Data acquisition and recoding modules
XJDL40D AND XDL01

INDEX

1.   GENERAL WARNING

1.1   PLEASE READ BEFORE USING THIS MANUAL

- This manual is part of the product and should be kept near the instrument for easy and quick reference.
- The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Check the application limits before proceeding.

1.2   ⚠ SAFETY PRECAUTIONS

- Check the supply voltage is correct before connecting the instrument.
- Do not expose to water or moisture: use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent formation of condensation
- Warning: disconnect all electrical connections before any kind of maintenance.
- Fit the probe where it is not accessible by the End User. The instrument must not be opened.
- In case of failure or faulty operation send the instrument back to the distributor or to "Dixell S.p.A." (see address) with a detailed description of the fault.
- Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.
- In case of applications in industrial environments, the use of mains filters (our mod. FT1) in parallel with inductive loads could be useful.

2.   GENERAL DESCRIPTION

The **XJLD40D** in DIN RAIL format is an acquisition module able to read up to 4 temperature via NTC or PT1000 probes or 3 temperatures and 1 4-20mA input. It is provided of 4 digital inputs at supply voltage.
As optional an input for back up battery is available, to supply the XJDL40D and XDL10 system in case of power down. There are 2 batteries available:
BA6H: rechargeable battery 1.2 Ah, 6h back-up
BA24H: rechargeable battery 4.0 Ah, 24h back-up

The **XDL01** is a temperature/status recording module. It is provided with 1m cable for connection to the XJDL40D. The temperature and status come from XJDL40D. The XDL01 is provided with USB output to download the data and alarms recorded. The data are collected into a .txt file to be easily read with a standard spreadsheet program such as Excel ®.

3.   XDL01 FRONT PANEL COMMANDS

SET - ⏻   In programming mode it selects a parameter or confirm an operation. To start and stop recording, if the parameter rdb = y..

△   (**UP**): To see the **data** recorded.
In programming mode it browses the parameter codes or increases the displayed value.

▽   (**DOWN**) To see the **alarms** recorded.
In programming mode it browses the parameter codes or decreases the displayed value.

DOL   To download the data to the USB pen drive.

PROBE   To select the probe to see the data
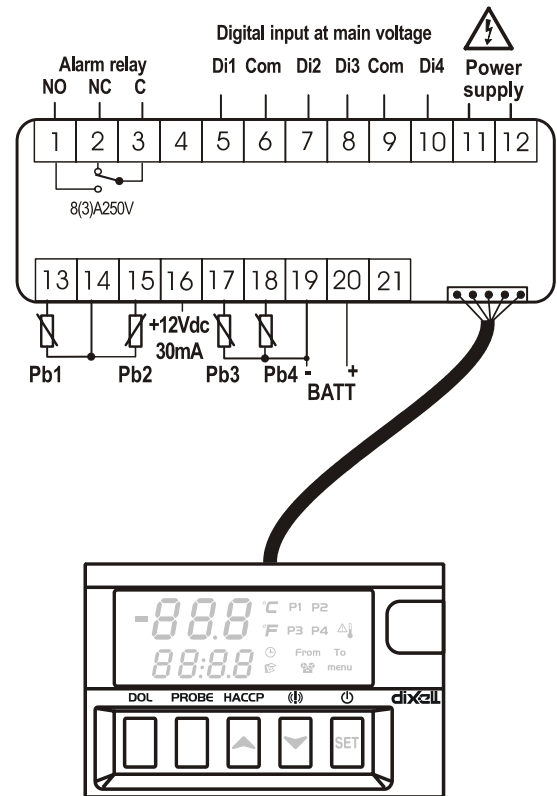
KEY COMBINATIONS

SET + ▽   To enter in programming mode.
SET + △   To return to the room temperature display
To start the recognition of the controller connected to the XDL01

3.1   USE OF LEDS

LED	FUNCTION
P1	Probe 1
P2	Probe 2
P3	Probe 3
P4	Probe 4
⏱	Clock symbol
🖭	Data symbol
😾😾	XDL01 is recording
Menu	To signal the access to the "Function Menu"
From	Start date
To	End date
⚠🌡	An alarm is happening
°C	Celsius
°F	Fahrenheit

4.   WIRING CONNECTION

4.1   CONNECTION BETWEEN XJDL40D AND XDL01

MODEL WITH 9-40VDC SUPPLY (XJDL40D- 3xxxx)
Power supply: 11(-), 12(+)
Digital inputs:
- I.D.1: 5(+), 6(-)
- I.D.2: 7(+), 6(-)
- I.D.3: 8(+), 9(-)
- I.D.4: 10(+), 9(-)

Terminal 16: supply for P4 probe: the terminal number 16 supplies the same voltage of the main supply of the instrument.
Warning: if the controller is powered with 40Vdc the voltage at terminal number 16 ia 40Vdc.

5.   FIRST START UP

After connecting the XDL40D and XDL01 as described in the above paragraph, parameters of XDL01 and XJDL40D have to be set.
Note: the parameters of XDL01 are accessible via XDL01.

5.1   XDL01: HOW TO SET THE RTC – TIME AND DATE

When the instrument is turned on, it's necessary to set the time and date.
In this case the controller displays the "**rtc**" message.
Push a key and then the following messages are displayed:

Upper Display	Hur

Lower Display	value (flashing)

1. Push the **UP** or **DOWN** keys to adjust the hour.
2. Push the **SET** to confirm the value.
3. Repeat the same operations for the next parameters:
   a. **Min** (minutes)
   b. **yEA** (year)
   c. **Mon** (month)
   d. **dAy** (day)

To exit: Push SET+UP keys or wait for 15sec without pushing any keys.

5.2 XDL01: HOW TO SEARCH AND RECOGNISED THE CONTROLLER CONNECTED TO THE XDL01

After connecting the XDL01 to a controller, it's necessary to recognise controller connected..
To do this, act the following procedure:
1. Hold pushed the **SET +** ⌂ keys for about 3s till the display shows the "Src" flashing message.
2. The XDL01 starts searching the controller connected to, at the end the following message is displayed:

Upper display	End
Bottom display	Value of the Adr parameter of the controller

3. Push a key: the first probe of the controller connected to is displayed.

NOTE1: If the "**dLL**" flashing message is displayed, the libraries of the controller connected, are not present in the XDL01. Please contact the Dixell Service Support to get them.

NOT"2: The "**Adr**" flashing message is displayed when the XDL01 is not able to communicate with the controller connected to.
In this case:
   a. Verify the connection, as described in par. 4, "WIRING CONNECTION", and the cable CAB/DL2 if used.
   b. Start a new search as described above.
If the message "Adr" is displayed again, the serial output of the controller or the XDL01 could be damaged. In this case contact the Dixell Service Support.

5.3 XJDL40D: HOW TO SET THE ADR PARAMETER

After connecting the XDL01 to the XJDL40D as described in the previous paragraph, some time could be necessary to change the value of the Adr parameter.
To do this, act the following procedure:
1. Enter the parameter of the XJDL40D. (See par. 7)
2. Select the parameter Adr, set it at desire value, push the SET key to confirm the value..
3. At this point the communication between the XJDL40D and the XDL01 will be lost: the XJDL40D now has a new address and the XJDL40D is not able to find it at the old one.
4. Start again the recognition by pushing the **SET +** ⌂ keys for few seconds.
5. The XDL01 starts searching the controller connected to, at the end the following message is displayed:

Upper display	End
Bottom display	Value of the Adr parameter of the controller

6. At this point both XDL01 and XJDL40D will have the new address.
7. Push a key: the first probe of the controller connected to is displayed.

5.4 XDL01: HOW TO DO THE MAIN SETTINGS: RECORDING INTERVAL, MEASUREMENT UNIT, RESOLUTION

When the controller connected to the XDL01 is recognised, the XDL01 shows the temperature detected by the controller.
If the temperature displayed by XDL01 is different from temperature of the controller please look ate the following table:

Kind of difference	What to do
The measurement unit of the XDL01 is different from the measurement unit set on the controller	Enter the programming mode of XDL01, select the CF parameter, set it according to the measurement unit used:: °C = Celsius °F = Fahrenheit
The temperature is divided by 10	Enter the programming mode of XDL01 and set rES = in
The temperature is multiplied by 10	Enter the programming mode of XDL01 and set rES = dE

6. XDL01: MAIN FUNCTIONS

6.1 HOW TO START/STOP REGISTRATION

XDL01 is supplied with the logging operating.

To enabled the manual Start/Stop of the registration:
1. Enter the programming mode.
2. Set the parameter "**rcb = y** ": manual start of registration enabled
3. Exit from programming.

To start/stop the registration hold the SET key pushed for 3s.

When the XDL01 is recording the 📷 icon is lighted..

6.2 TO SET TIME AND DATE DURING THE NORMAL OPERATING

1. Enter the programming menu
2. Select the parameters related to time and date and set them.

7. XDL01 AND XJDL40D: PROGRAMMING MENU

### 7.1 TO ENTER IN PARAMETERS LIST "PR1" ((XDL01 E XJDL40D)

To enter the parameter list "Pr1" (user accessible parameters) operate as follows:

1. Enter the Programming mode by pressing the **SET +** ⌄ for few seconds. (°C or °F starts flashing)
2. The instrument will show the first parameter present in "Pr1" and its value
3. To enter the parameters in Pr1 of the XJDL40D, select the parameter "**JdL**" and hit the SET key.

WARNING: the data coming from XJDL40D could take some seconds to be displayed. During this period the XDL01 shows "---".

### 7.2 TO ENTER IN PARAMETERS LIST "PR2" (XDL01 E XJDL40D)

To access parameters in "**Pr2**":
1. Enter the "**Pr1**" level.
2. Browse the menu till "Pr2" parameter is shown on the upper display, while the lower display shows "- - -" and press the " **SET** " key.
3. Shortly the message "0 - -" with a flashing zero is displayed.
4. Use ▲ or ⌄ to input the security code in the flashing digit; confirm the figure by pressing " **SET** ".
   **The security code is "321".**
5. If the security code is correct the access to "Pr2" is enabled by pressing " **SET** " on the last digit.
6. **XJDL40D** To enter the parameters in Pr2 of the XJDL40D, select the parameter "**JdL**" and hit the SET key.

EXIT: Push the SET+UP keys or wait 15s.

NOTE: each parameter in "Pr2" can be removed or put into "Pr1" (user level) by pressing **SET +** ⌄. When a parameter is present in "Pr1" the decimal point of the upper display is on.

7.3 TO CHANGE PARAMETER VALUES

1. Enter the Programming mode.
2. Select the required parameter with ▲ or ⌄ .
3. Press the " **SET** " key to change its value
4. Use ▲ or ⌄ to change its value.
5. Press " **SET** " to store the new value and move to the following parameter.

To exit: Press SET + UP or wait 15s without pressing a key.
NOTE: the new programming is stored even when the procedure is exited by waiting the time-out to expire.

8. PARAMETERS

8.1 XDL01 PARAMETERS

JdL **Menu to enter the XJDL40D parameters**: push the SET button to enter the XJDL40D parameter menu. To see the list of parameters look at the next paragraph.

Adr **Serial address** (1÷247): it has to be set with the same value of the Adr parameter of the controller.

itP **Recording interval** (1÷255min)

rC1 **First probe recording enable**: **y** = recording enabled; **n =** recording disabled

rC2 **Second probe recording enable**:
y = recording enabled; **n =** recording disabled

rC3 **Third probe recording enable:**
y = recording enabled; **n =** recording disabled

rC4 **Fourth probe recording enable**
y = recording enabled; **n =** recording disabled

rCb **Start recording SET key enabling**
y = by the SET key is possible to start/stop recording.
n = recording is always enabled

Hur **Hour** (1÷24h)

Min **Minutes** (0÷60min)

dAy **Day** (1÷31)

Mon **Month** (1÷12)

yEA **Year** (0÷99)

EU **Date format: EU =** European: dd/mm/yyyy; **US =** USA: mm/dd/yyyy

Lod **Upper display visualization: P1** = probe 1; **P2** = probe 2; **P3** = probe 3 **P4** =probe 4

rEd **Lower display default visualization**: **P1** = probe 1; **P2** = probe 2; **P3** = probe 3; **P4** =probe 4; **tiM** = hour: minute

rSd **Data erase** (no÷y)

rSA **Alarms erase** (no÷y)

rEL **SW Release** readable only

Ptb **Parameter map code** readable only

8.2 XJDL40D PARAMETERS

These parameters are accessible trough the JdL menu of the XDL01

P1F **Kind of probe 1, 2 and 3:** it sets the kind of probe 1, 2 and 3:
Ntc = NTC; **Pt1=** Pt1000

P1P **Probe 1 presence no =** probe absent; **YES =** probe present

o1 **Probe 1 calibration** (-12,0°C ÷ 12,0°C; -21°F ÷ 21°F); allows to adjust possible offset of the probe 1.

P2P **Probe 2 presence no =** probe absent; **YES =** probe present

o2 **Probe 2 calibration** (-12,0°C ÷ 12,0°C; -21°F ÷ 21°F); allows to adjust possible offset of the probe 2.

P3P **Probe 3 presence no =** probe absent; **YES =** probe present

o3   **Probe 3 calibration (**-12,0°C ÷ 12,0°C; -21°F ÷ 21°F); allows to adjust possible offset of the probe 3.

P4F   **Kind of probe 4;** it sets the kind of probe 4
Ntc = NTC; **Pt1=** Pt1000; **420=** 4-20mA (16+; 18in)

P4P   **Probe 4 presence: no =** probe absent; **YES =** probe present

LCI   **Start of scale with current input**: (-99.9÷Uci, -999÷Uci). Adjustment of read out corresponding to 4mA input signal.

UCI   **End of scale with current input** (Lci÷99.9, Lci÷999). Adjustment of read out corresponding to 20mA input signal.

o4   **Probe 4 calibration (-**12,0÷12,0°C; -21÷21°F; -12,0÷12,0 4-20mA); allows to adjust possible offset of the probe 4.

CF   **Temperature measurement unit:** (°C= Celsius; °F= Fahrenheit)

rES   **Resolution (for °C)**: it allows decimal point display. **dE =** with decimal point; **in =** integer

AL1   **Low temperature alarm for probe 1:** (-100÷AU1°C; -148÷AU1°F) when temperature reaches AL1 value the alarm is enabled, after the ALd delay.

AU1   **High temperature alarm for probe 1:** (AL1÷150°C; AL1÷392°F) when temperature reaches AU1 the alarm is enabled, after the ALd delay.

AL2   **Low temperature alarm for probe 2:** (-100÷AU2°C; -148÷AU2°F) when temperature reaches AL2 value the alarm is enabled, after the ALd delay.

AU2   **High temperature alarm for probe 2:** (AL2÷150°C; AL2÷392°F) when temperature reaches AU2 the alarm is enabled, after the ALd delay.

AL3   **Low temperature alarm for probe 3:** (-100÷AU3°C; -148÷AU3°F) when temperature reaches AL3 value the alarm is enabled, after the ALd delay.

AU3   **High temperature alarm for probe 3:** (AL3÷150°C; AL3÷392°F) when temperature reaches AU3 the alarm is enabled, after the ALd delay.

AL4   **Low alarm for probe 4;   temperature probe**: -100÷AU4°C; -148÷AU4°F **current probe**: Lci ÷AU4

AU4   **High alarm for probe 4;   temperature probe**: AL4÷150°C; AL4 ÷ 392°F **current probe**: AL4 ÷Uci

AFH   **Differential for temperature alarm recovery (**0,1÷25,5°C; 1÷45°F)

ALd   **Temperature alarm delay:** (0÷255 min) time interval between the detection of an alarm condition and alarm signalling.

dAo   **Temperature alarm exclusion at power-on** (0.0 ÷ 24.0h; res. 10min)

tbA   **Alarm relay shut down**:
no = shut down disabled: alarm relay stays on till alarm condition lasts,
yES =shut down enabled: alarm relay is switched OFF by pressing a key during an alarm.

AoP   **Alarm relay polarity:** it set if the alarm relay is open or closed when an alarm happens. **CL=** terminals 2-3 closed during an alarm; **oP =** terminals 1-3 closed during an alarm

Aro   **Alarm relay activation in case of power shutdown (used when the XDL01 is connected to a back up battery)**
no = the alarm relay is not closed in case of power shut down
YES = the alarm relay is closed in case of power shut down
ALL = the alarm relay is closed with power shut down and temperature alarm.

i1P   **Digital input 1 polarity: oP:** the digital input is activated with voltage absence on the contacts; **CL:** the digital input is activated with voltage presence on the contacts.

i1F   **Digital input 1 configuration**
EAL = external alarm; **dEF =** a defrost cycle is running; During a defrost the temperature alarms are disabled. If an alarm is present before defrost starting, it is signalled also during a defrost.

d1d   **Digital input 1 alarm delay:** delay between the detection of the external alarm condition and its signalling. (0÷255min.)

i2P   **Digital input 2 polarity: oP:** the digital input is activated with voltage absence on the contacts; **CL:** the digital input is activated with voltage presence on the contacts.

i2F   **Digital input 2 configuration**
EAL = external alarm; **dEF =** a defrost cycle is running; During a defrost the temperature alarms are disabled. If an alarm is present before defrost starting, it is signalled also during a defrost.

d2d   **Digital input 2 alarm delay:** delay between the detection of the external alarm condition and its signalling. (0÷255min.)

i3P   **Digital input 3 polarity: oP:** the digital input is activated with voltage absence on the contacts; **CL:** the digital input is activated with voltage presence on the contacts.

i3F   **Digital input 3 configuration**
EAL = external alarm; **dEF =** a defrost cycle is running; During a defrost the temperature alarms are disabled. If an alarm is present before defrost starting, it is signalled also during a defrost.

d3d   **Digital input 3 alarm delay:** delay between the detection of the external alarm condition and its signalling. (0÷255min.)

i4P   **Digital input 4 polarity: oP:** the digital input is activated with voltage absence on the contacts; **CL:** the digital input is activated with voltage presence on the contacts.

i4F   **Digital input 4 configuration: EAL =** external alarm; **dEF =** a defrost cycle is running; During a defrost the temperature alarms are disabled. If an alarm is present before defrost starting, it is signalled also during a defrost.

d4d   **Digital input 4 alarm delay:** delay between the detection of the external alarm condition and its signalling. (0÷255min.)

Adr   **Serial address** (1÷247)

rEL   **Software release** for internal use**.**

Ptb   **Parameter table code:** readable only**.**

9.   DATA

9.1   HOW TO SELECT WHICH THE HAS TO BE SHOWN ON THE DISPLAY

Push in succession the "**PROBE**" button to choose which probe has to be displayed: P1 → P2 → P3→ P4→ P1.

9.2   DATA VISUALISATION

1.   Push and release the **UP** key (**HACCP**)
2.   The P1 or P2 or P3 or P4 is lighted (it depends on which probe has been selected previously);

Upper Display	The last temperature recorded
Lower Display	hh:mm of the last temp. recorded
Icons	CLOCK

3.   Push the **DOWN** key

Upper Display	The last temperature recorded
Lower Display	mm.dd of the last temp. recorded
Icons	CALENDAR

4.   To browse the recorded temperatures use the DOWN key, the format is hh:mm and mm.dd. The temperatures are displayed form the newest to the oldest.
5.   To see another probe, push the "**Probe**" key.

Exit: don't push any keys for 30s or push the **SET+UP** key.

9.3   TO ERASE THE DATA RECORDED

1.   Enter Programming mode.
2.   Select the "rSd" parameter
3.   Set it to "y"
4.   Confirm by the SET key to erase the recorded data.

10.   ALARMS

10.1   TO SEE THE ALARMS RECORDED

1.   Push **DOWN** (((•))) key.
2.   On the **upper display** the last alarm happened with its number is shown.
3.   On the **lower display** the kind of alarm s shown with the following codes:
    -   **HA1:** high temperature alarm probe 1
    -   **LA1:** low temperature alarm probe 1
    -   **HA2:** high temperature alarm probe 2
    -   **LA2:** low temperature alarm probe 2
    -   **HA3:** high temperature alarm probe 3
    -   **LA3:** low temperature alarm probe 3
    -   **HA4:** high temperature alarm probe 4
    -   **LA4:** low temperature alarm probe 4
    -   **EA1:** external alarm digital input 1
    -   **EA2:** external alarm digital input 2
    -   **EA3:** external alarm digital input 3
    -   **EA4:** external alarm digital input 4
    -   **noL:** no link.
4.   By pushing again the **UP** key the other alarm codes are displayed from the newest to the oldest.
5.   To see an alarm happened and its duration push the **SET** key.
6.   The starting time e date of the alarm are showed alternatively, and the **Clock** and **Date** icons are turned on, together with the "**from**" message.
7.   Pushing again the ▲ key: the end time and date of the alarm are showed together with the "**to**" message.
8.   To come back to the alarm list push the **UP** key..

To exit: don't push any keys for 30s or push the **SET+UP** key.

10.2   TO ERASE THE ALARM RECORDED

1.   Enter Programming mode.
2.   Select the "rSA" parameter
3.   Set it to "y"
4.   Confirm by the SET key to erase the alarms recorded .

11.   HOW TO DOWNLOAD THE DATA TO AN USB PEN DRIVE

1.   Insert the USB pen drive.
2.   Push the "**doL**" key
3.   The controller starts sending data to the pen drive, while the "doL" message is displayed on the upper display, while the bottom display shows the percentage of the download, from 0 to 100%.
    IMPORTANT: during the download don't remove the USB pen drive: this could cause damages to the data files and USB pen drive itself.
4.   The **"End"** flashing message is displayed if the download has been successful. This visualization lasts for 15s or till a key is pushed..
5.   Take away the key.
6.   The **"Err"** message is displayed if the download has failed. This visualization lasts for 15s or till a key is pushed

11.1   DATA STRUCTURE

DATE	PB1 C	PB2 C	PB3 C	PB4 C	STATE
19/05/2008 11.34	25.4	25.8	---	---	ON/C
19/05/2008 11.35	25.4	25.8	---	---	ON/C
19/05/2008 11.36	25.4	25.8	---	---	ON/C

Where
DATE: recording date and time
PB1C, PB2 C, PB3 C, PB4 C = Value of probe 1, 2, 3, 4 if present and operating. With probe failure or absence:" - - - " symbol is displayed
STATE: status of the controller
-   **ON**: operating; **OFF**: in stand by mode,
-   **NOL**: communication problems between XDL01 module and controller;
-   **D** = defrost running; **C**: compressor working

11.2 ALARM FILE STRUCTURE

DESCRIPTION	LABEL	PB	START	STOP
High temperature	HA1	ST1	19/05/08 16.34	19/05/08 16.44
No link	Nol	---	19/05/08 16.53	19/05/08 16.57
No link	Nol	---	19/05/08 15.52	19/05/08 15.59
High temperature	HA1	ST1	19/05/08 16.22	19/05/08 16.27
High temperature	HA1	ST1	19/05/08 16.31	19/05/08 16.33

12. HOW TO USE THE HOT KEY (XJDL40D)

12.1 HOW TO PROGRAM A HOT KEY BY XJDL40D (UPLOAD)

1. Program one controller with the front keypad.
2. Remove the XDL01 connector
3. When XJDL40D is ON, insert the "**Hot key**". The hot key programming is started. Please **wait 10s.**
4. Remove the HOT KEY.
5. Connect the XDL01 that will display for 10s:
   a. **End** if the programming has been successful
   b. **Err** if the programming has failed.

12.2 HOW TO PROGRAM THE XJDL40D USING A HOT KEY (DOWNLOAD)

1. Turn OFF the XJDL40D.
2. Insert a **programmed "Hot Key" into the 5 PIN receptacle** and then turn the XJDL40D on.
3. Automatically the parameter list of the **"Hot Key"** is downloaded into the controller memory. Wait 10s and then remove the Hot Key
4. Connect the XDL10 to the XJDL40D that will display for 10s:
   a. **End** if the programming has been successful
   b. **Err** if the programming has failed.

13. ELECTRICAL CONNECTIONS

The XDL01 is provided with a 1m cable for the connection to the XJDL40D.
The XJDL40D is provided with disconnectable screw terminal block to connect cables with a cross section up to 2,5 mm².
Before connecting cables make sure the power supply complies with the instrument's requirements. Separate the signal cables from the power supply cables, from the outputs and the power connections

14. ALARM SIGNALLING

Mess.	Cause
"P1"	Probe 1 failure
"P2"	Probe 2 failure
"P3"	Probe 3 failure
"P4"	Probe 4 failure
"HA1"	High temperature alarm probe 1
"LA1"	Low temperature alarm probe 1
"HA2"	High temperature alarm probe 2
"LA2"	Low temperature alarm probe 2
"HA3"	High temperature alarm probe 3
"LA3"	Low temperature alarm probe 3
"HA4"	High temperature alarm probe 4
"LA4"	Low temperature alarm probe 4
"EA1"	External alarm from digital input 1
"EA2"	External alarm from digital input 2
"EA3"	External alarm from digital input 3
"EA4"	External alarm from digital input 4
Adr	The XLDL40D and the XDL01 are not able to communicate
noL	Communication interruption with the controller connected to the XDL01
dLL	Library not available on the XDL01
End	Data files created
Err	Problem in download the file to the USB pen drive

15. TECHNICAL DATA

15.1 XDL01

Housing: 70x45mm; **Dual display** with 17 icons
TTL port for data recording; **Input for supply**
USB port for data download; **Internal real time clock** with rechargeable battery
Clock battery back up: 48h; **Pollution grade:** 2
Data storing: on the non-volatile memory (EEPROM).
Operating temperature: 0÷60 °C.; **Storage temperature**: -25÷60 °C.
Relative humidity: 20÷85% (no condensing)

15.2 XJDL40D

Housing: self extinguishing ABS; **Case:** 4 DIN modules 70x85 mm; depth 61mm
Mounting: DIN RAIL mounted in an omega din rail
Connections: Disconnectable screw terminal block ≤ 2,5mm² wiring
Power Supply: 230Vac ± 10% 50/60Hz or 24Vac ± 10% 50/60Hz, or 115 Vac ± 10% 50/60Hz, or 9-40Vdc.
Power absorption: 5VA max; **Display**: through XDL01
Analog inputs: 4 NTC or PT1000 probes or 3 NTC or Pt1000 probes and 1 4-20mA probe
Digital Inputs: 4 main voltage digital inputs
Parameter Storage: on the non-volatile memory(EEPROM)
Operating temperature: 0÷60 °C; **Storage temperature:** -30÷85 °C
Relative humidity: 20÷85% (no condensing)
Measuring and regulation range: -100 ÷ 150 °C, -148÷302F
Resolution: 0,1 °C o 1°C or 1 °F; **Precision a 25°C:** ±0,7 °C, ±1 digit

16. PARAMETERS

Nome	Description	Range	Value	Level
Adr	Serial address	0÷247	1	Pr1
itP	Recording interval	10÷255min	16min	Pr2
rC1	First probe recording enable	y÷n	y	Pr2
rC2	Second probe recording enable	y÷n	y	Pr2
rC3	Third probe recording enable	y÷n	n	Pr2
rC4	Fourth probe recording enable	y÷n	n	Pr2
rCb	Start recording key enabling	y÷n	n	Pr2
Hur	Hour	1÷24h	-	Pr1
Min	Minutes	0÷60min	-	Pr1
dAy	Day	1÷31	-	Pr1
Mon	Month	1÷12	-	Pr1
yEA	Year	0÷99	-	Pr1
EU	Date format (European or USA)	EU, US	EU	Pr2
Lod	Upper display visualization	P1 = probe 1; P2 = probe 2; P3 = probe 3; P4 =probe 4	P1	Pr2
rEd	Lower display visualization	P1 = probe 1; P2 = probe 2; P3 = probe 3; P4 =probe 4; tiM = hour: minute	tiM	Pr1
rSd	Data erase	no÷y	no	Pr2
rSA	Alarms erase	no÷y	no	Pr1
rEL	Software release	-	-	Pr2
Ptb	Map code	-	-	Pr2

16.1 XJDL40D

Label	Description	Range	Value	Level
P1F	Kind of probe P1/P2/P3	ntc- Pt1	ntc	Pr2
P1P	Probe 1 presence	no - YES	YES	Pr2
o1	Probe 1 calibration	-12,0÷12,0°C; -21÷21°F	0.0	Pr2
P2P	Probe 2 presence	no - YES	YES	Pr2
o2	Probe 2 calibration	-12,0÷12,0°C; -21÷21°F	0.0	Pr2
P3P	Probe 3 presence	no - YES	no	Pr2
o3	Probe 3 calibration	-12,0÷12,0°C; -21÷21°F	0.0	Pr2
P4F	Probe 4 presence	ntc - Pt1 – cur	ntc	Pr2
P4P	Probe 4 calibration	no – YES	no	Pr2
Lci	Value to display with 4mA current input	rES=dE: -99.9÷Uci rES=in: -999 ÷ Uci	0.0	Pr2
Uci	Value to display with 20mA current input	rES=dE: Lci÷99.9; rES=in: Lci ÷ 999	100	Pr2
o4	Probe 4 calibration	P4F=ntc/Pt1: -12,0÷12,0°C; -21÷21°F ; P4F=cur -12,0÷12,0;-120÷120	0.0	Pr2
CF	Measurement unit with ntc/Pt1000 probes	°C - °F	°C	Pr2
rES	Resolution: with decimal point, integer	dE – in	dE	Pr1
AL1	Low temperature alarm, probe 1	-100÷AU1°C o -148÷AU1°F	-40	Pr1
AU1	High temperature alarm, probe 1	AL1÷150°C o AL1÷302°F	150	Pr1
AL2	Low temperature alarm, probe 2	-100÷AU2°C o -148÷AU2°F	-40	Pr1
AU2	High temperature alarm, probe 2	AL2÷150°C o AL2÷302°F	150	Pr1
AL3	Low temperature alarm, probe 3	-100÷AU3°C o -148÷AU3°F	-40	Pr1
AU3	High temperature alarm, probe 3	AL3÷150°C o AL3÷302°F	150	Pr1
AL4	Low temperature alarm, probe 4	-100÷AU4°C or -48÷AU4 °F or LCI÷AU4	-40	Pr1
AU4	High temperature alarm, probe 4	AL4÷150°C or AL4÷302°F or AL4÷UCI	150	Pr1
AFH	Differential for alarm recovery	0,1÷25,5°C; 1÷45°F	1.0	Pr2
ALd	Temperature alarm delay	0 ÷ 255min	15	Pr1
dAo	Temperature alarm exclusion at power-on	0 ÷ 24.0h	1.3	Pr2
tbA	Alarm relay disabling	no – YES	YES	Pr2
AOP	Alarm relay polarity	OP – CL	cL	Pr2
Aro	Alarm relay activation with power failure	no - YES - ALL	no	Pr2
i1P	Digital input 1 polarity	OP – CL	cL	Pr2
i1F	Digital input 1 configuration	EAL - dEF	EAL	Pr1
d1d	Digital input 1 alarm delay	0 ÷ 255 (min.)	15	Pr1
i2P	Digital input 2 polarity	OP – CL	cL	Pr2
i2F	Digital input 2 configuration	EAL - dEF	EAL	Pr1
d2d	Digital input 2 alarm delay	0 ÷ 255 (min.)	15	Pr1
i3P	Digital input 3 polarity	OP – CL	cL	Pr2
i3F	Digital input 3 configuration	EAL - dEF	EAL	Pr1
d3d	Digital input 3 alarm delay	0 ÷ 255 (min.)	15	Pr1
i4P	Digital input 4 polarity	OP – CL	cL	Pr2
i4F	Digital input 4 configuration	EAL - dEF	EAL	Pr1
d4d	Digital input 4 alarm delay	0 ÷ 255 (min.)	15	Pr1
Adr	Serial address	1 ÷ 247	1	Pr1
rEL	Firmware release	Readable only	-	Pr2
Ptb	Parameter map code	Readable only	-	Pr2