6-key open IWK

open keyboard for IWP boards

code 9IS23077
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IWK keyboards can be used for remote access of IWP series power board functions by displaying functional parameters and the operating temperature.

The Split version of the Wide device consists of two units:
• an IWK keyboard available in several sizes*
• an IWP power module. The IWK keyboard is connected to the IWP power module via a "powered" **SHORT DISTANCE.** or **LONG DISTANCE** serial connection

***Different IWK keyboard models are available: the features and information on how to connect the standard 6-key IWK open keyboard are described below. For information on this and other keyboards, refer to the relevant technical data sheets.**

The standard 6-key open version is an open keyboard (supplied as an open board with no silk screening and polycarbonates) that can be installed/enclosed in a special device/casing according to the manufacturer's requirements.
An example of a keyboard polycarbonate enclosure is shown on the right. It consists of:
• 6 keys (4 "primary" and 2 "secondary" or "function keys"
•7 LEDs (4 display LEDs and 6 "key" LEDs)

The symbols and names of the keys and LEDs clearly indicate their functions.

example of polycarbonate enclosure

"UP/Def." key
see parameter*

"DOWN" key
see parameter*

"on-off" key (function 2)
see parameter*

"esc" key
see parameter*ACTIVATES OSP/ECONOMY

"set" key

"LIGHT" key (function 1)
see parameter*

***see IWP board instructions**

USER INTERFACE

(example with standard 6-key open-board keyboard).

The user is supplied with a keyboard wich has a display and four primary + two secondary keys for controlling instrument status and programming.

KEYS AND MENUS

"primary" keys

UP Key
Scrolls through the menu items
Increases the values
Parameter programmable*

DOWN key
Scrolls through the menu items
Decreases the values
Parameter programmable*

esc key
ESC function (quit)
Parameter programmable*
*see IWP board instructions
**Activates functions (see paragraph on OSP FUNCTIONS FOLDER

Set key
(press once)
MACHINE STATUS MENU
•Accesses set point
•Displays alarms (if present)
(hold down)
•Accesses Parameter Programming menu

UP key +esc key pressed simultaneously
(press for 2 seconds)
•Locks/unlocks keyboard

"secondary" or function keys

"ON-OFF" key
(hold down*)
(function 2)
Switches unit on/off
Parameter programmable*

"LIGHT" key
(function 1)
Switches on light
Parameter programmable*

NOTE :
a) The "primary" keys can be programmed using the parameters...
In standard configuration the keys are set by default as:
• "UP" key;*
activates manual defrosting
• "DOWN" key;*
no related function (disabled)
• "esc" key;*
activates reduced set point function
• "set" key; not programmable.
b) The "secondary" or "function keys" can be programmed using the parameters*
In standard configuration the keys are set by default as:
• "LIGHT" key*;
activates light
• "ON-OFF" key*;
activates "ON-OFF" function (STAND-BY).

***see IWP board instructions**

LEDS

"Display" LEDs

The display is red; the display LEDs (from left to right) are green* (3) and red* (Alarm LEDs).

*see IWP board instructions

Compressor LED **(green)***

•ON when compressor is on;
•blinking for delay, protection or enabling blocked

Defrost LED **(green)***

•ON when defrosting is in progress;
•blinking when activated manually or with digital input

Fan LED **(green)***

•ON when fan is on;
•blinking for manual or D.I. (Digital Input) fan forcing
(**RH& function, humidity reduction**
***see IWP board instructions)**

Alarm LED **(red)***
•ON for active alarm;
•blinking for silenced alarm

"Key" LEDs

3 LEDs are associated with the 3 set, "on-off"* and "LIGHT"* keys on the keyboard provided as an example.

<u>*see IWP board instructions</u>

"set" LED **(yellow)***

•ON for parameter programming level 2;
•blinking when reduced set point is entered **OSP**

"on-off" LED **(yellow)***

•ON when unit is "off" (on **STAND-BY**);
•OFF when unit is on;

"light" LED **(green)***

•ON when output is active, (%RH / light depending on model and/or default settings);
ON when output is also active from D.I.

N.B.: the LEDS are OFF in all other circumstances

LOCAL KEYBOARD PROGRAMMING MENU

Hold down the "UP" and "DOWN" keys for at least 3 seconds to access the "Keyboard Local Programming" menu.
If specified, the access PASSWORD will be requested (see parameter "PA3") and, if the password is correct, the **PLO (Local Parameters) label will appear. This folder contains the keyboard local parameters (see Keyboard Local Parameters table).**
If the password is incorrect, the display will show the PA3 label again. **NOTE: the folder may NOT be visible; if this is the case, keyboard local programming cannot be accessed)**
To enter the folder, press "set".
The label of the first visible parameter will appear.

6-KEY OPEN IWK KEYBOARD TECHNICAL DATA

Casing: open board.
Dimensions: 124x68 mm (LxH) (35 mm. depth)
Mounting: 4 rivets h=6.5 mm
Operating temperature: -5...55 °C.
Storage temperature: -30...85 °C.
Usage ambient humidity: 10...90 % RH (non-condensing).
Storage ambient humidity: 10...90% RH (non-condensing).
Display range: -50...110 (NTC); -55...140 (PTC) °C without decimal point (parameter selectable), on display 3 digits + sign.
Measurement range: from -55 a 140 °C.
Accuracy: better than 0.5% of bottom scale +1 digit.
Resolution: 1 or 0.1 °C.
Analogue Inputs, Digital Inputs and Outputs: on associated IWP power board
Serials: see Associated IWP Power Board Technical Data Base Board-Keyboard
Connection: via "powered" serial using +12V, GND and DATA lines
Consumption: see Associated IWP Power Board Technical Data
Power supply: 12V⎓from IWP power module.

To scroll through the other parameters, use the "UP" and "DOWN" keys.
To change the parameter, press and release "set", then set the desired value using the "UP" and "DOWN" keys and confirm with the "set" key. Move on to the next parameter.

KEYBOARD LOCAL PASSWORD

Password "PA3" allows access to the keyboard local parameters. This password is not present in the standard configuration. To enable it (value<>0)) and assign it the required value, access the "Keyboard Local Programming" menu in the "PLO" folder. If the password is enabled, it will be requested when entering the "PLO" menu.

INSTALLATION

The unit has been designed for:
• open board.
The keyboard has been designed to be installed using spacers in the 4 corners of the board.

Do not install the keyboard in excessively humid and/or dirty locations. It is suitable for use in locations with normal pollution levels.
Always make sure that the area next to the unit cooling slits is adequately ventilated.

ELECTRICAL WIRING

Warning! Always switch off machine before working on electrical connections.

• **6-key standard open IWK keyboard:** screw connectors for the connection of electrical cables with a max. section of 2.5 mm^2.

Make sure that the power voltage complies with the device voltage.

Serial cables should be kept separate from the power cables. For safety purposes, the keyboard should always be installed on insulated supports/columns.

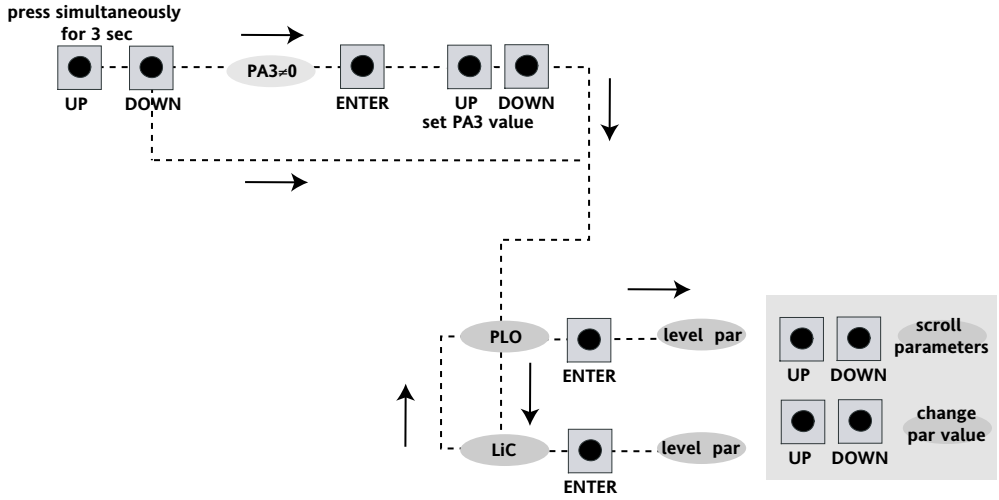
KEYBOARD PARAMETERS

PARAMETER	DESCRIPTION	RANGE	DEFAULT*	U.M.
	ECO (folder with "PLO" label)			
ECO	Type of keyboard 0= Master keyboard 1= ECO keyboard address base.	0...1	0	num
adb	Base address. By changing the address of the power board in a LINK, this parameter can be used to logically connect the keyboard to a different power board so that menu navigation, parameter programming, etc is possible.	0...4	0	num
PA3	Keyboard PAssword. When enabled (value is not 0) it represents the access key for the local keyboard parameters.	0...255	0	num
rEL	reLease firmware. Device version: read only parameter. time-out Address.	0...999	0	num
toA	tbA address timeout.	0...250	10	sec
	LiC (folder with "LiC" label)			
Li1	Broadcast communication n= keyboard communicates with adb address base (see.)(in this case, there are several bases); y= keyboard communicates with broadcast address base (in this case, there is only one base). Temporary navigation base address.	n/y	n	num
tbA	Temporary address for network navigation. -1= disabled	-1...4	0	num

* DEFAULT column: The term default identifies the standard factory-set configuration;

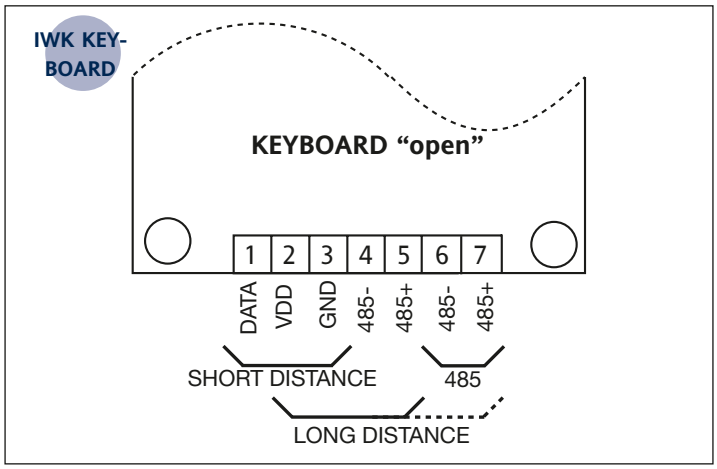
(!) CAUTION!
• We strongly recommend that you switch the instrument off and on again each time parameter configuration is changed in order to prevent malfunctioning of the configuration and/or ongoing timings.

KEYBOARD LOCAL PARAMETER MENU DIAGRAMS

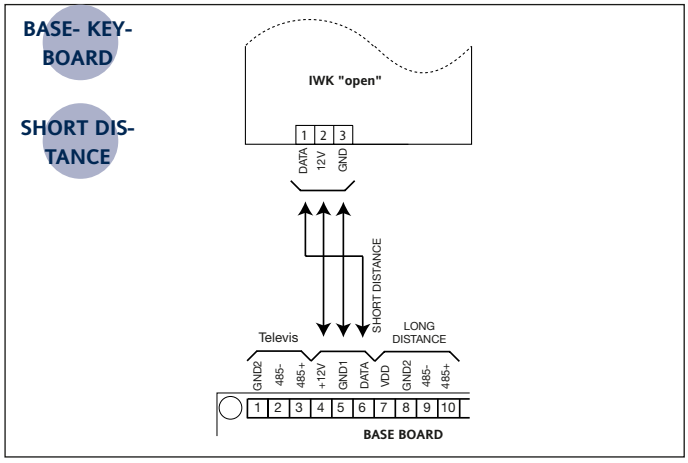


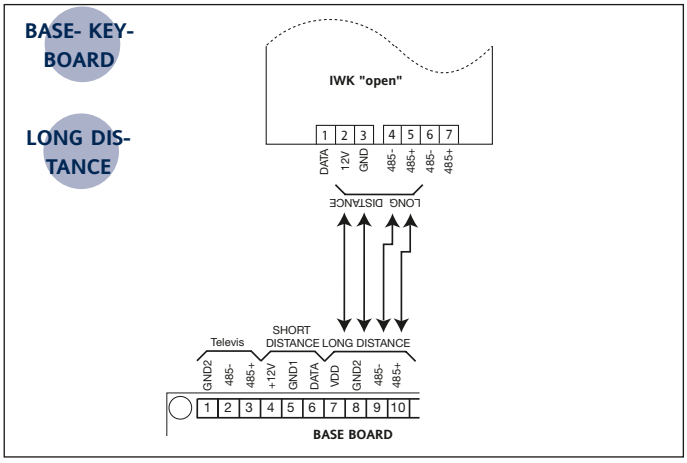
	set	UP	DOWN	ESC	aux/light	on/off
wide keyboard						
6-key open keyboard						
32x74 keyboard						

OPEN KEYBOARD / BASE-KEYBOARD CONNECTIONS



TERMINALS	
“powered” or SHORT DISTANCE SERIAL	
1	DATA
2	VDD (+12V on base)
3	GND
“LINK” or LONG DISTANCE SERIAL	
2	485+
3	485-
4	GND
5	VDD
485 SERIAL	
6	485+
7	485-





Link Plus Serial Connection	
+12V	12V- power supply
GND1	GND “Powered” serial connection
DATA	DATA- powered serial connection

RS485 Long Distance serial connection	
VDD	12V Power supply
GND2	RS485 GND Serial connection
485-	RS485- Serial connection
485+	RS485+ Serial connection

IWK Serial Output Table (also see keyboard connections)

Type	Use	Lines	Accessories (on IWK keyboard)
Powered serial (SHORT DISTANCE)	for Single Base-Keyboard Connection	GND, DATA, VDD	plug-in module 90°
Optoisolated serial (LONG DISTANCE)	for Single Base-Keyboard connection; for multiple connections see below	VDD, GND, +, -	plug-in module 90° (open keyboard) for semi-finished product for std and wide keyboard

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NOTE : BASE UNIT/KEYBOARD CONNECTION/PROGRAMMING.

1 — THE BASE UNIT/KEYBOARD PROGRAMMING/CONFIGURATION CANNOT BE CARRIED OUT IF THE DEVICES ARE CONNECTED TO THE LINK NETWORK. THEREFORE, IT IS FIRST NECESSARY TO CONFIGURE THE MASTER AND SLAVE DEVICES (WITH RELATED KEYBOARDS) AND THEN CONNECT THEM TO THE LINK NETWORK.
2 — “FLICKERING” OF THE DISPLAYS ON THE KEYBOARD INDICATES THAT THE CONNECTED UNITS ALL HAVE THE SAME ADDRESS: DISCONNECT THE LINK NETWORK AND PROGRAM EACH UNIT AS DESCRIBED ABOVE.