

PANL PC0144 Relay Quick Start Guide

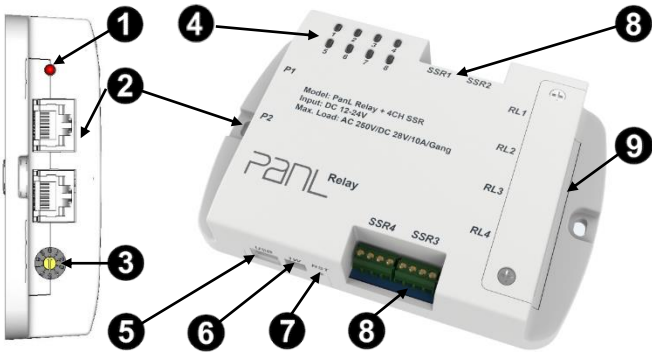


Please visit <http://panlshop.com/warranty> or scan the QR code for warranty registration with the UUID and Product Key below:

STICKER AREA



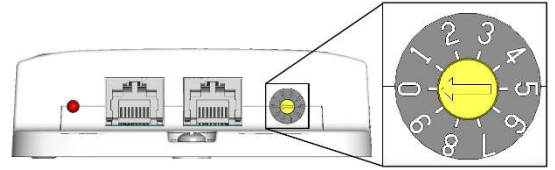
Product Features



PanL Relay

- 1 Power Indicator**
- 2 RJ45 Ports** – Connect PanL Hub, another PanL Device or Terminator
- 3 ID Switch** – Refer to the **ID Switch Configuration** section for more details
- 4 Status indicator** - Refer to the **PanL Relay LED Status Indicator** section for more details
- 5 USB** – Reserved for factory use only
- 6 1W** –Reserved for factory use only
- 7 Reset Button**
- 8 DC Input/Solid State Relay (SSR) Control**– Refer to DC Input and SSR Control setup section for more details
- 9 Relay Ports (RL1-RL4)**– Refer to Relay(RL1-RL4) setup section for more details

ID Switch Configuration

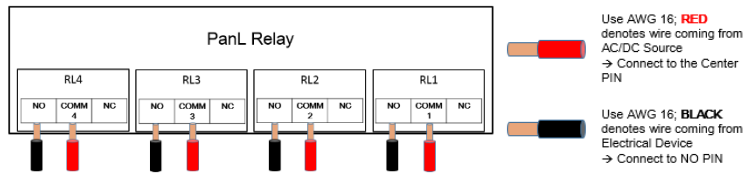


For multiple PanL Relay connections to a single PanL Hub port, the ID switch at the back of the displays must be configured to be unique. Using a Philip head screw driver, set a unique number for each display between 0-7 (do not use 8-9). For example, if connecting 3 PanL Relay to a PanL Hub port, you may set it as 0, 1, and 2. Relays connected to different PanL Hub ports can share the same unique number.

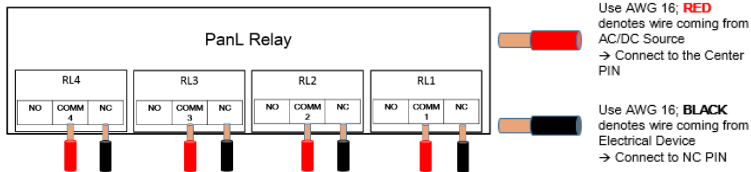
Relay (RL1-RL4) Setup

The Relay (RL1-RL4) supports both AC and DC Loads and is rated at AC250V/DC28V/10A max per relay. Below depicts 2 connection options:

DEVICES NORMALLY OFF (NO)



DEVICES NORMALLY ON (NC)



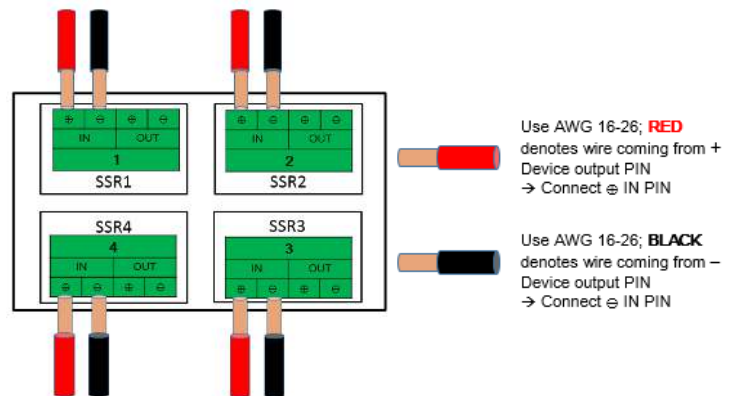
WARNING: ALWAYS SWITCH OFF POWER SUPPLY WHEN WIRING

PanL Relay Setup

- To securely mount the device on a flat surface, M4 screws and nuts can be applied at the side of the enclosure. (Not provided in the box)
- If connecting multiple PanL Relays to a single PanL Hub port in a daisy chain configuration, set the ID switch. Refer to the section - **ID Switch Configuration** for details.
- Connect RJ45 8P8C cable and add a terminator. Refer to the section **PanL Hub Connection** for details.
- If using **Relay (RL1-RL4)** option, refer to the section **Relay (RL1-RL4) Setup** for details.
- If using **SSR Control** option, refer to **SSR Control setup** for details.
- If using **DC INPUT** for external input sense, refer to the section **DC Input** setup for details.

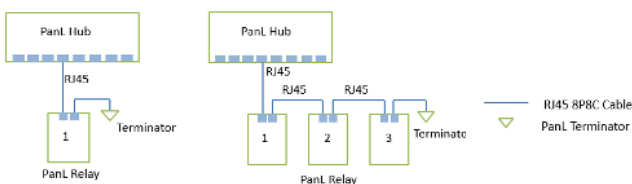
DC Input Setup

The 4 DC input channels are designed to take in external DC inputs ranging from 3.3V to 24V. It can be used as a feedback channel to sense the RL1-RL4 and SSR activation. Setup connections are illustrated below:



PanL Hub Connection

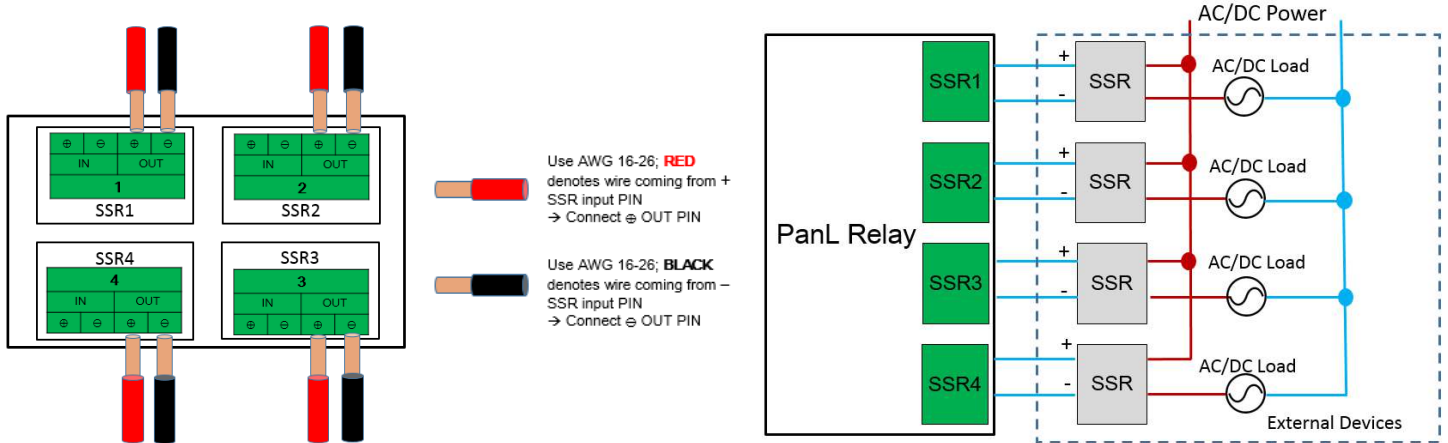
The PanL Relay is designed to be connected to a PanL Hub for power and data via the P1 or P2 RJ45 ports. When a single PanL Relay is connected to a PanL Hub port, the maximum length of the RJ45 cable shall not exceed 100 meters. Connect the PanL terminator (provided in the PanL Hub package) to the unconnected P1 or P2 port.



For multiple PanL Relay connections to a single PanL Hub port, the first connection to PanL Hub and the subsequent connections in between the PanL Relay devices must not exceed 50 meters in cable length each. A single PanL Hub port can support up to 3 PanL Relay. The total combined cable lengths must not exceed 100 meters. Connect the PanL terminator provided in PanL Hub box to the last unconnected PanL Relay P1 or P2 port.

SSR Control Setup

The 4 Solid State Relay (SSR) Controls are designed to be able to drive low to high loads through an external SSR. The output channels are rated at 12V/25mA max for each channel. Setup connections are illustrated below. Actual load rating is dependent on external SSR specifications.



PanL Relay LED Status Indicator

The table below depicts the different status which are represented by different color codes. Once the communication to PanL Hub is successfully established and enters operating mode, LED 1-8 will represent the relay operating and relaxed states. LED 1 to LED 4 corresponds to RL1 to RL4 and LED 5 to LED 8 corresponds to SSR 1 to SSR 4. LED flashes green when relay is in operating state and light blue during relaxed state.

Normal Function Status	System/RL1 Status (LED 1)		Communications/RL2 Status (LED 2)		RL3-4/SSR1-4 Status (LED 3-8)	
	Color	Icon	Color	Icon	Color	Icon
Power On Status	Red		Red		Red	
Boot Success	Green		Red		Off	
No Communication	Green		Red		Off	
Unconfigured	Green		Green		Off	
Configuring	Yellow*		Green		Off	
Ready/Relay Operating State	Green		Green		Green	
Ready/Relay Relaxed State	Blue		Blue		Blue	

Failsafe Status	System/RL1 Status (LED 1)		Communications/RL2 Status (LED 2)		RL3-4/SSR1-4 Status (LED 3-8)	
	Color	Icon	Color	Icon	Color	Icon
Power On Status	Red**		Off		Off	
Boot Success	Red**		Off		Off	
No Communication	Red**		Red		Off	
Communication	Off		Green*		Off	
Waiting for Recovery	Red<->Green**		Green*		Off	
Recovery in Progress	Red<->Yellow**		Green*		Off	
Recovery Done	Green**		Green**		Off	

* - LED blinks during data transfer
 ** - LED blinks twice a second (2Hz rate)