



Addressable Generic I/O Mimic Module 16 Inputs / 48 Outputs 2212

## Description

The addressable generic I/O mimic module 2212 is designed to provide up to 16 non-supervised clean contact inputs e.g. switch input and up to 48 non-supervised outputs e.g. LEDs. 2212 is a loop module that can be used remotely or inside the C.I.E. It requires 2 pairs from the control panel FT128, FT512 or FT1020G3 for 24V and COM loop. The 2212 module consists of 2 boards, a plug-in I/O matrix board 4582 and Generic I/O Mimic termination board SUB949A. The I/O matrix plugs in the IDC header in SUB949A and secured via M3 hex nuts and screws. The inputs and outputs are controlled via the I/O matrix board by the control panel as shown in Table 3, all inputs and outputs are programmable via Win software. The generic I/O module 2212 is designed to be fitted either using a standard DIN rail PCB mount (e.g. Excel Controls type E107 and M107) or using the mounting holes on SUB949A, refer to Figure **1**.

To configure 2212, the generic option in Win software is used.

#### **Mode of Operation**

The 48 LED outputs are 5V, approx. 15 mA (current limitation) per LED, and can be used for mimic indication. Any programmable output trigger conditions in Win128 / Win512 / WinG3 can be used to trigger an output LED. The 16 inputs can be used for 16 switches (push buttons, key switches, external time channel etc.). Any programmable input trigger conditions in Win128 / Win512 / WinG3 can be used.

#### **Specifications**

All current consumptions are valid for nominal voltage 24 VDC @ 25°C.

| Function                      | Description  |
|-------------------------------|--|
| Power requirement             | 18-30V DC, Nominal 24V   |
| COM loop quiescent current    | Min. / Max.: 4 mA / 6 mA   |
| DC supply current consumption | Min. / Max.: 10 mA (4582) / 100 mA (Depending on number of LEDs and activated input switches – application board.)   |
| Output                        | 48 x LED outputs of 5VDC, maximum 15mA per LED   |
| Input                         | 16 x Non-supervised inputs, N/O or N/C dry contact (0.1 – 3 mA per input)<br>Note: For FT128, if time channels are used to control inputs, only 8 can be used. |
| Ambient temperature (°C)      | Operating: -10 to +55 Storage: -55 to +105   |
| Ambient humidity (%RH)        | Max. 90, non-condensing  |
| Ingress protection rating     | Not applicable. (Depending on the application, board housing etc.)   |
| Size L x W x H (mm)           | 230 x 107 x 27 (the module includes SUB947 and 4582 plugged in)  |
| Weight (g)                    | Approx. 25   |

(Due to the continual development Brooks Australia reserves the rights to change the product specifications)

|          |     |   | Title<br>Addressable Generic I/O<br>Unit 2212 | Technical<br>Datasheet |           | BROOKS  |     |
|----------|-----|---|---|------------------------|-----------|---------|-----|
| 27/4/12  |     | Update Layout Dwg., SUB number,<br>add I/O table & Check. | For Addressable CIEs                          | Created                | Checked   | TDS No. | Rev |
| 24/10/11 | 0   | Original Issue  |   | E.T. / G.P.            | A.S.      | TDC010  | 1   |
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## Installation

Figure 1 shows the location and purpose of mounting holes for installation.

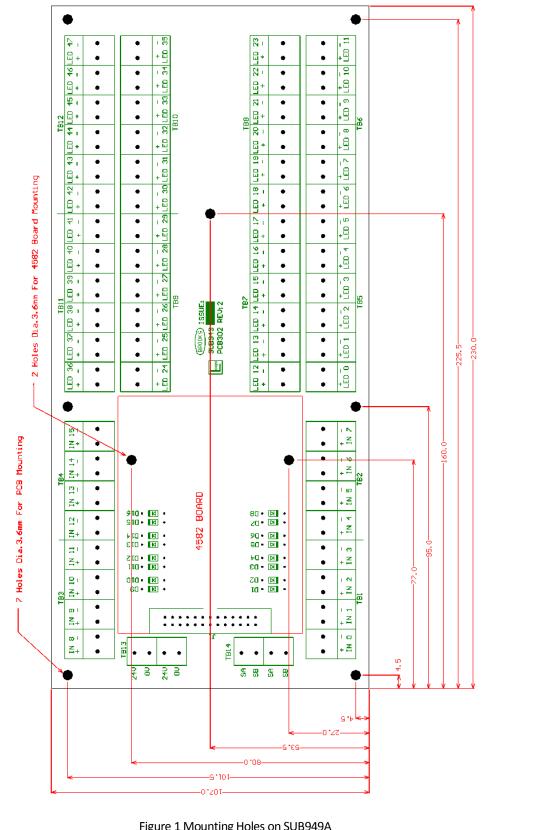


Figure 1 Mounting Holes on SUB949A

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### **Jumper Link Settings on 4582**

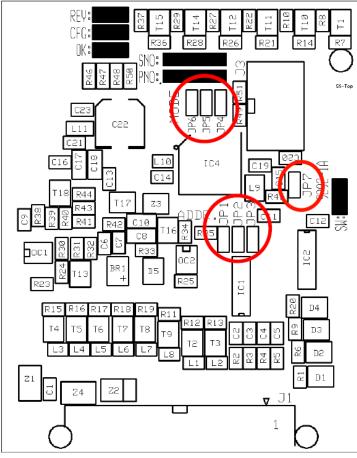


Figure 2 4582 I/O Matrix Board jumper locations

Table 1: 4582 I/O Matrix Board Address Setting (JP1-JP3)

| 4582<br>Address | JP1 – "1" | JP2 – "2" | JP3 – "3" |
|-----------------|-----------|-----------|-----------|
| 0               |           |           |           |
| 1               | Х         |           |           |
| 2               |           | Х         |           |
| 3               | Х         | Х         |           |
| 4               |           |           | Х         |
| 5               | Х         |           | Х         |

Jumpers JP1 to JP3 shown on Table 1 are used to set the address of the 4582 board. "X" indicates which jumpers should be shunted while empty spaces indicates those that are left not shunted.

**NOTE!** Jumper "JP3" is only used in the Firetracker FT1020G3 – for the FT1020G3 the maximum number of 4582 boards per loop is 6, for the FT128 and FT512 the maximum number per loop is 4 boards.

#### Table 2: 4582 I/O Matrix Board Type (JP4-JP6)

| 4582 Туре    | JP4 | JP5 | JP6 |
|--------------|-----|-----|-----|
| Fan control  |     |     |     |
| Zone Control | Х   |     |     |
| Generic      |     | Х   |     |

Jumpers JP4 to JP6 on **Table 2** are used to set the type of 4582 board application. For the 2212 the 4582 is used as a generic option, JP5 must be shunted while both JP4 and JP6 are not shunted.

# Jumper JP7 is not shunted (used for factory setting).

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# **Configuration of Inputs & Outputs**

The 2212 module consists of 1 x SUB949A & 1 x 4582 and configured as follow:

- 16 dry contact inputs IN 0 IN 15, 4582 inputs 0 15
- 48 LED outputs LED 0 LED 47, 4582 outputs 0 47

#### Table 3 Input / Output configured in Win128 / Win512 / WinG3 and the terminal description on SUB949

| Inpu                  | ıts          |          |        | Outp     | uts    |          |        |
|-----------------------|--------------|----------|--------|----------|--------|----------|--------|
| 4582 I/P in<br>Win SW | SUB949<br>In | 4582 O/P | LED    | 4582 O/P | LED    | 4582 O/P | LED    |
| 0                     | In 0         | 0        | LED 0  | 16       | LED 16 | 32       | LED 32 |
| 1                     | In 1         | 1        | LED 1  | 17       | LED 17 | 33       | LED 33 |
| 2                     | In 2         | 2        | LED 2  | 18       | LED 18 | 34       | LED 34 |
| 3                     | In 3         | 3        | LED 3  | 19       | LED 19 | 35       | LED 35 |
| 4                     | In 4         | 4        | LED 4  | 20       | LED 20 | 36       | LED 36 |
| 5                     | In 5         | 5        | LED 5  | 21       | LED 21 | 37       | LED 37 |
| 6                     | In 6         | 6        | LED 6  | 22       | LED 22 | 38       | LED 38 |
| 7                     | In 7         | 7        | LED 7  | 23       | LED 23 | 39       | LED 39 |
| 8                     | In 8         | 8        | LED 8  | 24       | LED 24 | 40       | LED 40 |
| 9                     | In 9         | 9        | LED 9  | 25       | LED 25 | 41       | LED 41 |
| 10                    | In 10        | 10       | LED 10 | 26       | LED 26 | 42       | LED 42 |
| 11                    | In 11        | 11       | LED 11 | 27       | LED 27 | 43       | LED 43 |
| 12                    | In 12        | 12       | LED 12 | 28       | LED 28 | 44       | LED 44 |
| 13                    | In 13        | 13       | LED 13 | 29       | LED 29 | 45       | LED 45 |
| 14                    | In 14        | 14       | LED 14 | 30       | LED 30 | 46       | LED 46 |
| 15                    | In 15        | 15       | LED 15 | 31       | LED 31 | 47       | LED 47 |

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