# Clever Home Automation Control



# **GTI G2 Motorised Window Actuator**



# The easy way to automatically control your home (or office) windows

# **Neccessity**

Ideal for innaccessible windows that are too high or remote to operate manually.

### Coordination

Now you can automatically coordinate control of your windows with control of your external <u>motorised roller</u> shutters, and your internal motorised blinds/curtains.



#### Convenience

These low operating noise motorised window actuators allow Clever Home to automate control of your windows, so that you may:

- Automatically open windows in bathrooms when your <u>exhaust fan</u> operates to let fresh air in, and then close after the exhaust fan has cleared the steam from your bathrooms.
- Automatically close when Away Arming your <u>security system</u>, or when high wind speeds are detected as a storm approaches.
- Automatically operate on timed schedules.
- Operate manually from any <u>C-Bus wall switch</u>, touch screen, or Archos wireless Internet tablet.



#### Safety

Safe low voltage 24VDC wiring only is requried to these Window actuator motors.

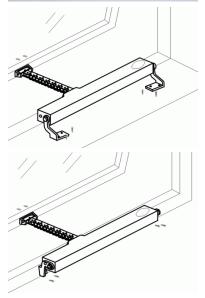


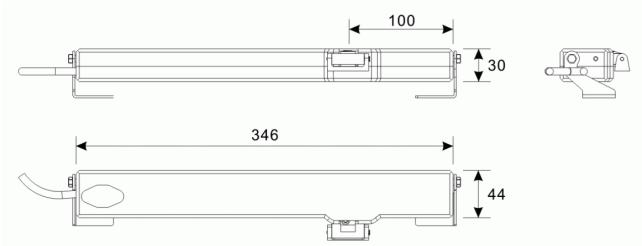
# **Window Chain Linear Actuator Specifications**

- Available in White or Silver to match your decor.
- Sill and Fixed Brackets of same colour included.
- Pivoting bracket design allows actuator and chain to align better with the window as it opens, helping ensure longer trouble-free operation.
- Fixed Brackets allow for mounting on window frames, with or without window sills.
- Low noise produced when operating.
- Easy wiring installation using a single figure 8 two-core low voltage cable.
- Electronic overload cut-off and travel-limit stop.
- Double link chain operating stroke of 300mm.
- Safe operating speed of 6mm/s.
- Endurance tested for 20,000 operations.
- High lock force of 4,500N when not moving.
- Maximum opening and closing force of 450N.
- Wide operating temperature range: -15°C to 75°C.
- Safe low operating voltage: 24VDC +/- 10%.
- Maximum current drawn: 0.6A.
- IP rating: 32.
- Actuator dimensions: 346mm long, 30mm high, 44mm deep (see dimension diagram below), plus Fixed Bracket stand-off distances.
- Easily controlled with Clipsal C-Bus home automation using <u>C-Bus Shutter Control Relays</u> (see C-Bus relay wiring diagram on next page).







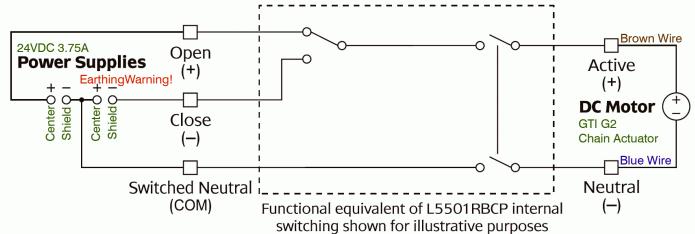


#### **Motorised Window Actuator**

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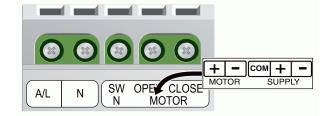
# HOW TO WIRE DC WINDOW CHAIN ACTUATORS TO C-BUS SHUTTER CONTROL RELAYS



#### NOTE:

Shutter relay terminal labels are shown as labelled on the product. In this installation their function is not as labelled. A DC termination label is provided for when a DC motor is used.

**DC Actuator connection stickers** are stuck over the top of the normal 240VAC connection labelling (see diagram right) by Clever Home, so that the relay connections are labelled as shown in brackets in the above wiring diagram.



**Earthing Warning**: If the mains earth pin is internally connected to the 0VDC output within the Power Supplies, then the mains earth pin on the Power Supply providing the -24VDC (on RHS in above diagram) must not be connected to prevent shorting the DC output on both Power Supplies, while at the same time ensuring that the installation is properly and safely earthed. Check for shorts before powering up.

#### Two DC power supplies are required.

When Open (+) is activated on the C-Bus Shutter control relay, positive polarity is applied to the window chain actuator. When Close (-) is activated, negative polarity is applied to the actuator.

**Cut off the Power Supply output plugs** while keeping cable as long as possible, and leaving the anti-EMI ferrite filter on the end of the power supply cable. Ensure that the power supplies are not powered up, and that they have been fully discharged, before cutting the DC output cable plugs off, so that when you short the output cable when cutting it you do no damage to the power supplies. The outer shield of the output cable is OVDC, and the center conductor is +24VDC.

**Up to four GTI G2** Chain Actuators may be connected to one pair of shared 24VDC 3.75A power supplies. This allows for maximum peak inrush currents of up to 1.5 \* 0.6 (specified max current) = 0.9A for each actuator. 4 \* 0.9A = 3.6A total max inrush current, which is less than the 3.75A maximum current output from the power supplies.

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**At limit of travel** the current consumption of the GTI G2 Actuator falls to almost nothing, but it is still good practise to implement a fail-safe cut-off duration of 50s (300mm stroke / 6mm/s speed) within the C-Bus Shutter Relay. We program this into each relay. If the home owner wants to reduce the maximum window opening stroke on any windows, we can simply reduce the fail-safe cut-off duration programmed into individual Shutter relays.

# Where to buy window actuators in Victoria Australia

# **Clever Home Pty Ltd**

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<u>Clever Home Automation Website: www.cleverhome.com.au</u>

<u>Window Actuators Website Page</u>