

- Production line test equipment, data recording system ,data online data collection, quality control of portable test equipment, data recording devices measured.
- PLC equipment and abnormal movements of program records, records of power consumption.
- Records of solar power generation system and efficiency of power generation.

■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

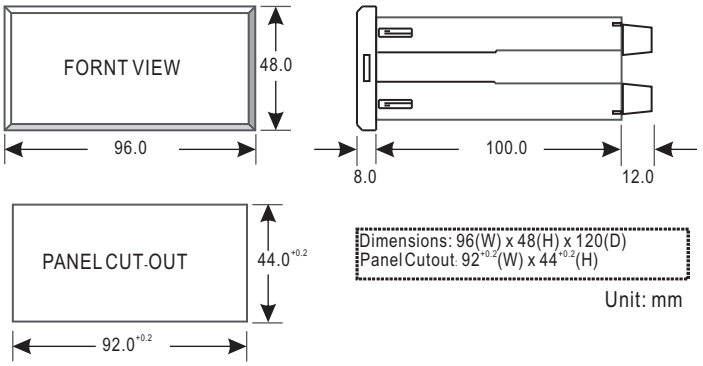
Note: The light-colored part of the specifications for the new version of the word book additional features, is currently temporarily unavailable。

■Seven-segment display (LED) display font table

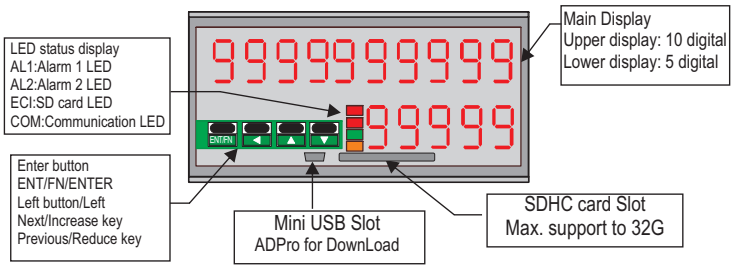
A b C d E F G H i J K L M n o p q r S t U v W X y Z

1 2 3 4 5 6 7 8 9 / .

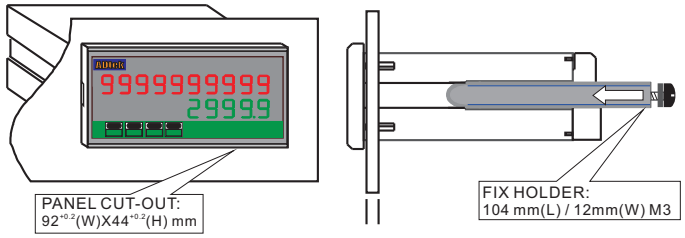
■DIMENSION



■FRONT PANEL

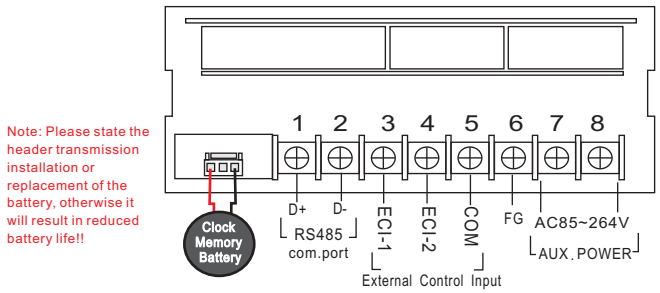


■INSTALLATION



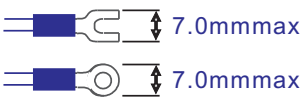
■CONNECTION DIAGRAM

When wiring, make sure the power voltage and terminals connection are correct. Proposed installation of the instrument before the fuse or no-fuse breaker for safety equipment use.

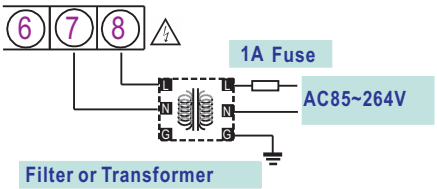


■Wiring Terminal

Terminal 1~8: 15A/600Vac, M3.5, 12~22AWG;
Maximum torque: 13Kg-cm



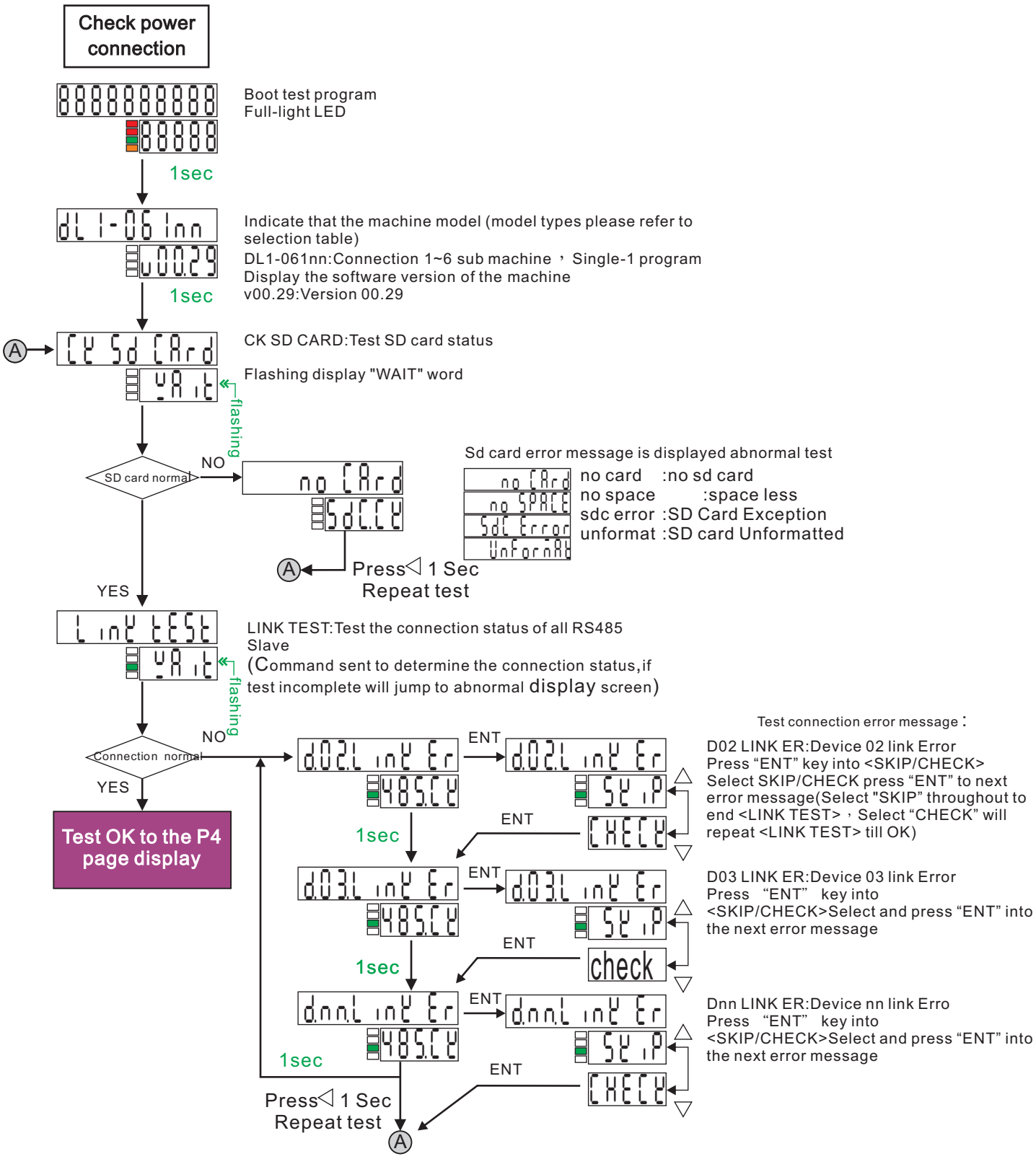
■Power Supply



1.Boot test process

Please read the instructions before formal operation:

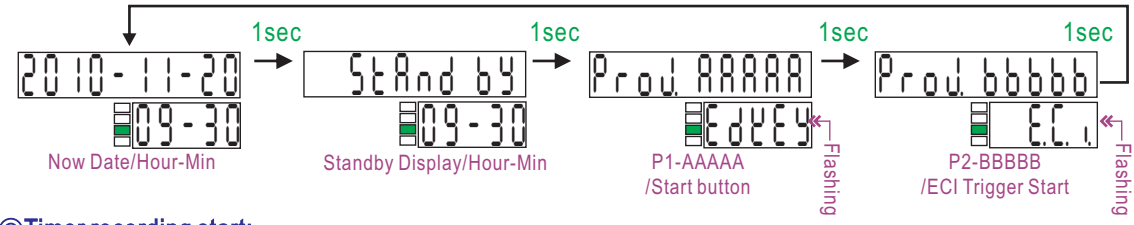
1. Instrument setting is divided into "user level " and "engineers level ".
2. Do not allow non-engineering personnel to modify within "Engineer level ",to avoid system anomalies caused by improper setting or damage。
3. Please read the process description below fully, understand the process flow chart, set the appropriate



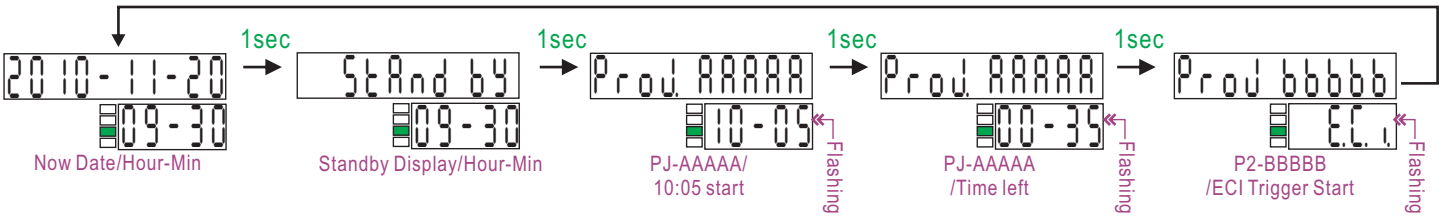
2.1 Standby display User Level

Standby screen details

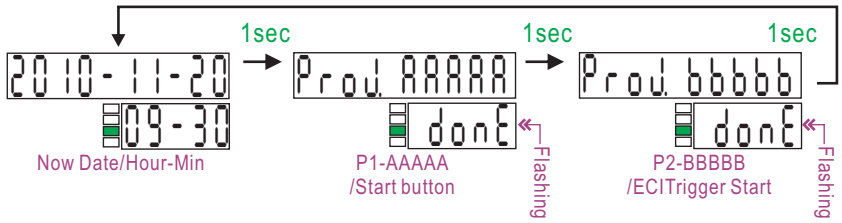
◎Manual/ECI recording start:



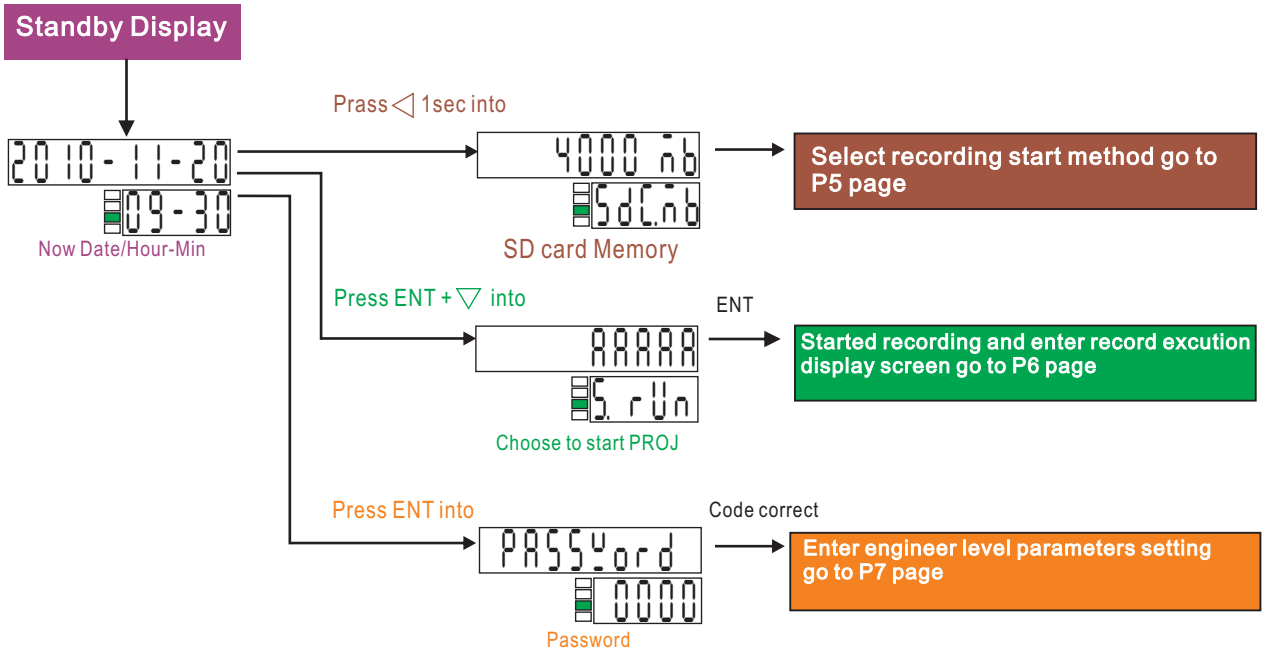
◎Timer recording start:



◎Recording ended:

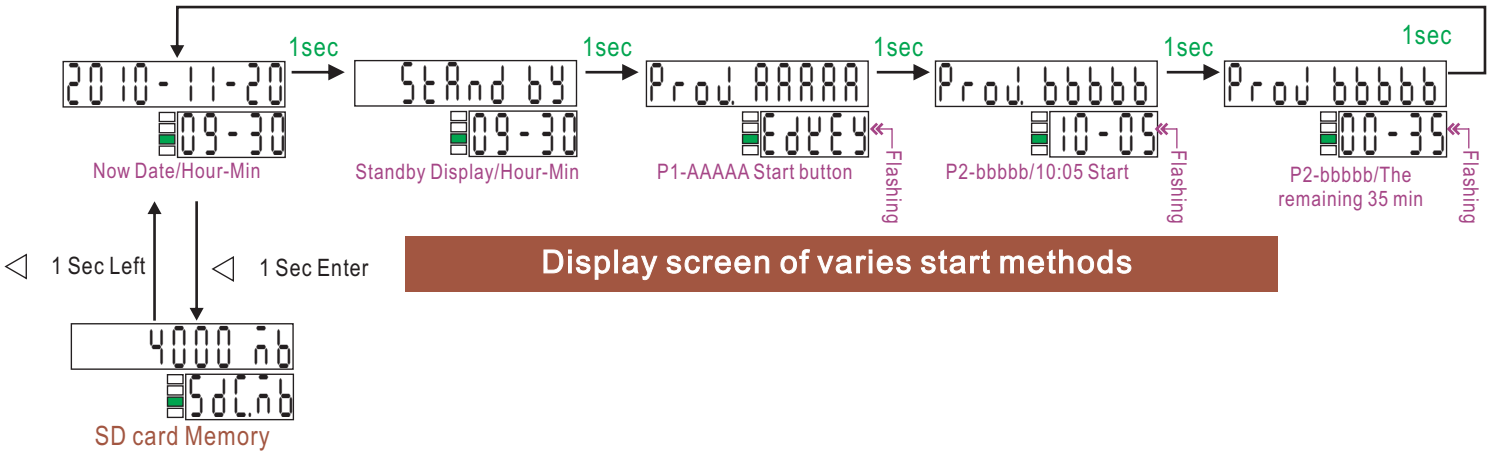


Flow chart display of each parameters setting in details



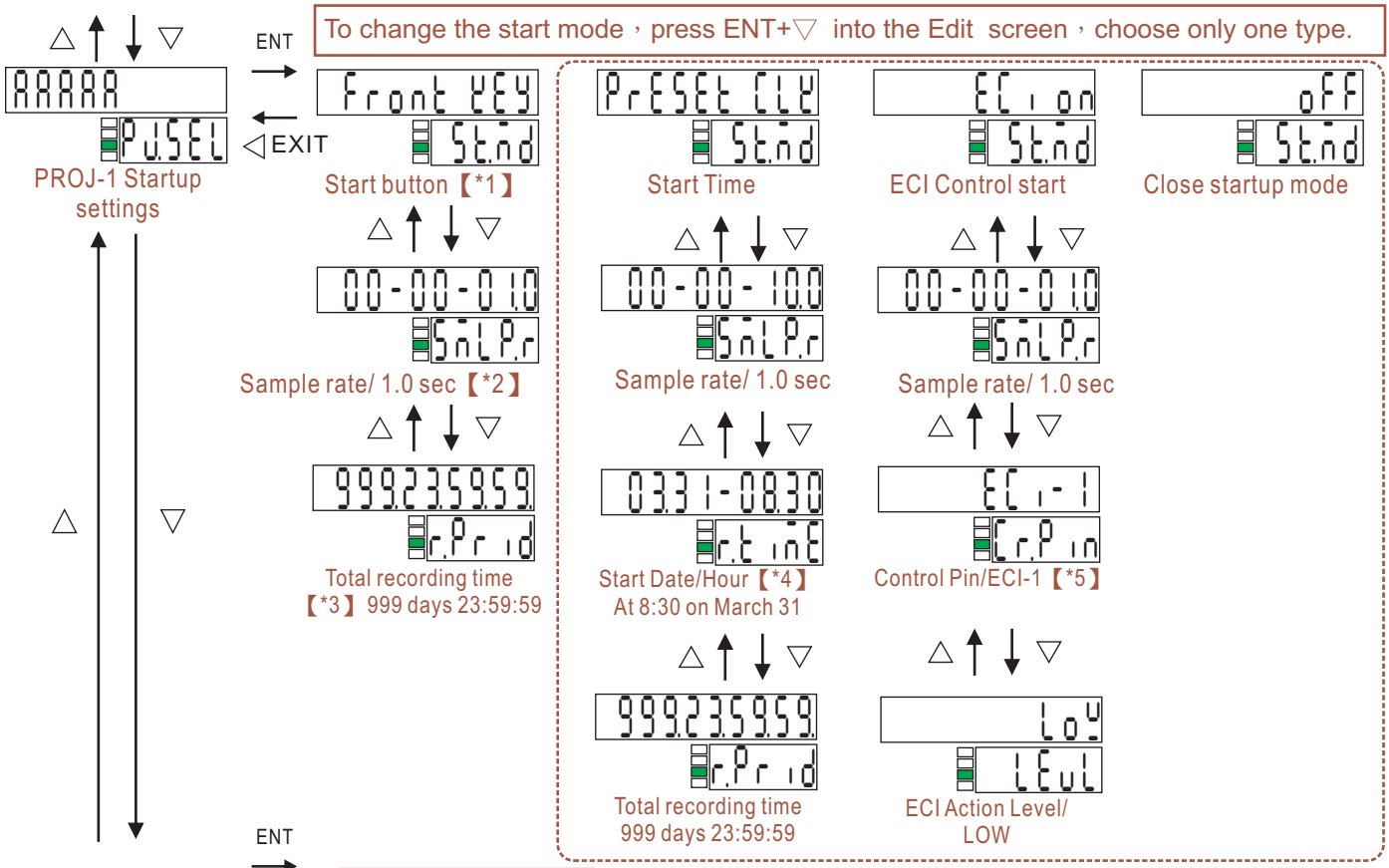
2.2 Recording start method setting and display　User Level

Standby display



Display screen of varies start methods

To change the start mode，press ENT+▽ into the Edit screen，choose only one type.



Note:

【*1】sTmd:Start recording(Start Mode):
If setting is done in ADPro software, screen display start mode type, same setting can be change here.

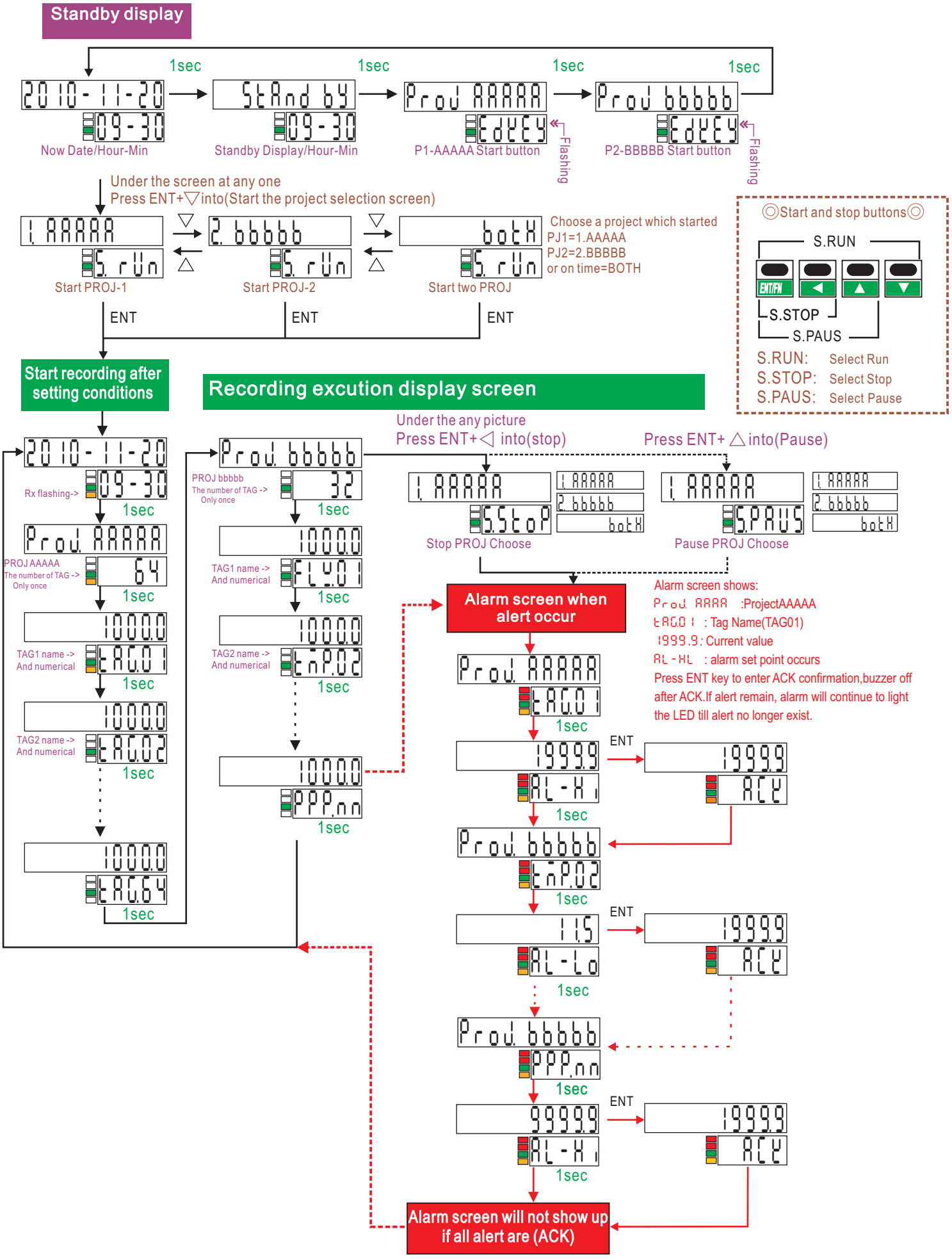
【*2】smlPr:Interval between each recording(Sampling rate)
00-00-0!0:0.1 Sec~23(H)-59(M)-59.9(S)

【*3】Rprid:Set start run time (For timer start method only)
99(2#5(5(:】999 days 23:59:59，All set to "0" for continuous recording, if set 1 day 11:11:11. Unit end recording after run time ended.

【*4】Rtime:Start recording date(For timer start method only)
0#31-0*30:March 31，8:30 unit follow real time start.

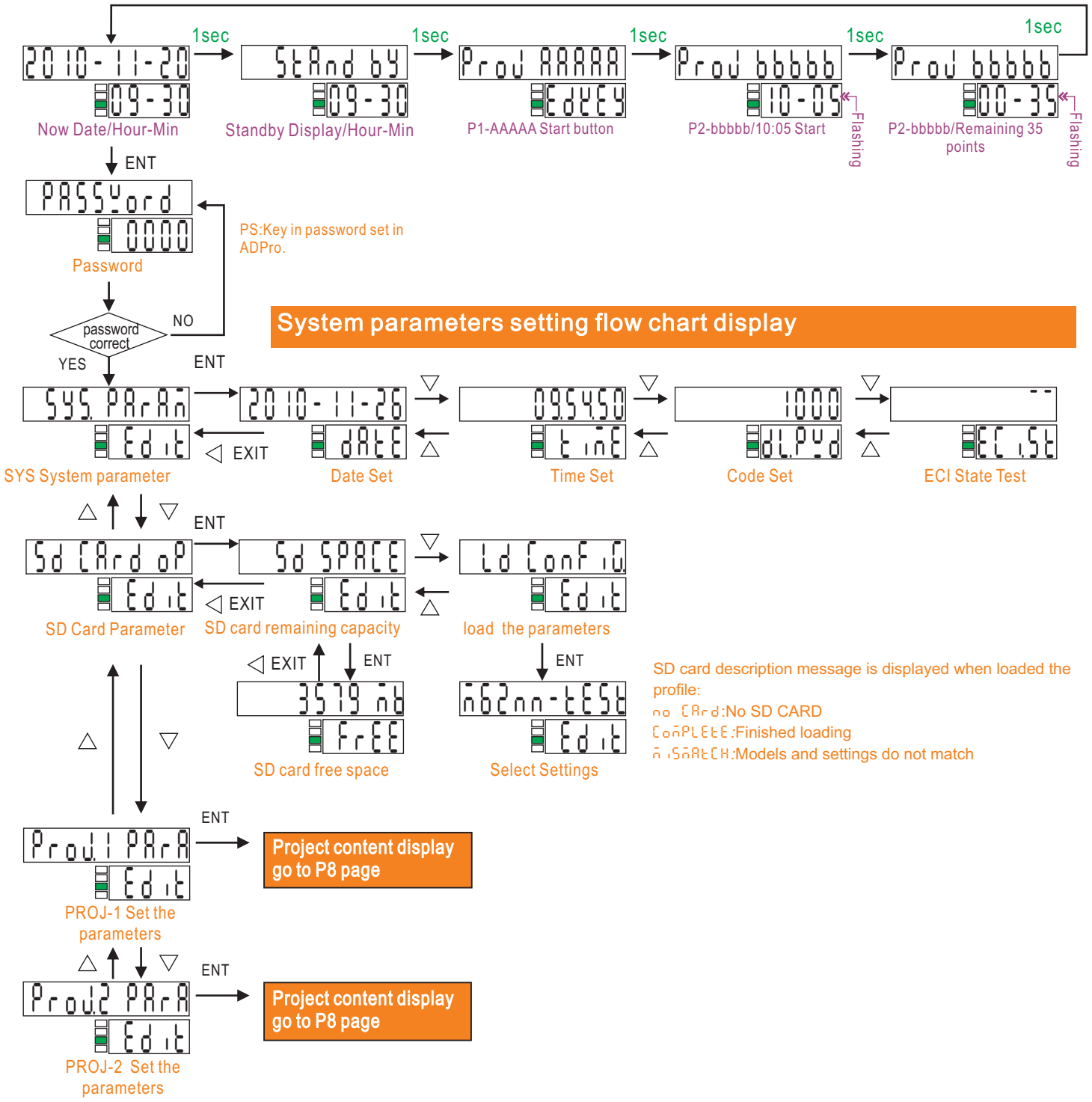
【*5】eci start method:By DL1 external control input contact to start
Contact ON: DL1 execution recording, contact OFF: DL1 recording stops.

2.3 Recording and execution of recording display User Level



2.4.1 System parameters setting display Engineer level

Standby display



System parameters setting flow chart display

2.4.2 System parameters setting display Engineer level

Project content display(Not able to change parameters here)