

NIMBUS TECHNOLOGIES

**INSTRUCTION MANUAL
FOR DATA LOGGER
8 & 16 CHANNELS**

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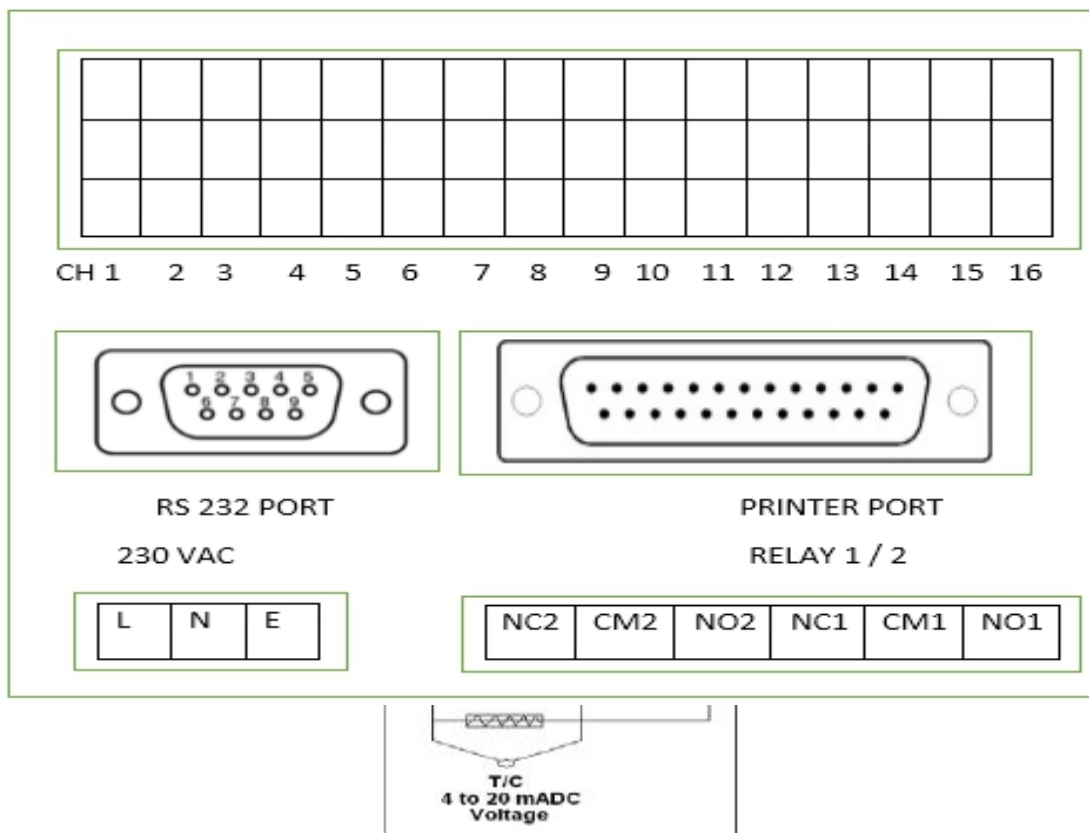
1. WIRING

1.1 Wiring precautions While wiring take the following precautions.

- (1) Field wiring to the instrument should be placed so as to avoid blocking the airflow, yet provide a suitable service loop to allow easy removal of unit with wiring attached.
- (2) Wires should be tied to maintain their order in the event they must be disconnected for any reason.
- (3) For connecting the wiring to the terminals, we recommend use of crimp terminal lugs with insulated sleeves.
- (4) Route the input circuit wiring away as possible from the power and ground circuits to avoid noise pickup.
- (5) Use proper-shielded wire to avoid electromagnetic interference.
- (6) Use of Auxiliary relay is recommended if load exceeds the output relay contact rating (230vac, 5A resistive load).
- (7) For using an inductive load such as Auxiliary relay on output relay contact, use a diode (for DC) or an RC filter (for AC) in parallel as a surge suppressor circuit.

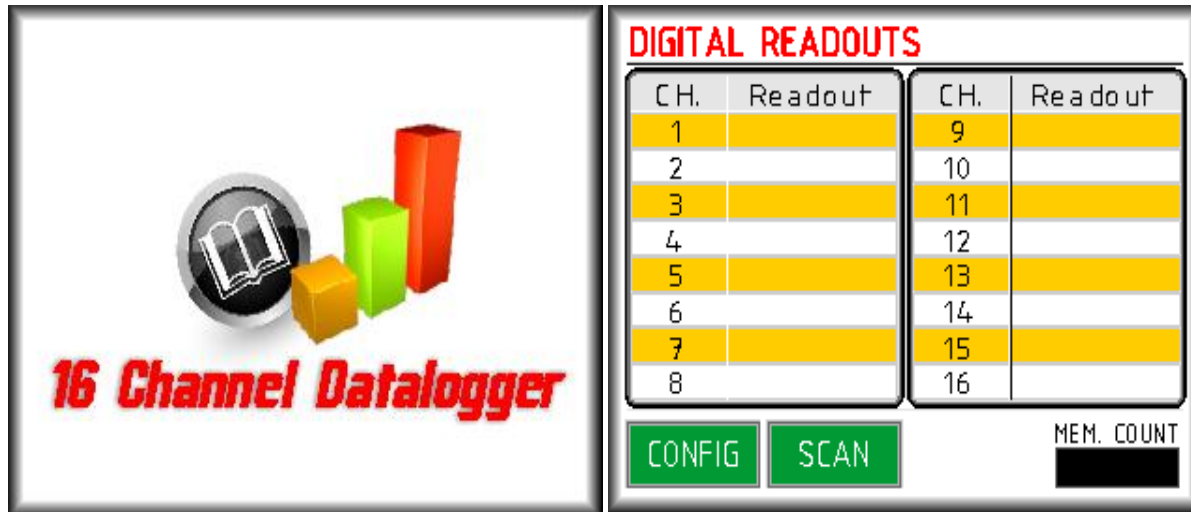
1.2 Wiring diagram

MAIN UNIT BACK CONNECTOR



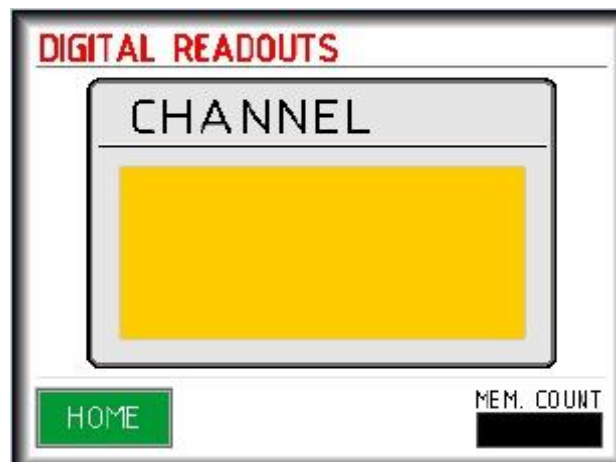
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2. FRONT PANEL FEATURES :



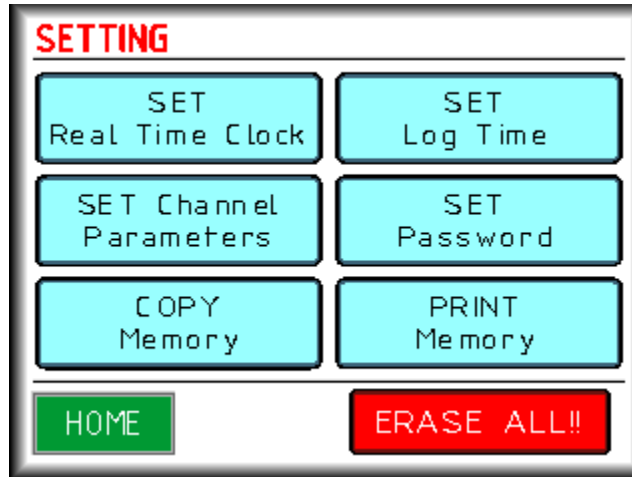
- ✓ Capacitive touch screen display for easy handling.
- ✓ Brilliant : 3.5" Capacitive Touch Screen Display as a frontend display for optimum readability.
- ✓ USB 2.0 Port for data retrieval.
- ✓ All Channels digital readouts at a glance.
- ✓ The controller unit has two major options on main screen, As shown in main display there are two options in green buttons. In CONFIG mode the different settings like Input type, Real Time, Log time available. When SCAN button pressed logger gets in continue scanning mode

SCAN MODE :



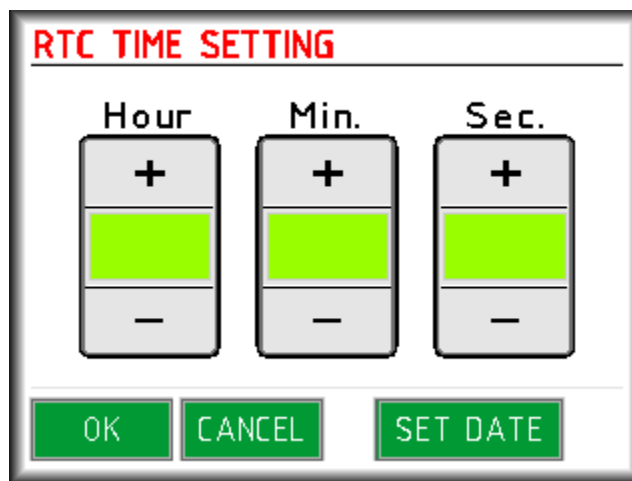
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3.CONFIG : OPERATING PARAMETER SETTING:



a.SET Real Time Clock :

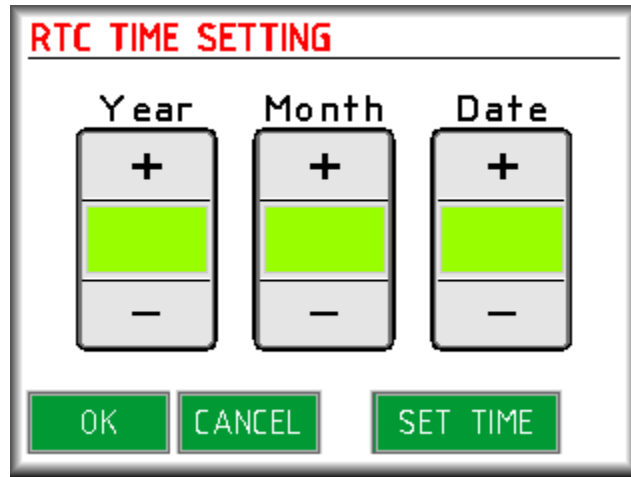
- Menu used to set the Real Time Clock (RTC). RTC is continuously running even after power failure.



The green middle display shows the current Hour/Min/Sec value. Use the + & buttons to set the desired digit value (Hours/Min/Sec). Press OK button to save the settings Press CANCEL button to cancel the settings.

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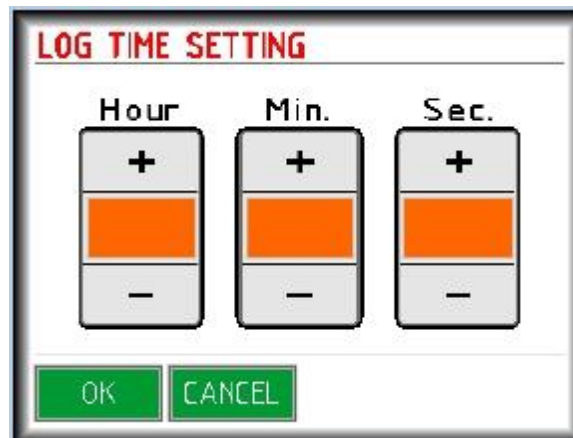
DATE SETTINGS :



The green middle display shows the current Year/Month/Date value. Use the + & - buttons to set the desired digit value (Year/Month/Date). Press OK button to save the settings. Press CANCEL button to cancel the settings.

b. Setting print time or Log Time :

The menu is used to set the duration of two successive readouts to be stored in memory/printouts.



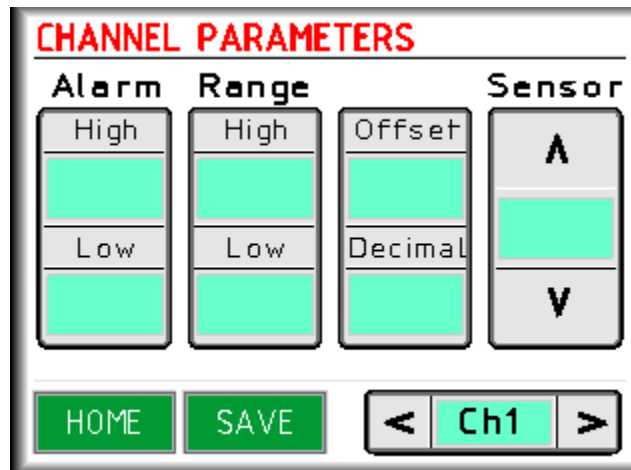
The Orange middle display shows the current Hour/Min/Sec value for logging the data into

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device. Use + & buttons to set the desired digit value (Hour/Min/Sec). Press OK button to save the settings. Press CANCEL button to cancel the settings.

c. SET Channel Parameters :

- From this window we can set each channel independently to any of the input type.
- If the selected Input type is between RTD or any types of thermocouples then there is no need to set the range. But if the selected type is either 0-20 mA or 4-20 mA or 0 to 5V then Range needs to be programmed.

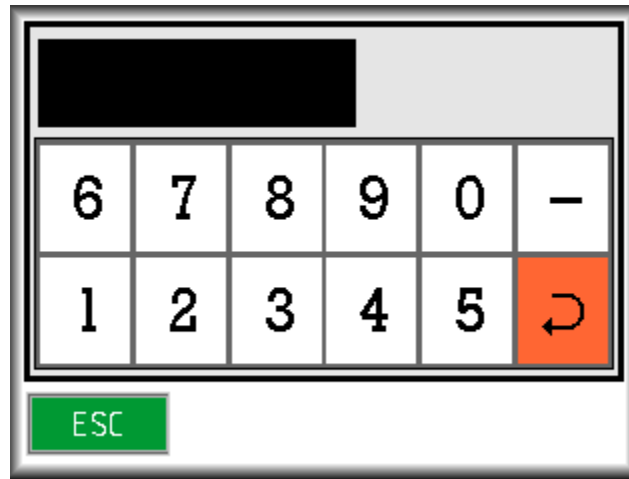


Alarm	Range	Offset	Sensor
High	High	Offset	A
Low	Low	Decimal	V

HOME SAVE < Ch1 >

- In this parameter setting window Alarm settings also provided. Here we can set the High Alarm Limit and Low Alarm Limit. Depend on these provided values the color of readouts on main display will be changed. Black color shows normal reading which between the given alarm range. Red color of value indicates reading is out of Higher range and Blue color indicate out of Lower range. Also common relay operates (ON/OFF) action on these provided values.
- The Range window in parameter setting used to set the range for Input types like 0-20 mA or 4-20 mA or 0 to 5V .
- For setting ranges values Press the on the current value, new window appear on screen as shown below.
- Enter the required value and press on orange (ENT) button.

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- Offset is provided for software calibration purpose. Also We can set the decimal point for each readings (Expect RTD).
- Use (<) & (>) buttons to change the channel numbers.
- Use Save button to save the settings for each channel.
- Use (^) & (v) buttons to change the input type.

NO	TYPE	RANGE
1	RTD	- 100 To 300
2	4 To 20 mA	-999 To 9999 -settable
3	0 To 20 mA	-999 To 9999 -settable
4	0 to 5 V	-999 To 9999 -settable
5	T/C TYPE K	0 To 1370
6	T/C TYPE J	0 To 760
7	T/C TYPE T	0 To 400
8	T/C TYPE N	0 To 1300
9	T/C TYPE E	0 To 1000
10	T/C TYPE S	0 To 1768
11	T/C TYPE R	0 To 1760

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d. Setting Password :



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- The DL-35 provided with Password protection facility. First time Password is 0035, By entering this password we can change the device password. To change the password first press on SET PASSWORD button. This will ask for current password and then enter new password.

e. Selecting Copy Memory Mode :

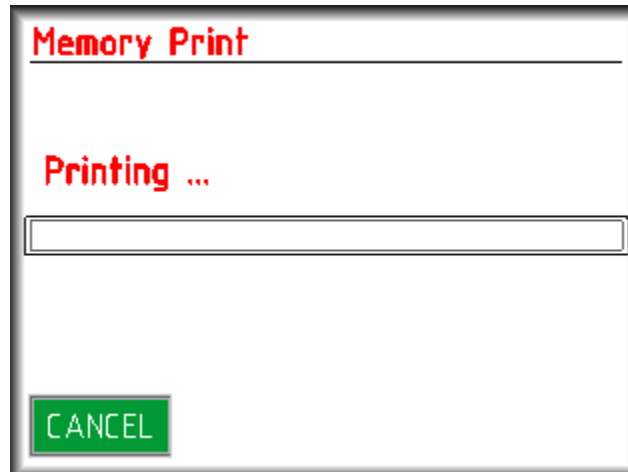
- The menu is used to dump all the stored data to USB device. First connect the Pendrive to USB Port which is available on front side of DL35 unit. Press Copy Memory but on the logger will automatically save the entire data stored in the memory with date, time and process value of each channel for every reading.



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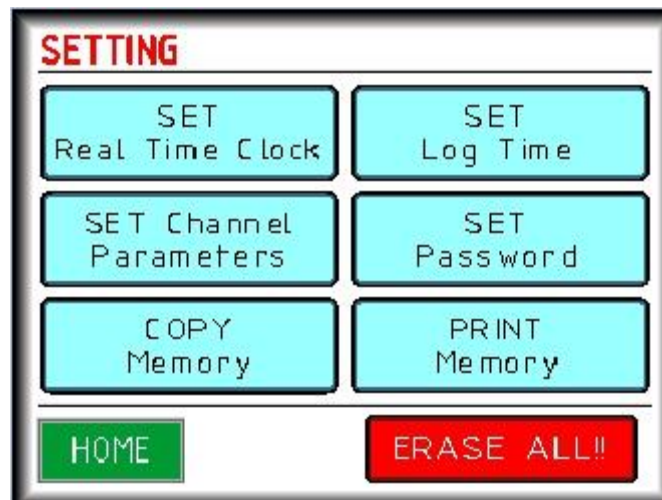
f. PRINT Memory Mode

The menu is used to dump all the stored data to print on the dot matrix printer. First connect the. First connect the Dot matrix printer to the printer port available on the back panel of the logger. Press PrintMemory button the logger will automatically print the entire data stored in the memory with date time and process value of each channel for every reading.



g. ERASE ALL Mode :

In Erase mode the data stored in the memory get erased. To select Erase mode, press ERASE ALL button which is available in Parameter Settings. Press button is will ask for . Then data stored in memory will get erased.



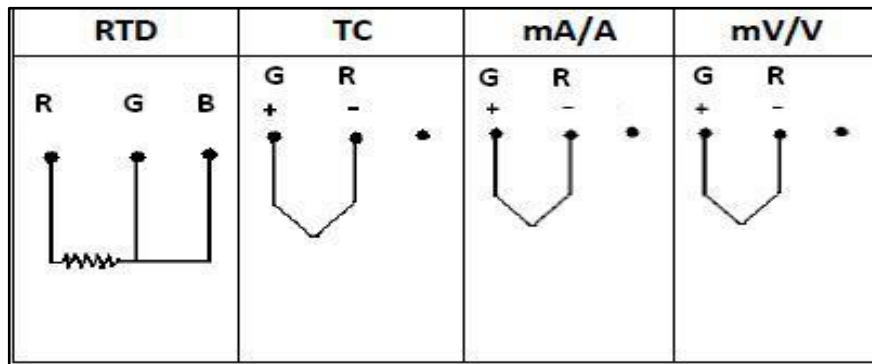
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4. MAINTENANCE

Basic troubleshooting procedure

The following questions should be asked & appropriate action is to be taken to the negative answers. All major corrective action can be accomplished by replacing the basic unit. No special tools are required except screwdriver & multimeter.

- 1) When you switching ON the unit check whether the display is showing anything? If yes then go for step 2 & if not check for the power input connections, check whether the unit is getting proper supply at proper terminals. Connecting the supply to the wrong terminals may damage the unit permanently.
- 2) Check, is the display showing actual value properly. If yes follow step 3, if not check the sensor input, check whether the sensor or input is connected at proper terminals in proper way (+ve & -ve polarity).
- 3) For RTD (+ve=R, -ve=G, -ve=B), 4-20 mA (+ve=G, -ve=R), Thermocouple (+ve=G, -ve=R)
[R, G & B are the names given on the connectors provided on the back side of Data Logger]



- 4) After connecting the sensor if the actual value shown is not proper then check the calibration is correct according to the calibration constant table.
- 5) If the password entered is incorrect while entering the configuration screen, Data Logger will show "Password not matching!!", if the entered Password is correct, it will enter into SETTING screen.
- 6) For Communication with RS485, use pin no 5=Data+, pin 6=Data-, if the pin is not connected properly communication between Data Logger & Software will not be established.

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5. Installation of Software

Insert the CD in the CD drive.

- Click on the START box available on the Extreme down left hand side of the computer.
- Go to Setting → Control Panel → Regional setting & click on that.
- Go to Customize Regional optional → Short date format.
- Set the short date format as **dd/MM/yyyy** only.
- Click on apply & again click on OK button & come out from control panel to main menu.
- Go to My Computer → My Disc (F:).
- Double Click on the Setup icon. Now the software will start loading. After completion of the setup,
- Go to Start → Programs → Das10.4S → DAS 10.4S.
- Click on that, it will ask for user name & password. User name & Password is “**admin**”(In small letters only).
- Go to MAIN MENU & go to Port Setting.
- Set the port & Baud rate (Which is given on CD) & click on Store.
- Go to Data Read.
- This completes the software installation.