The WJ-80 interface for an outdoor keypad / reader

The WJ-80 is a component of Jablotron's JA-80 Oasis 80 system. It is designed to connect JA-80H outdoor keypads or JA-80N RFID readers to a control panel. It provides an output to operate the electric strike of a door lock and is equipped with a wireless door bell transmitter.

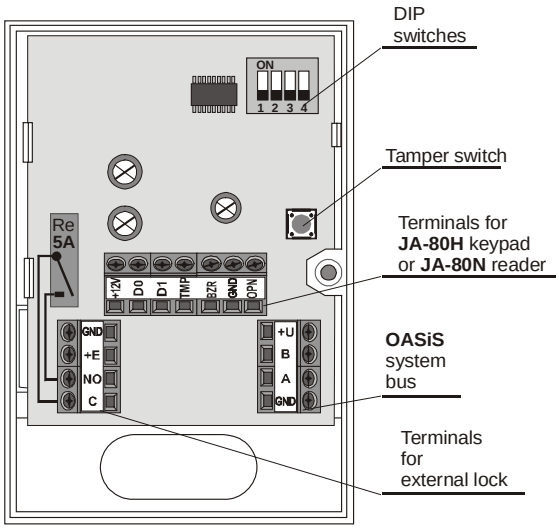
The WJ-80 can also be used to interface to a third party keypad (reader) which uses Wiegand 26b protocol (e.g. HID RK-40 a RK-10).

Installation

Installation shall only be undertaken by technicians holding a certificate issued by an authorized distributor. It should be placed in a protected internal part of a house (usually near an entrance door equipped with an electric lock).

Open the front cover by unscrewing the screw and take out the electronic circuit board (held by 2 tabs). Install the back part of the housing to the desired place, put back the electronic circuit board and connect the cables – see the following diagram. Do not connect the power before all wiring up and setting the DIP switches has been finished.

Terminals



Control panel (C.P.) bus cable

+U, B, A, GND connect to the corresponding terminals in the C.P.

Keypad/reader cable – a max. of one JA-80H or JA-80N can be wired in

terminal	*wire*
+12V	**red** (power, max. 60mA)
D0	**green** (DO data of Wiegand 26b)
D1	**brown** (D1 data of Wiegand 26b)
TMP	**grey** (TAMPER input, triggers if disconnected from GND)
BZR	**yellow** (output to operate the keypad buzzer by grounding it, max. 10mA)
GND	**blue and white** (ground)
OPN	**unlock input** – grounding this terminal activates the output relay for a period selected by DIP switch # 3. Can be used as a push button input to open the door from the inside.

A third party keypad/reader can be used if it uses Wiegand 26b protocol, but Jablotron cannot guarantee its compatibility.

Electric door lock output

+E , GND	a power supply to activate the electric strike of a door lock (its long-term current is limited by a resistor and its initial energy pulse is supplied by a reservoir capacitor). The power output is optimised for door locks of the type Jablotron Z8-12V.
C and NO	normally open dry contact of the output relay (max. 5A / 60V)

DIP switches

Interface features can be set by the DIP switches:

#	OFF	ON
1	the keypad (reader) works as a **control panel (CP) keypad**. The output relay can be activated by a PGY output (if DIP #2 is on)	the keypad (reader) **only operates the door lock** and starts a CP entrance delay if the CP is set (armed). The output relay is activated by a valid code (card) entry on the connected keypad.
2	**no reaction to PGY** output of CP	relay **reacts to the PGY** output
3	relay energizes for **3 sec.**	relay energizes for **6 sec.**
4	**no entrance and exit beeps** from the connected keypad	**exit and entrance beeps enabled***

***** disconnect the yellow wire from the BZR terminal to switch the keypad's acoustic and optical indication off completely.

The connected keypad / reader function

For the WJ-80 to function properly, the control panel should have its back-up battery connected. The basic function of the keypad / reader is determined by **DIP switch # 1:**

OFF = the keypad / reader works as a control panel keypad and can therefore be used to operate and program the alarm system. The output relay can only be activated in this mode by the CP's programmable PGY output (if DIP switch # 2 is ON, the duration of relay activation is set by DIP switch # 3).

ON = the keypad / reader only operates the door lock (external bypass function). It means:

The door lock opens by: a valid code (card) entry, grounding the OPN terminal and, if DIP # 2 is on, then also by triggering the PGY output (this can be used to open the door by entering ∗9 on the control panel keypad).

- If the door lock opens (by any of the above ways) while the alarm system is set, the entrance delay will start (as if a delayed detector has just been triggered).
- When the external keypad / reader is in this mode it cannot be used to set, unset or program the alarm system. It can however be used to program access codes (cards) the same way as via the control panel keypad (by the ∗6 sequence).
- If operation of the control panel by the service code (sequence 6921 in the control panel) is enabled, then the service code cannot be used for door opening.

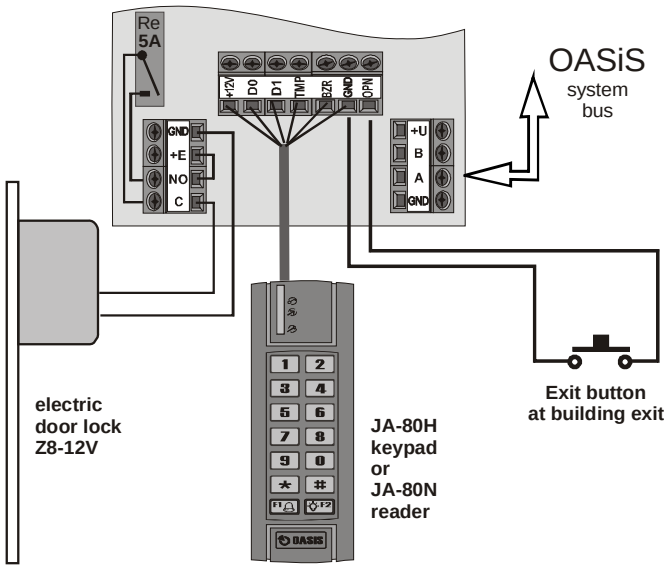
The JA-80H's door bell button

The bottom left key on the keypad can be used as a door bell button if the JA-80L wireless siren has been installed. If this function is desired, the button should be enrolled to the JA-80L siren (by pressing it while the siren is in enrollment mode). If the door bell button is used, the WJ-80 housing should not be shielded by any metal which could block radio signals.

Configuring the keypad for operation with the WJ-80

If the JA-80H keypad or JA-80N reader is connected to an Oasis control panel via a WJ-80 unit and it does not work as described above, then it is not set to the correct (factory default) operational mode. In such a case, follow the keypad / reader manual.

Example of wiring



Specifications

Power	*via the control panel bus*
Standby consumption	*approx. 60mA (incl.JA-80H or 80N)*
Output relay contact	*max. 5A/60V*
Built-in doorbell transmitter	*868MHz, Oasis protocol*
Operational environment	*II. indoor general, –10 to +40 °C (EN50131-1)*
WJ-80 dimensions	*76 x 110 x 33 mm*
EN 50131-1, EN 50131-5-3	*Grade 2*
Can be operated according to	*ERC REC 70-03*

FCC ID VL6WJ80

Jablotron Ltd. hereby declares that the WJ-80 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC and complies with part 15 of the FCC rules. Operation is subject to the following two conditions: 1. This device may not cause harmful interference, and 2. This device must accept any interference received, including interference that may cause undesired operation.

***CAUTION:** Changes or modifications no expressly approved by Jablotron could void the user´s authority to operate the equipment. The original of the conformity assessment can be found at www.jablotron.com, Technical Support section.*