

Configuration of optional I/O boards

Various boards may be fitted on WorldCast Systems devices: input, output or audio. They can be adapted depending on the user's needs. Their availability and number vary depending on the product.

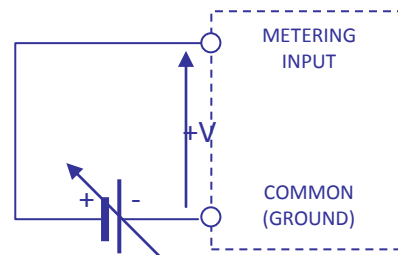
1. Metering module (analog inputs)

This module provides 8 metering inputs designed to measure voltages up to 50 V. It is possible to select the measurement range in the ScriptEasy software for a better accuracy while converting.

Schematic diagram:

This module converts analog voltage into a digital signal used by the unit.

Voltage (+V) must be applied between one of the metering inputs and the ground.

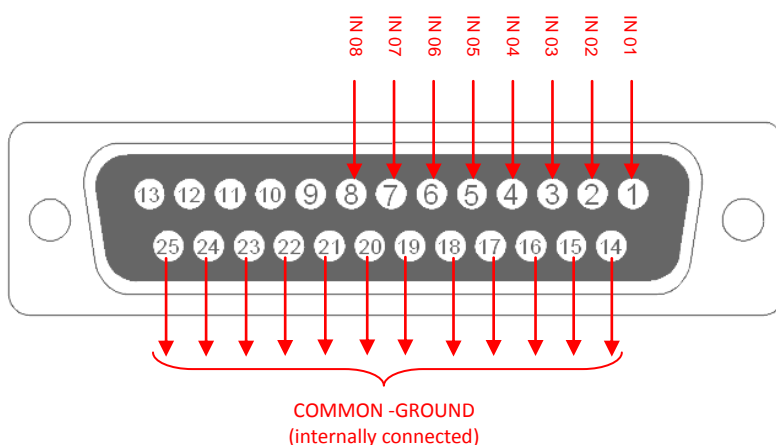


Metering input module external connection diagram:

External connections are done on the SUB-D 25 pts female connector located at the end of the board.

- Input impedance: 100 k Ω .
- Measurement range: 0-5 V, 0-10 V, 0-25 V & 0-50 V.
- ADC resolution (Analog to digital converter): 12 bits for each measurement range.

SUB-D 25 pts FEMALE CONNECTOR



Note: the ground is the same as the ground of the unit.

| PIN NUMBER | DESCRIPTION |
|------------|-------------|
| 1 | IN1 |
| 2 | IN2 |
| 3 | IN3 |
| 4 | IN4 |
| 5 | IN5 |
| 6 | IN6 |
| 7 | IN7 |
| 8 | IN8 |
| 9 | Not used |
| 10 | Not used |
| 11 | Not used |
| 12 | Not used |
| 13 | Not used |
| 14 | GND |
| 15 | GND |
| 16 | GND |
| 17 | GND |
| 18 | GND |
| 19 | GND |
| 20 | GND |
| 21 | GND |
| 22 | GND |
| 23 | GND |
| 24 | GND |
| 25 | GND |

2. Status module (digital inputs)

This module provides 16 digital inputs and can work in 2 different modes depending on jumper configuration:

Schematic diagram:

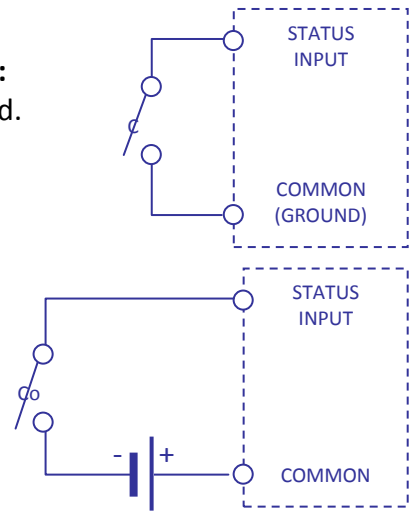
'Internal power supply' mode (default mode):

With this mode, all common pins are internally linked to the ground. When a digital input is connected with the common, this input's value switches to '1'; otherwise it stays on '0'.

'External power supply' mode:

With this mode, all 'common' pins are linked together but they are no longer connected to the ground. Now, an external power supply is necessary.

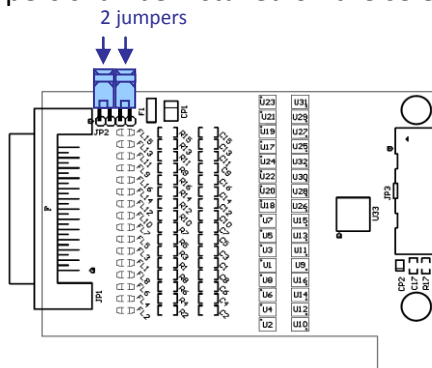
An external power supply between 5 and 25 V is applied to the common. If a digital input is connected to the ground, this input's value switches to '1'; otherwise it stays on '0'



Select internal or external power supply mode:

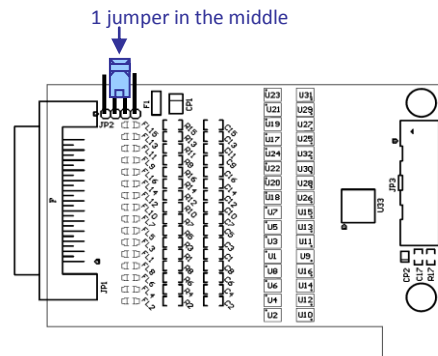
'Internal power supply' mode (default mode):

Two jumpers shall be installed on the selected pins.



'External power supply' mode:

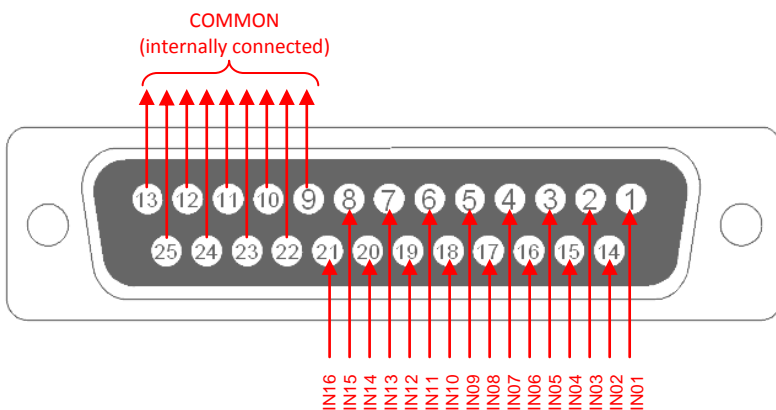
Install one jumper only on the middle pins.



Status module external connection diagram:

External connections are done on the SUB-D 25 pts female connector located at the end of the board.

SUB-D 25 pts FEMALE CONNECTOR



Note: When the 'internal power supply' mode is selected, the common ground is the same as the unit's ground.

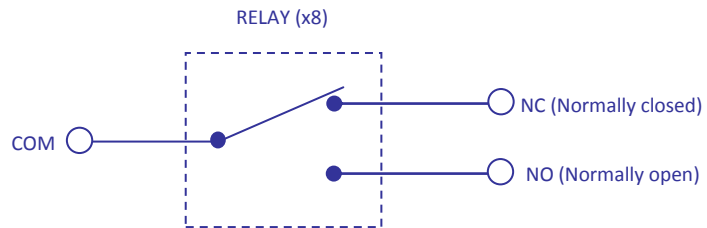
| PIN NUMBER | DESCRIPTION |
|------------|-----------------|
| 1 | Status input 1 |
| 2 | Status input 3 |
| 3 | Status input 5 |
| 4 | Status input 7 |
| 5 | Status input 9 |
| 6 | Status input 11 |
| 7 | Status input 13 |
| 8 | Status input 15 |
| 9 | Common |
| 10 | Common |
| 11 | Common |
| 12 | Common |
| 13 | Non connecté |
| 14 | Status input 2 |
| 15 | Status input 4 |
| 16 | Status input 6 |
| 17 | Status input 8 |
| 18 | Status input 10 |
| 19 | Status input 12 |
| 20 | Status input 14 |
| 21 | Status input 16 |
| 22 | Common |
| 23 | Common |
| 24 | Common |
| 25 | Common |

3. Command module (relay outputs)

This module provides 8 SPDT relays. Each relay has one com input (common) and two outputs: NC (normally closed) and NO (normally opened).

Schematic diagram:

- When the relay is not in use, com is linked to the NC output.
- When the relay is activated, com is linked to the NO output.



Note: If your unit reboots, the COM is then linked to the NC output.

Practical examples:

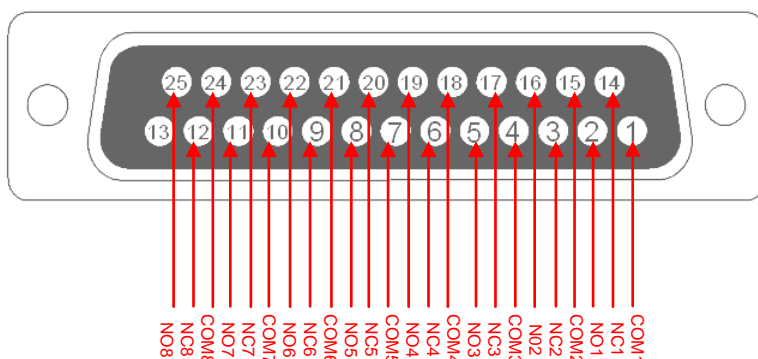
- The relay can be used like an on-off switch to make a contact between the common and one of the outputs (NC or NO).
- It is also possible to connect a power supply to the common (for example the +12 V power supply available on pin 13) and to switch this power supply between the NC and the NO output.

Command module external connection diagram:

External connections on the SUB-D 25 pts male connector located at the end of the board.

- Each circuit can support 5 A between -60 V and +60 V.
- A +12 V power supply with a max current of 250 mA is available between pin 13 and the unit's ground.

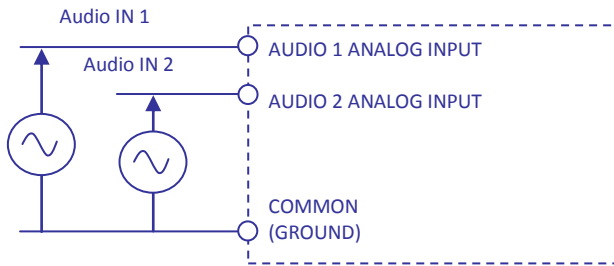
SUB-D 25 pts MALE CONNECTOR



| PIN NUMBER | DESCRIPTION |
|------------|-------------|
| 1 | COM1 |
| 2 | NO1 |
| 3 | NC2 |
| 4 | COM3 |
| 5 | NO3 |
| 6 | NC4 |
| 7 | COM5 |
| 8 | NO5 |
| 9 | NC6 |
| 10 | COM7 |
| 11 | NO7 |
| 12 | NC8 |
| 13 | +12V |
| 14 | NC1 |
| 15 | COM2 |
| 16 | NO2 |
| 17 | NC3 |
| 18 | COM4 |
| 19 | NO4 |
| 20 | NC5 |
| 21 | COM6 |
| 22 | NO6 |
| 23 | NC7 |
| 24 | COM8 |
| 25 | NO8 |

4. Audio module

This module has two inputs for 2 channel audio monitoring.



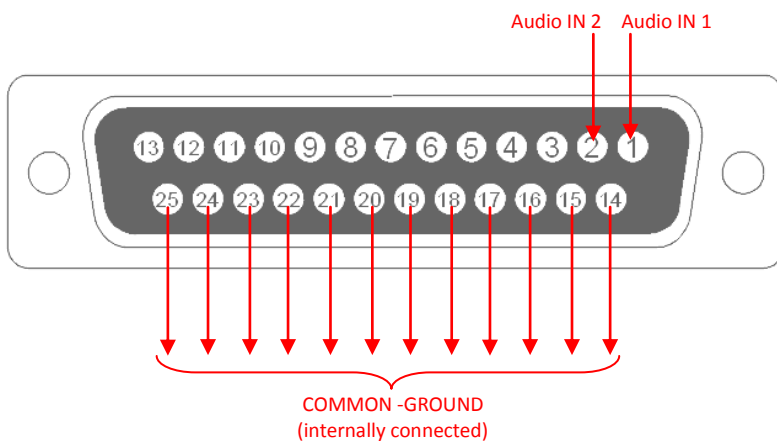
- This module converts a double alternation analog voltage into a digital signal the unit can process.
- Only pin 1, 2, 14-25 are available for Audio:
 - Pin1 = Channel 1 (R, L, L+R ,L-R)
 - Pin2 = Channel 2 (R, L, L+R ,L-R)
 - Pin14-25 = GROUND
 - Pin3-13 = Not used

🔊 Audio input module external connection diagram:

External connections on SUB-D 25 pts female connector located at the end of the board.

- Impedance: 100 kΩ.
- Min level: - 50 dBu; Max level: + 10 dBu.
- Bandwidth: 20 Hz - 15 kHz.

SUB-D 25 pts FEMALE CONNECTOR



| PIN NUMBER | DESCRIPTION |
|------------|-------------|
| 1 | AUDIO IN1 |
| 2 | AUDIO IN2 |
| 3 | Not used |
| 4 | Not used |
| 5 | Not used |
| 6 | Not used |
| 7 | Not used |
| 8 | Not used |
| 9 | Not used |
| 10 | Not used |
| 11 | Not used |
| 12 | Not used |
| 13 | Not used |
| 14 | GND |
| 15 | GND |
| 16 | GND |
| 17 | GND |
| 18 | GND |
| 19 | GND |
| 20 | GND |
| 21 | GND |
| 22 | GND |
| 23 | GND |
| 24 | GND |
| 25 | GND |