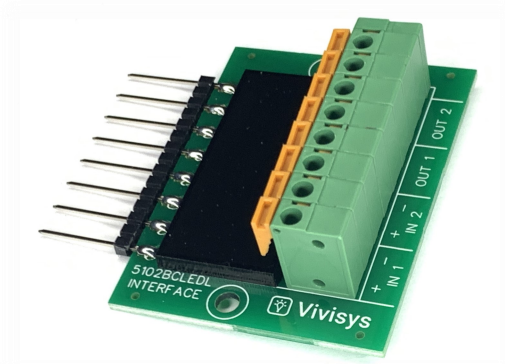
EasyConnect
Digital I/O Interface



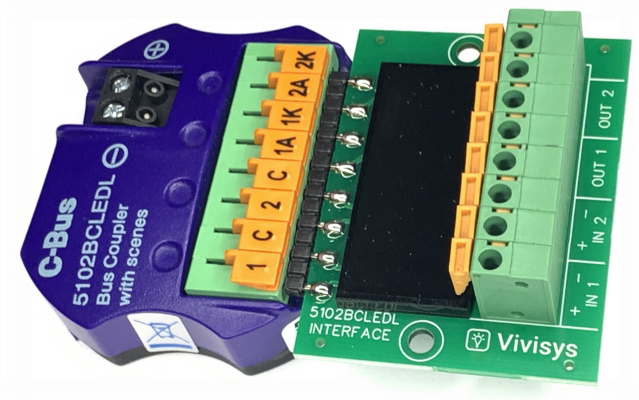
Two inputs and two outputs
for Clipsal C-Bus systems

Making it easy

The Vivisys EasyConnect Digital I/O Interface board works in conjunction with the standard Clipsal 5102BCLEDL Bus Coupler to make connecting your low voltage devices a breeze! The standard bus coupler connects to floating switches only, and powers two LEDs, but the EasyConnect board extends this by allowing the connection of on/off non-floating voltage sources, and turning the LED outputs into two solid state relays for operating your gadgets!

Making it easy, one EasyConnect board (used with a standard Clipsal 5102BCLEDL Bus Coupler) brings the following to the C-Bus system:

- Two non-floating on/off DC voltage inputs, typically in the 5 to 48 V DC range.
- Two solid state relay outputs for driving loads up to 48 V DC and 0.30 A.
- The ability to easily connect devices such as garage door openers, sliding gates, door locks, water sensors, etc.



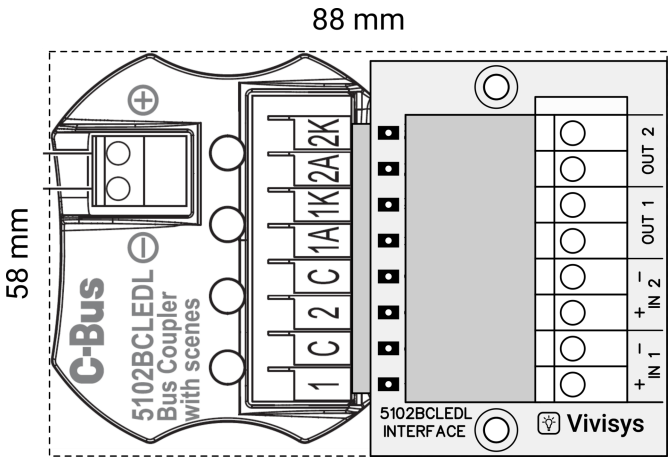
Additionally, the EasyConnect board:

- Is powered from the 5102BCLEDL Bus Coupler.
- Has a detailed application note available showing how to use it to operate a typical garage door opener.

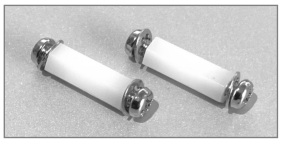
Vivisys

Specifications

General	
PCB Dimensions (W×H×D)	42 mm x 56 mm
Terminal wire size	0.25 - 2.0 mm^2
Isolation (terminal block to C-Bus Coupler)	3750 Vrms
Operating temperature range	0 – 45 deg C
Operating humidity range	10-95% RH
Inputs	
Input voltage to register as ON state	5 - 18 V
Input voltage to register as OFF state	< 1.5 V typ.
Internal series resistance	720 Ω
Min/Max input current for ON state	5 mA / 25 mA
Outputs	
Maximum voltage	48 V
Maximum current	0.30 A
OFF state leakage	1 µA max (typ. 100 pA)
ON state resistance	2 Ω max (1 Ω typ.)



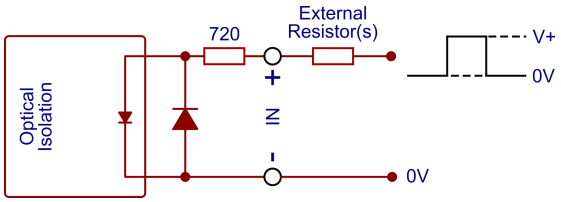
Two plastic standoffs are supplied for use as required.



NOTE — Ensure that the EasyConnect board and the C-Bus Bus Coupler and associated C-Bus cabling are well separated from mains wiring, earthed metal structures and electrical noise sources.

Input operation

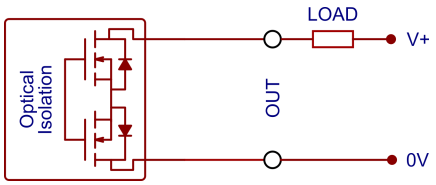
The input is polarised but features reverse polarity protection. The inbuilt series resistance is sufficient to directly accept ON voltages in the range 5 to 18 Vdc. At higher voltages some series resistance is needed to limit the current to an allowable level. These resistors are to be 0.5 W e.g. readily available metal film types.



Series resistance required to limit current for voltages greater than 18 Vdc						
Voltage source (V+)	5 - 18 Vdc	19 - 24 Vdc	25 - 30 Vdc	31 - 36 Vdc	37 - 42 Vdc	43 - 48 Vdc
External Resistor(s)	Not needed	2.2 kΩ	2.7 kΩ	3.9 kΩ	2 x 2.2 kΩ in series	2 x 2.7 kΩ in series

Output operation

The outputs are a solid state contact. To avoid damage the current must not exceed 0.30 A (300 mA), and the voltage must not exceed 48 Vdc. The two output connections are not polarised and an example configuration is shown. To ensure the current is kept less than 0.30 A, the table shows the minimum load resistance to be observed at various driving voltages.



Output - load series resistance required to keep current less than 0.30 A					
Voltage source (V+)	5 V	12 V	24 V	30 V	48 V (max)
Load resistance	> 16 Ω	> 40 Ω	> 80 Ω	> 100 Ω	> 160 Ω

Part numbers

Part number	Description
EASYCONNECT	Vivisys EasyConnect board