VII. FREE INPUT / OUTPUT

1. Function

The Climatic^{TM}60 have free input / output on the main board BM60 and the expansion board BE60 to offer some possibilities to customize input / output for remote control of the unit.
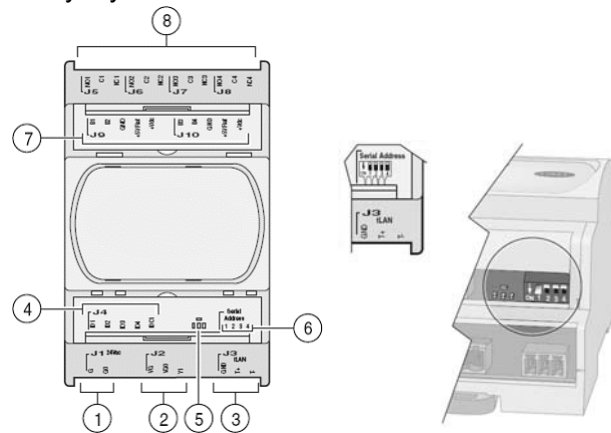
2. Description

The number of the free customized input / output is:

- 2 free contact input (normally opened) on BM60,
- 1 free contact output (normally opened) on BM60,
- 4 free contact input (normally opened) on BE60,
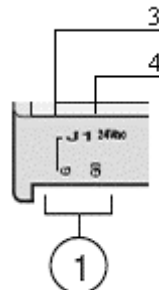- 4 free contact (normally opened) output on BE60,
- 4 free analog input on BE60.

The expansion board BE60 is an additional board fixed on DIN rail. The description of the various connectors is:
1) Power supply of the board,
2) Analog output 0/10V : Not used,
3) Network bus to the Climatic^{TM}60 BM60,
4) 4 Digital inputs : Only dry contacts,
5) Status LED of the network bus,
6) Serial address dip-switch of the network bus,
7) 4 Analog inputs configurable by pair B1-B2 and B3-B4,
8) 4 Digital outputs: Only dry contacts.

Power supply
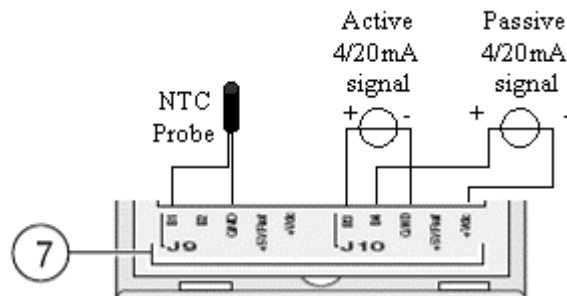The expansion board BE60 is power in 24Vac, +/-15%, 50-60Hz, P$_{max}$=6W.

Analog input

The 4 analog inputs can be used as NTC probe (-50T90 °C; R/T 10 KΩ at 25 °C) or 4/20mA (Impedance = 100Ω) current signal. They are configurable by pair B1-B2 and B3-B4. The configuration of the type of the input is automatically set by the Climatic^{TM}60.

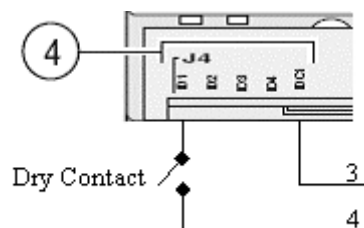The analog input can be configurable to be used as one of these items:
- 0) Not set,
- 1) Water set point desired,
- 2) Offset set point desired,
- 3) Free NTC probe.

Digital input
The 4 digital inputs must be used with dry contacts according to the following example. The digital input can be configurable to be used as one of these items:
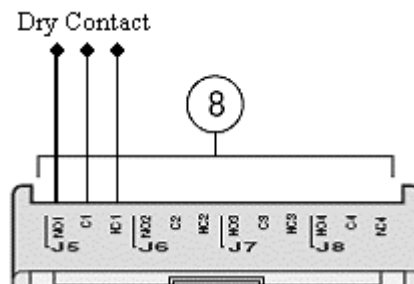- 0) Not set,
- 1) Remote On/Off,
- 2) Remote reset alarm,
- 3) Swap to second water set point,
- 4) Force the cooling mode,
- 5) Force the heating mode,
- 6) Force the dead zone mode,
- 7) Force the defrost delay (10min),
- 8) Disable the circuit 1 (All compressors),
- 9) Disable the circuit 2 (All compressors),
- 10) Disable the circuit 1-compressor 1,
- 11) Disable the circuit 1-compressor 2,
- 12) Disable the circuit 1-compressor 3,
- 13) Disable the circuit 2-compressor 1,
- 14) Disable the circuit 2-compressor 2,
- 15) Disable the circuit 2-compressor 3,
- 16) Force the mode A,
- 17) Force the mode B,
- 18) Force the mode C,
- 19) Force the mode D,
- 20) Force the mode BMS,
- 21) Status of electrical heaters,
- 22) Free digital input.

Digital output
The 4 digital outputs are dry contacts and the maximum commutable power is 2000VA, 250Vac.
The digital output can be configurable to be used as one of these items:

0)   Not set,
1)   General alarm (alarm minor),
2)   General fault (alarm major),
3)   General alarm on circuit 1,
4)   General alarm on circuit 2,
5)   General alarm on condenser,
6)   General alarm on evaporator pump(s),
7)   Flow evaporator alarm,
8)   Unit enable,
9)   Unit available (ready to start),
10) Unit running (one compressor ON),
11) Unit running 100% (all compressor(s) ON),
12) Unit operating in cooling mode,
13) Unit operating in heating mode,
14) Unit operating in dead zone mode,
15) Unit operating in zone 0
16) Unit operating in zone 1,
17) Unit operating in zone 2,
18) Unit operating in zone 3,
19) Unit operating in zone 4,
20) Unit operating in zone 5,
21) Unit operating in zone 6,
22) Unit operating in mode A,
23) Unit operating in mode B,
24) Unit operating in mode B,
25) Unit operating in mode D,
26) Unit operating in mode BMS,
27) Output for additional electrical heater 1,
28) Output for additional electrical heater 2,
29) Output for additional electrical heater 3,
30) Output for additional electrical heater 4,
31) Free digital output.

3. Settings

The different settings to configure the custom I/O are available in the menu:
- (**3131**): Setting for the digital output on the connector BM60-J14-NO7,
- (**3132**): Setting for the digital output on the connector BE60-J5-NO1,
- (**3133**): Setting for the digital output on the connector BE60-J6-NO2,
- (**3134**): Setting for the digital output on the connector BE60-J7-NO3,
- (**3135**): Setting for the digital output on the connector BE60-J8-NO4.

- (**3141**): Setting for the digital input on the connector BM60-J4-ID4,
- (**3142**): Setting for the digital input on the connector BM60-J4-ID7,
- (**3143**): Setting for the digital input on the connector BE60-J4-ID1,
- (**3144**): Setting for the digital input on the connector BE60-J4-ID2,
- (**3145**): Setting for the digital input on the connector BE60-J4-ID3,

- (**3146**): Setting for the digital input on the connector BE60-J4-ID4.

- (**3151**): Setting for the analog input on the connector BE60-J9-B1,
- (**3152**): Setting for the analog input on the connector BE60-J9-B2,
- (**3153**): Setting for the analog input on the connector BE60-J10-B3,
- (**3154**): Setting for the analog input on the connector BE60-J10-B4.