

Ten Volt Module and Kit

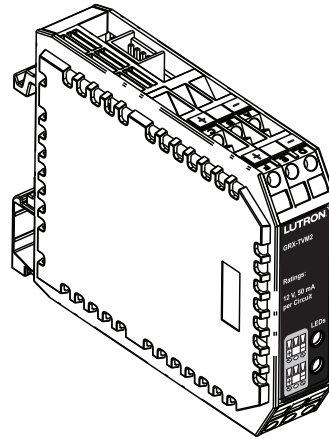
A Ten Volt Module (TVM) can control various LED and fluorescent load types when the lighting fixtures use a low-voltage signal ballast or LED driver.

The GRX-TVM2 can be considered as an output module in a HomeWorks QS system; it is used to control load types such as: 0–10 V_{DC} sink, 0–10 V_{DC} source, Pulse Width Modulation (PWM), DALI (broadcast only), and Tridonic DSI with the addition of a Module Interface (MI). Each TVM has two outputs which can be individually programmed to control any of these load types. TVMs can work in conjunction with the outputs of RPM-4U modules to switch the ballast or driver.

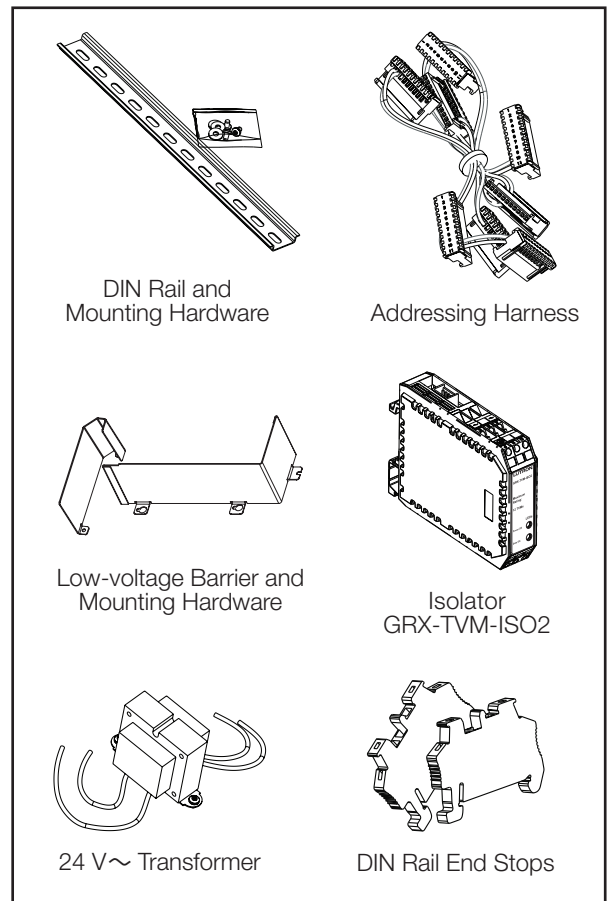
The Ten Volt Module Kit (HW-TVMKIT-120, HW-TVMKIT-230) contains the parts required to install TVMs (TVMs and TVM Kits are sold separately). Each TVM Kit can accommodate up to 12 TVMs, for a total of 24 circuits per panel.

Customers can mount the TVM Kit in their own enclosure or add it to an existing Lutron enclosure* (HWI-PNL-8, HWAP-8, HWBP-8, PBK-8).

The ISO2 (included in the TVM Kit) provides isolated power to the TVMs. Each ISO2 can provide no more than 750 mA of current — equal to 6 fully loaded TVMs or up to 12 partially loaded TVMs.



GRX-TVM2



HW-TVMKIT-120; HW-TVMKIT-230

Model Numbers

GRX-TVM2	Ten Volt Module
HW-TVMKIT-120	Ten Volt Module Kit (120 V _{AC})
HW-TVMKIT-230	Ten Volt Module Kit (230 V _{AC})
163198	Low-Voltage Transformer for 120 V _{AC} Kit (replacement)
163227	Low-Voltage Transformer for 230 V _{AC} Kit (replacement)
GRX-TVM-ISO2	ISO2 (replacement)

* The HW-TVMKIT is mounted in place of Remote Power Module (RPM) #8

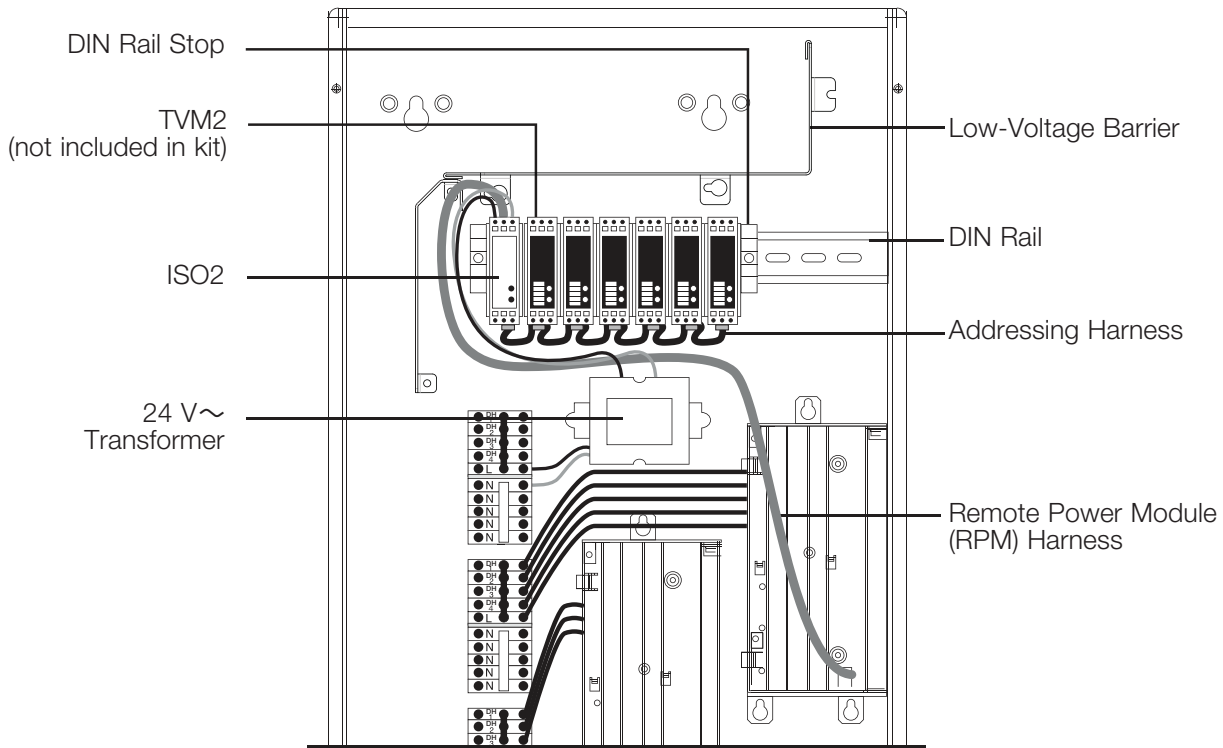
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Specifications

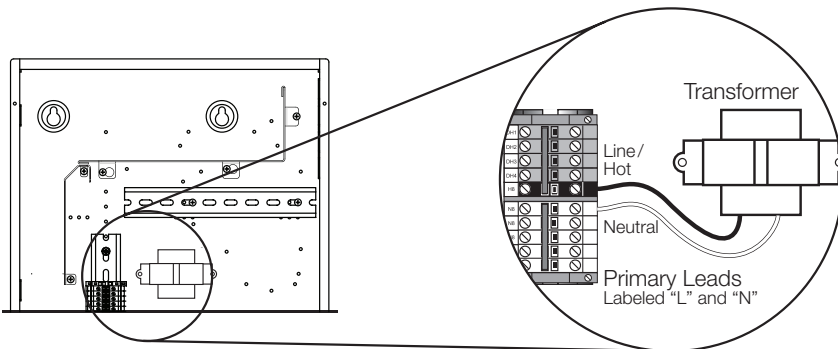
Model Numbers	<p>GRX-TVM2 (Ten Volt Module) HW-TVMKIT-120 (120 V~ Ten Volt Module Kit) HW-TVMKIT-230 (230 V~ Ten Volt Module Kit) <i>Replacement Kit Accessories:</i> 163198 (Low-Voltage Transformer for 120 V~ Kit) 163227 (Low-Voltage Transformer for 230 V~ Kit) GRX-TVM-ISO2 (ISO2)</p>
Power	<p>GRX-TVM2: 12 V= 50 mA per circuit</p> <p>HW-TVMKIT-120 ISO2: 24 V~ 50/60 Hz 750 mA per ISO2 Transformer Input: 120 V~ 50/60 Hz 40 W Transformer Output: 24 V~ 1.6 A IEC PELV/NEC® Class 2</p> <p>HW-TVMKIT-230 ISO2: 24 V~ 50/60 Hz 750 mA per ISO2 Transformer Input: 220 V~ to 240 V~ 50 Hz 40 W Transformer Output: 24 V~ 1.6 A IEC PELV/NEC® Class 2</p>
Capacity	<p>Each GRX-TVM2 can control up to 2 circuits. Each HW-TVMKIT-xxx can hold up to 12 GRX-TVM2s.</p>
Low-Voltage Connections	<p>11-pin harness connects ISO2 to each TVM2. Low-voltage MI harness connects the ISO2 units to panel interface.</p>
Environment	<p>Ambient operating temperature: 32 °F to 104 °F (0 °F to 40 °F). Ambient operating humidity: 0%–90% humidity, non-condensing. Indoor use only.</p>
Mounting	<p>Mounts in HWI-PNL-8, HWAP-8, HWBP-8, PBK-8 in place of Remote Power Module (RPM) #8.</p>
Warranty	<p>www.lutron.com/TechnicalDocumentLibrary/Warranty.pdf www.lutron.com/TechnicalDocumentLibrary/Intl_Warranty.pdf</p>

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Installation

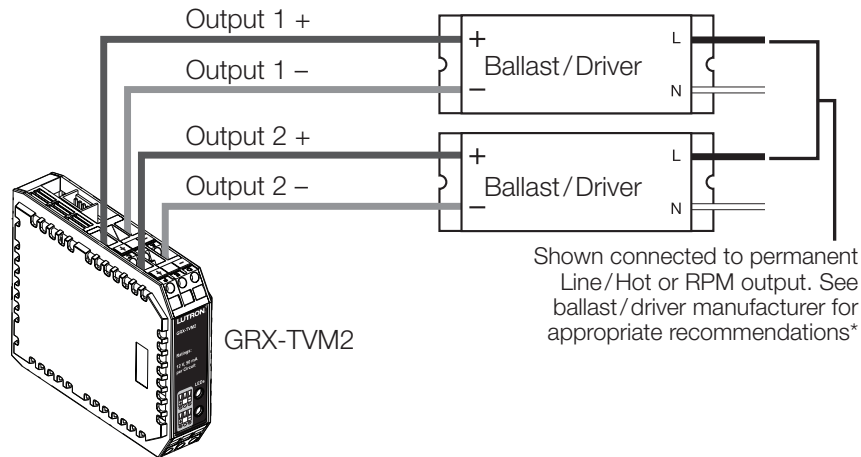


Wiring

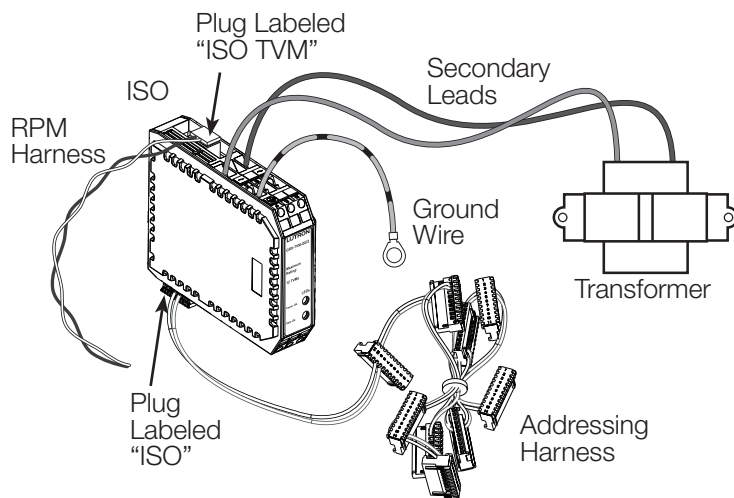


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Connecting the Low-Voltage Signal Wires



ISO2 Wiring Example



* Some ballasts/drivers require a permanent Line/Hot connection while others must be switched off, by the output of an RPM-4U module, in conjunction with the TVM. Consult ballast/driver manufacturer instructions for details.