



GX IO-Extender 150



GX IO-Extender 150 - front view

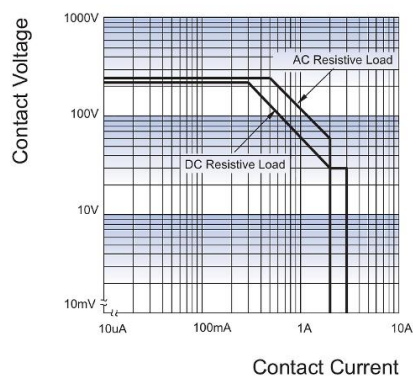


GX IO-Extender 150 - rear view



Node-RED node

## MAXIMUM SWITCHING POWER



Latching relay contact switching power depending on voltage and current

The GX IO-Extender 150 enhances the input and output (I/O) capabilities of a GX device, enabling seamless integration with additional sensors, controls, and external devices. It connects via USB, which also serves as its power source, providing a simple and efficient expansion solution. The device can be controlled using Node-RED on the GX device as well as the Switch pane in the user interface.

## Features

- 8 digital I/Os, configurable as 8 inputs, 8 outputs or 4 inputs + 4 outputs
- PWM output for precise control applications
- Two latching relays for low-power switching
- A solid switch for controlling DC loads that can be resistive, capacitive or inductive (such as the coil of a high-power contactor)
- Pluggable spring terminals for fast and secure connections
- Configurable via Node-RED for easy automation and custom logic

Technical Note: The digital outputs can source 4mA max. When driving 4mA, the voltage drop across the internal series resistor (560  $\Omega$ ) is 2.24V, which leaves only 2.76V @ 4mA for the output signal. Therefore, a driver like a transistor or FET is required to switch a relay with a digital output.

| GX IO-Extender 150                  |                                                                                                                                                                                                  |                                                                             |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Supply voltage                      | Powered by USB                                                                                                                                                                                   |                                                                             |
| Power consumption                   | < 100 mW when idle, max. 1 W (< 200 mA @ 5 V)                                                                                                                                                    |                                                                             |
| Mounting                            | Wall or DIN-rail (by using adapter accessory)                                                                                                                                                    |                                                                             |
| Input and Output connectivity       |                                                                                                                                                                                                  |                                                                             |
| Digital I/Os<br>(isolated from USB) | 8 I/Os with LEDs indicating state, configurable as 8 inputs, 8 outputs or 4 inputs + 4 outputs                                                                                                   |                                                                             |
|                                     | Inputs: 3.8 – 5.5 V, Outputs: 5 V, 4 mA max<br>The digital I/Os are capable to handle voltages up to 5.5 V. Any overvoltage can cause permanent damage                                           |                                                                             |
| PWM output<br>(isolated from USB)   | 4 channels with LEDs indicating the state<br>Voltage level: 5 V, Precision: 8 bits @ 1,5625 kHz                                                                                                  |                                                                             |
| Latching relays<br>(potential free) | 2x latching relays (bi-stable) with LEDs indicating the state                                                                                                                                    |                                                                             |
|                                     | Contact rating (resistive load):<br>DC: 3 A @ 30 V, 1 A @ 60 V, 0.3 A @ 220 V (90 W max)<br>AC: 2 A @ 60 V, 1 A @ 125 V, 0.5 A @ 250 V (125VA max)<br>Max switching power: See graph on the left |                                                                             |
| Solid switch<br>(isolated from USB) | Max battery voltage:                                                                                                                                                                             | 70 VDC                                                                      |
|                                     | Max load current:                                                                                                                                                                                | 4 A                                                                         |
|                                     | Max capacitive load:                                                                                                                                                                             | Vbat up to 15 V: 1000 µF<br>15 V<Vbat<30 V: 400 µF<br>30 V<Vbat<70 V: 50 µF |
|                                     | Max inductive load:                                                                                                                                                                              | Up to 1 A: 1000 mH<br>1 A<I<2 A: 100 mH<br>More than 2 A: 10 mH             |
| Dimensions                          |                                                                                                                                                                                                  |                                                                             |
| Outer dimensions (h x w x d)        | 123 x 67 x 23 mm                                                                                                                                                                                 |                                                                             |
| Weight                              | 0,170 kg                                                                                                                                                                                         |                                                                             |
| Operating temperature range         | -20 °C to +50 °C                                                                                                                                                                                 |                                                                             |