EC-O4 Manual **(ESX must be firmware 10.2.441 or above)**

infinity series
powered by EliteControl

4 Output Expander Module For ESX

The EC-O4 connects directly to the keypad bus of the ESX control panel using the ARR-14 quick connect loom provided or via the on board keypad bus terminals

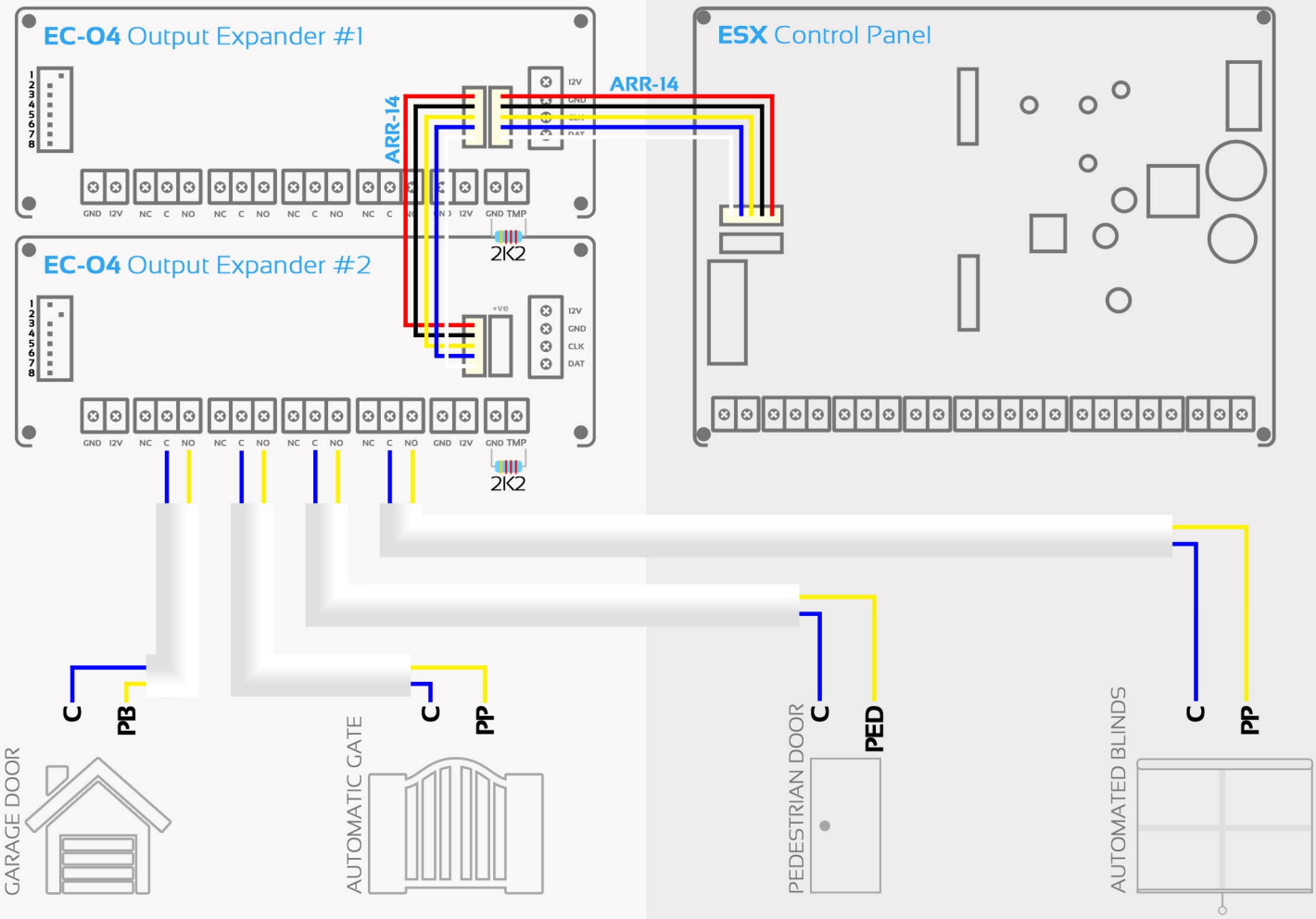
Each ESX control panel comes fitted with 4 on board outputs & can be expanded up to 32 outputs with the addition of our EC-O4 expander modules. Each EC-O4 module comes fitted with 4 outputs, allowing a maximum of 8 x EC-O4 modules to be connected to 1 x ESX control panel

Each EC-O4 supports:

- **4 x Individual Outputs** - Each 2A 30VDC Rated
- **2 x 12VDC accessory power terminals** - Each 12VDC 1.6A Fused
- **1 x Tamper input**
- **2 x Quick connect keypad bus sockets** - Use with ARR14 bus loom
- **1 x Keypad bus screw down terminals** - 12V - GND - CLK - DAT
- **Sockets** for EC-PSU plug in power supply module

Power Requirements
Voltage In: 12-15VDC
Min Current: 60mA
Max Current: 140mA

Basic Connection Diagram
Below is a simple connection diagram using the ARR-14 quick connect looms provided



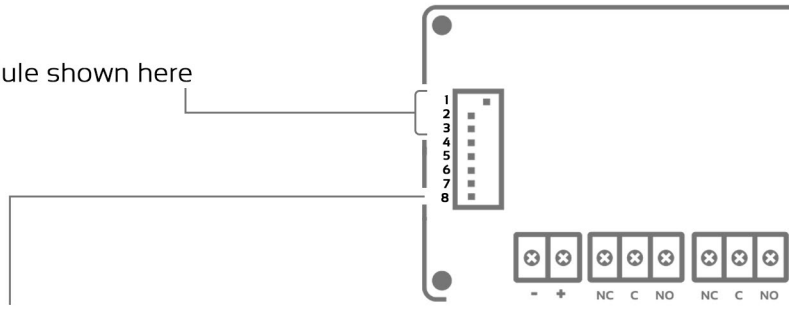
In this example:

- Output expander #1 dipswitch 1 is on which means it is following outputs 5 - 8 on the system
- Output expander #2 dipswitch 2 is on which means it is following outputs 9 - 12 on the system

Garage Door = Output 9 Automatic Gate = Output 10
Pedestrian Door = Output 11 Automated Blinds = Output 12

Dipswitch Addressing

- The EC-O4 uses dipswitches 1 - 3 to address each module shown here
- Dipswitches 4 - 7 are unused on the EC-O4 module



Use the chart below to set the EC-O4 output address:

Expander	EC-O4 Follows:	DIP 1	DIP 2	DIP 3
1	Outputs 1 - 4	OFF	OFF	OFF
2	Outputs 5 - 8	ON	OFF	OFF
3	Outputs 9 - 12	OFF	ON	OFF
4	Outputs 13 - 16	ON	ON	OFF
5	Outputs 17 - 20	OFF	OFF	ON
6	Outputs 21 - 24	ON	OFF	ON
7	Outputs 25 - 28	OFF	ON	ON
8	Outputs 29 - 32	ON	ON	ON

Important:
Dipswitch 8 controls the tamper function:

Dipswitch 8 Off = **Tamper input is active**
Requires a 2K2 resitstor shorted to common

Dipswitch 8 On = **Tamper input is inactive**
System ignores tamper input on this module

Output Programming (Basic)

- By default outputs 1 & 2 on the ESX system are siren outputs
- 1 x blue LED above each output shows the output state. If the LED is on the output is on & vice versa
- Before programming you must first enter installer mode. This is done by pressing PROG followed by your installer code, then ENTER. The default installer code is 000000

Output Reset Time (P40E) Note: Output becomes latching when reset time is set to 0 seconds
Press PROG 40 ENTER (output number) ENTER (time in seconds) ENTER

Push the right arrow to go to the next input or continue to another programming address

Overview

P 40 E 1-32 E 2 ENTER

- 2 — **Switching time in seconds (**0 seconds = toggle or latching**)**
- 1-32 — **Output number you wish to work on**
- 40 — **Address**

Power Supply

EC expander modules including the EC-O4, EC-Z8 & EC-A2 can be powered from the ESX control panel via the ARR-14 quick connect looms, however in many applications the 12VDC 1.4A supply will be exceeded. This is because each accessory usually draws around 100mA with the exception of locks & other specialised devices

Use the chart below to calculate the complete current draw of your system to help specify the correct supply:

Product	Current Draw	Quantity Used	Current
EC-O4	140mA		
PW WIEGAND (all models)	50mA		
AAP-EM	50mA		
AAP-TOUCH	50mA		
Magnetic Lock (estimate)	500mA		
Strike Lock (estimate)	250mA		
V-Lock (estimate)	1000mA		
EC-Z8	40mA		
EC-A2	100mA		
EC-LCD	100mA		
KP-TOUCH	250mA		
		Total Current →	