1171 Notre-Dame O.
Victoriaville, Qc, CANADA
G6P 7L1

Telephone: (819) 751-0095 or (800) 203-9421
Fax: (819) 751-1292

SYMCOD HM-02N Digital Clock

V3 **and** **V4**

Documentation: 01/06/2011

Use this information for the product : HM-02N V3 and V4

Our Web site: http://www.symcod.com/

Programmer : Steve Bilodeau (ßill)
E-mail : sbill@symcod.com

Configuration of HM-02N board version V3

Configuration description:
Many modes are available for this HM-02N V3 ; each mode meets distinct needs. To settle a mode on the clock, you have to follow the following steps :

1. Disconnect the clock.
2. Inside the clock, press down the two pressure micro buttons # 1 and # 2.
3. Connect the clock, wait 2 seconds and then release the two buttons.

On the display, at this step, you should see : **SS-00-**

4. Press the pressure buttons # 1 and # 2 to change the clock mode.
5. When the desired mode will show, disconnect the clock and then connect it again.

DESCRIPTION OF THE MODES HM-02N V3:

Mode : 20 [TCPIP: Windows with Symcod library]
This mode displays the time in TCPIP mode. In the library, you must add the clock like a LBC-02 terminal.

Mode : 21 [TCPIP: Windows]
This mode can displays the time and string (start in time mode) in TCPIP mode.

Mode : 22 [TCPIP: Windows]
This mode can displays the time and string (start in string mode) in TCPIP mode.

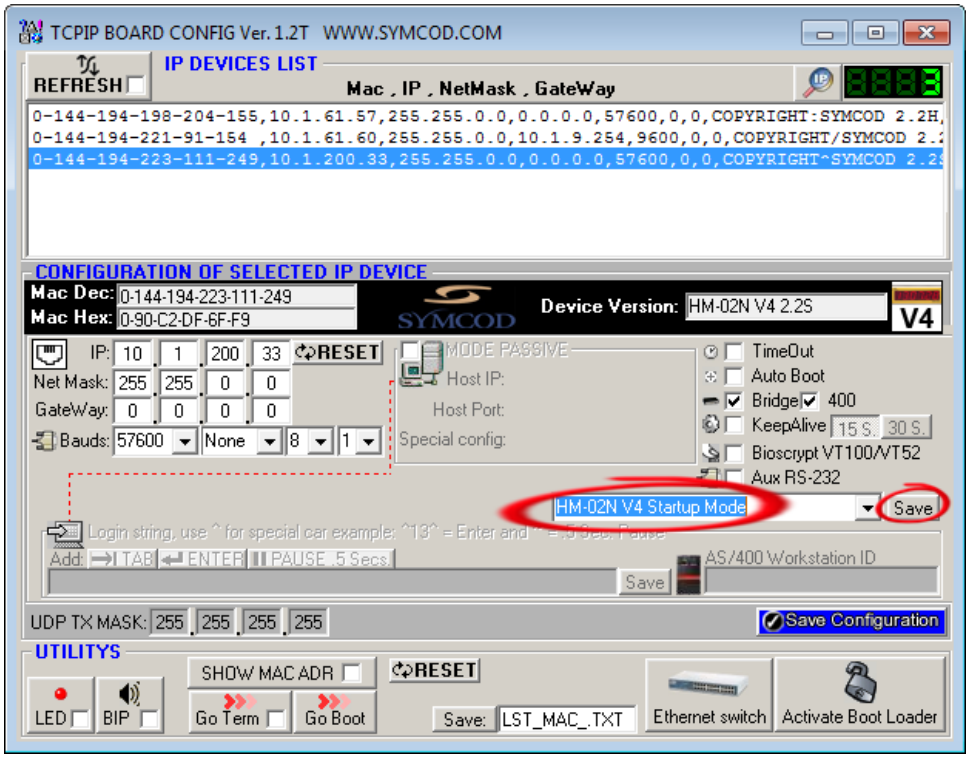
Mode : 25 [TCPIP: AS/400, Linux, Unix]
This mode displays the time in TCPIP mode.

Mode : 26 [TCPIP: AS/400, Linux, Unix]
This mode can displays the time and string (start in time mode) in TCPIP mode.

Mode : 27 [TCPIP: AS/400, Linux, Unix]
This mode can displays the time and string (start in string mode) in TCPIP mode.

Configuration of HM-02N board version V4

Configuration description:
Many modes are available for this HM-02N V4 ; each mode meets distinct needs. To settle a mode on the clock, you have to follow the following steps :
1. Download and install the software BoardConfig version 1.2T or more



2. Select your device
3. Use the “HM-02N V4 Startup Mode” to define the startup mode of your HM-02N V4 and click on “Save”

Description of each mode HM-02N V4:

Mode : Clock Mode (Red)
With this mode the HM-02N V4 start in clock mode and display the time.

Mode : String Mode
With this mode the HM-02N V4 start in string mode to display number.

Mode : Temperature Mode
With this mode the HM-02N V4 start in temperature mode and display in Celsius the mainboard temperature.

Mode : Show Version Mode
With this mode the HM-02N V4 display the firmware version at startup.

TCPIP Configuration

TCPIP CONFIGURATION MODE [Windows]:

1. With the help of BoardConfig software, enter the desired TCPIP parameters for your clock.
2. Save the configuration and close the BoardConfig software.
3. You can communicate with your clock via our library *(mode 20 only with HM-02N V3)* or directly via a TCP connection.

DIRECT TCP COMMUNICATION [Windows]:

1. Open a TCP connection on the IP address 1024 port of the HM-02N.
2. Send the desired commands.

TCPIP CONFIGURATION MODE [AS/400, Linux, Unix]:

With the help of BoardConfig software:

1. Select the terminal in **IP DEVICES LIST** (click)
2. Enter the **IP** and **Net Mask** of this terminal (**Bauds** = 57600 **Parity** = 0 **Databits** = 0)
3. Check the **MODE ACTIVE**
4. Enter the **Host IP** and (**Host Port** = 23)
5. Check the **Auto Boot**
6. Enter your **login string**

Example: ~~USER^9^PASSWORD^13^
Description: [Pause .5 Secs.] USER [TAB] PASSWORD [ENTER]
7. Push the button: **SAVE CONFIG IN TO IP DEVICE**

AS/400 WORKSTATION ID:

Board Config software version 1.1L or more supports WORKSTATION ID for AS/400
This functionality is available on SYMCOD DEVICE VERSION 1.9A and more.
** You can see your product DEVICE VERSION in the BOARD CONFIG software.*

Commands description (Windows Mode)

Time adjustment -> (177) [Windows mode]
Syntax: (177)"HHMMSS"{ETX}
Example: Chr(177)+"010203"+Chr(3)

Signal exit relay ON xx SECONDS (220) [Windows mode]
xx = Second(s) number
Syntax: (220)"99"{ETX}
Puts the exit relay ON during xx seconds.
Example: Chr(220)+"02"+Chr(3)

Signal exit relay ON (193) [Windows mode]
Syntax: (193){ETX}
Puts the exit relay ON.
Example: Chr(193)+Chr(3)

Signal exit relay OFF (196) [Windows mode]
Syntax: (196){ETX}
Puts the exit relay to OFF.
Example: Chr(196)+Chr(3)

Display String (199) [Windows mode]
Display string that can contain: “0123456789ABCDEFHIJKLOPQRSU- “
Syntax: (199)SSSSSS{ETX}
SSSSSS = String
Example : Chr(199)+"HELLO-"+Chr(3)

Command description (AS/400, Linux, Unix mode)

Time adjustment [AS/400, Linux, Unix mode]
Syntax: ><EHHMMSS
Example for 01:02:03: ><E010203

Signal exit relay ON xx SECONDS [AS/400, Linux, Unix mode]
Output RELAY 1 during xx seconds
><T1Txx
xx = Delay *(Two digits)*
Sequence example, set relay output ON during 4 seconds: ><T1T04

Signal exit relay ON/OFF [AS/400, Linux, Unix mode]
Output RELAY ON/OFF
><T1x
x = E for Enable or D for Disable
Sequence example, set relay output to ON: ><T1E

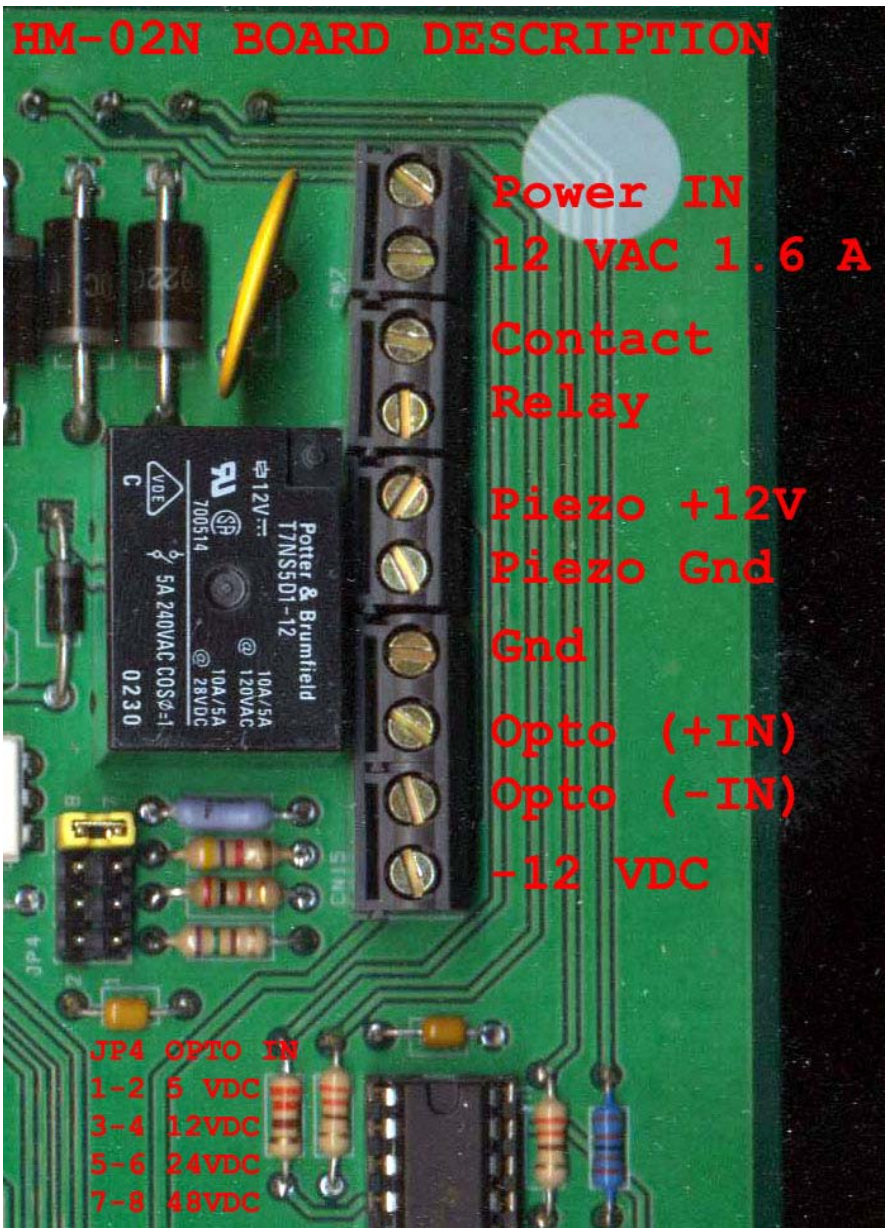
Display String [AS/400, Linux, Unix mode]
Display string that can contain: "0123456789ABCDEFHIJKLOPQRSU- "
Syntax: ><FSSSSSS{ETX}
SSSSSS = String
Example : ><FHELLO-

TECHNICAL SPECIFICATIONS HM-02N V3

ETHERNET CONNECTION :
The Ethernet link communicates only at a 10 Megabits speed.

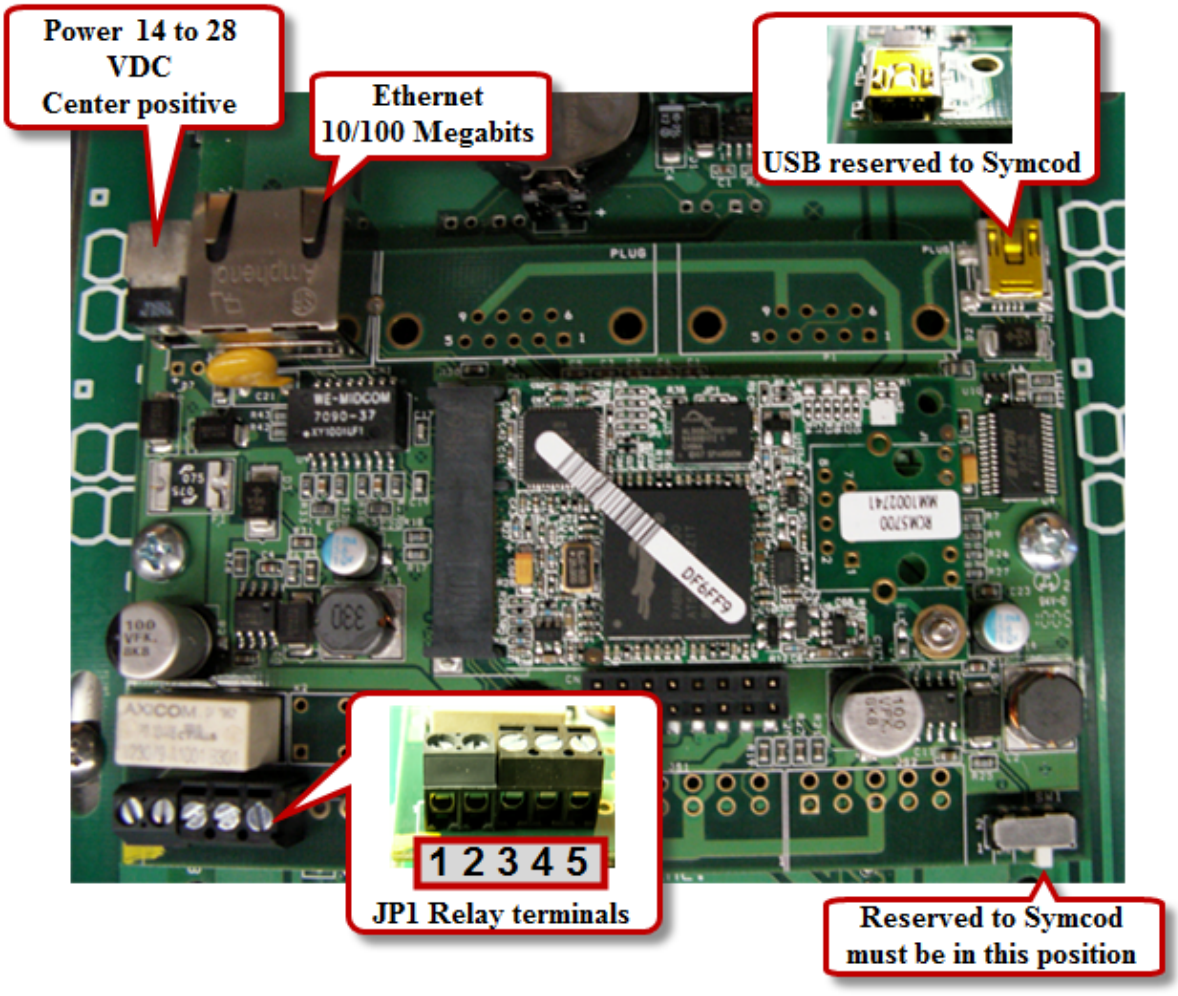
CONTACT RELAY:
Maximum voltage : 28VDC
Maximum amp. : 10 Amp. resistive or 5 Amp. Inductive.

IN/OUT CONNECTORS HM-02N V3:



TECHNICAL SPECIFICATIONS HM-02N V4

IN/OUT Internal connectors HM-02N V4:



The output relays (JP1 connector) offer a dry contact either normally closed or normally opened. The relay allows the activation or de-activation of a door strike or a door magnet but **it does not provide power to either the door strike nor to the door magnet.** The input voltage should never exceed 32 volts AC or DC.

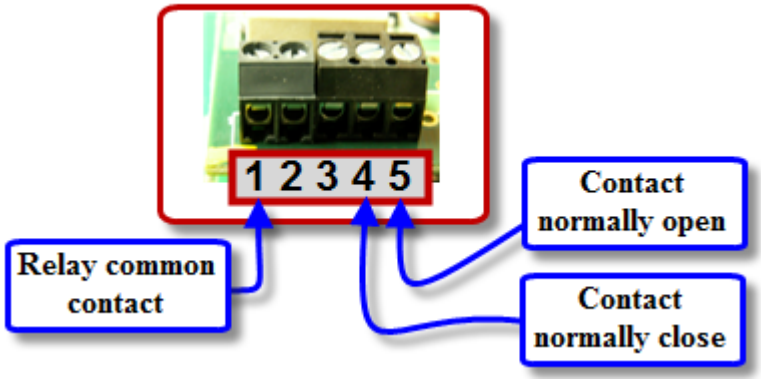
Relay dry contact specifications (HM-02N V4)

Relay terminals JP1 Terminals

Relay power input, DC Positive /AC line -1
Relay power input, DC Gnd /AC Neutral -2
Relay common output, DC Gnd /AC Neutral -3
Relay output normally close, DC Positive /AC line -4
Relay output normally open, DC Positive -5

The output relay (JP1 connector) offer a dry contact either normally closed or normally opened. The relay allows the activation or de-activation of a bell, but **it does not provide power.** The input voltage should **never exceed 32 volts AC or DC 4 Amps resistive**.

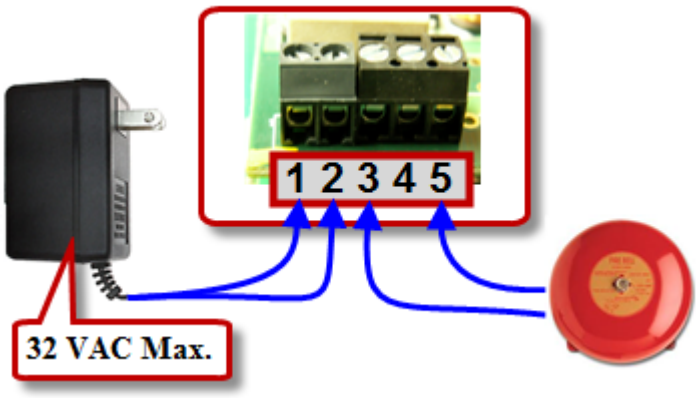
Wiring relay Dry contact only



Terminal 2 and 3 are electrically connected together.
These connections are only there to eliminate a wire slice.

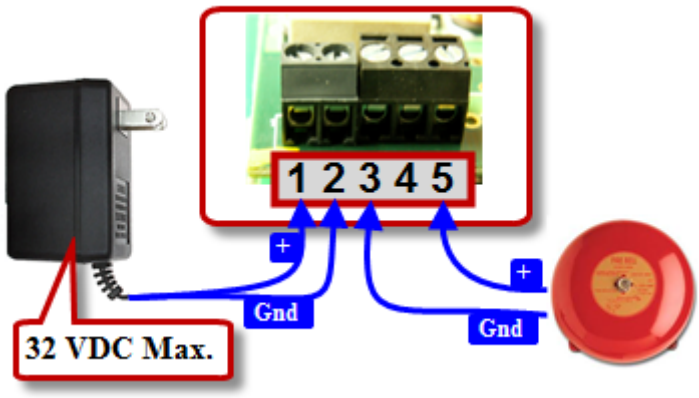
Relay wiring diagram for a bell (HM-02N V4)

Contact normally open Bell VAC



1. Plug the AC line of the external power source on pin 1 of JP1.
2. Plug the neutral of the external power source on pin 2 of JP1.
3. Plug the neutral of the Bell to control on pin 3 of JP1.
4. Plug the line of the Bell on pin 5 of JP1 for a normally open contact.

Contact normally open Bell VDC



1. Plug the positive of the external power source on pin 1 of JP1.
2. Plug the Gnd of the external power source on pin 2 of JP1.
3. Plug the Gnd of the Bell to control on pin 3 of JP1.
4. Plug the positive of the Bell on pin 5 of JP1 for a normally open contact.