

Every machine vision system using LED lighting needs one of these

Dynamically adjust all lighting parameters

Use techniques not previously possible

Auto-calibrate lighting

Produce more reliable inspection systems

Cut the cost of using LED lighting



Controlling machine vision lighting is usually time consuming and costly. The solution is the PP600 family of products, which includes the PP600 (push button setup) and the PP610 (remote RS232 control).

Problem



Solution



Powering LED lighting requires a DC supply, series potentiometer, enclosure, wiring, documentation and testing – a hidden cost often resulting in about three days work.	The PP610 can be wired up and working in about ten minutes.
Automated control of lighting then requires an analogue output board, amplifiers and power drivers, more documentation. After all that there are noise and ripple issues to be resolved.	The PP610 replaces all this with a single off the shelf unit.
Small variations in supply voltage can cause large changes in brightness.	The PP600 supplies a constant current to produce much more stable lighting.
Different component types require different lighting systems. Sometimes several different views are taken of each component.	Use a PP610 and control the switching, intensity and timing directly from software.
Although LED Lighting is fairly stable, some intensity drift does occur.	Measure the lighting intensity by averaging the brightness of the image grabbed by a camera. Send commands to the PP610 using RS232 to adjust the lighting current accordingly.
Production line down times prohibit lengthy manual adjustment of lighting levels for different builds.	Intensities can be stored with other configuration data and downloaded to the PP610 in seconds.

NERLITE® PP610 - LED Lighting Controller with RS232 Control

The PP610 lighting controller provides PC or PLC control of LED lighting for machine vision applications. It includes the power regulation, intensity control, timing and triggering functions required for machine vision systems.

Three modes of operation are provided separately for each channel:

- Continuous:** Output is a continuous current.
- Pulsed:** Output is pulsed once per trigger.
- Selected:** Output changes according to digital inputs.

The PP610 is set up using simple RS232 commands sent from a PC or PLC. The setup is saved in non-volatile memory so that the PP610 will resume operation after a power cycle. The PP610 can also be set up using four push buttons and a four digit display on the front of the unit.

Applications include machine vision systems requiring automated adjustment or complex control of lighting.



PP610 Current Controllers support those NERLITE Machine Vision Lighting products designated for Current Control/Constant Current use (-CC model descriptions) and that fall within the PP610's output specification. To select the appropriate Current Controller for a NERLITE Machine Vision Lighting application, please refer to the light's data sheet for power consumption data and controller recommendations.

Specification

	PP610
User interface	RS232 commands plus push button and display.
Output channels	2 independent constant current output channels.
Output current	From 0.25mA to 750mA in steps of 0.25mA. From 750mA to 10A in steps of 2.5mA. Up to 4A per channel continuous or 10A pulsed.
Trigger/selection inputs	2 opto-isolated digital inputs. Require 5V to 24V.
Pulse width timing	From 20us to 1.3 seconds in steps of 20us. Timing accuracy 2us (see manual for conditions).
Delay from trigger to pulse	From 20us to 1.3 seconds in steps of 20us. Timing accuracy 2us (see manual for conditions).
Serial port	Female 9 way D-type requiring a straight through connector to a PC. 9600 baud, 8 bits, no parity, 1 stop bit, no handshaking.
Output voltage	0V to 39V.
Supply voltage	Unregulated or regulated 12V to 40V. The supply voltage must be at least 1V higher than the output voltage required by the lighting.
Dimensions	118mm long by 76mm wide by 27mm high (excluding DIN fixing).
Weight	240g excluding DIN fixing.
Mounting	DIN rail or panel mounting.

Also available is the PP600 which is set up from the front panel only.

Product manufactured by:

