GARDASOFT
Industrial LED technology

RC Series LED Lighting Controllers

Entry level control for precise machine vision illumination

The Gardasoft RC Series is a range of single channel LED Controllers providing cost effective, precise control of LED lighting for Machine Vision applications. It includes the power regulation, intensity control, timing and triggering functions required for the highest performance vision systems.

Utilising Gardasoft's SafePower™ and SafeSense™ patented technology, the RC Series are an entry level to industry's most powerful LED Lighting Controllers.

- Up to 10 times Overdriving capabilities
- Single channel LED control
- High current pulsing up to 2.0A
- High power without heat-sinking

Unique flexibility with SafePower™

Single channel LED controller with SafePower™ which allows much greater flexibility in the DC power supply used. The advantages of SafePower™ are that thermal dissipation is minimised and the output voltage is not limited to the supply voltage.

No Heat-sinking required

SafePower™ supply removes the need to mount the controller onto a heat-sink, making the installation process much simpler and easier. SafePower™ automatically minimises the heat generated for continuous, pulsed and switched operation.

Voltage Step-up

SafePower™ removes the usual restriction on the output voltage. It will step-up the output voltage as needed to drive or Overdrive the lighting, up to a limit of 32V.

SafePower™ works automatically without needing any configuration or user input. For example, the RC range can run from 24VDC, regardless of the lighting connected, heat generation or Overdriving required.

Extra LED Brightness

Patented SafeSense™ technology creates a safe working environment for overdriving LED lights. Driving the LEDs with a highly accurate current source allows for very precise Overdriving, and SafeSense™ ensures that the pulse width and duty cycle are kept within safe working limits. The end result is that much more light is gained from the LED lighting for your machine vision application.

Miniature Web Server

The Ethernet option within RC controllers enables the devices to act as a miniature Web Server and can be controlled by image processing software on a remote PC. With the introduction of GigE cameras, the Machine Vision market is moving towards Ethernet - with the inherent Ethernet advantages of high speed, long distance, standardisation worldwide, and inexpensive implementation.

For more information please contact:

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Data sheet

RC Series

Flexible operation

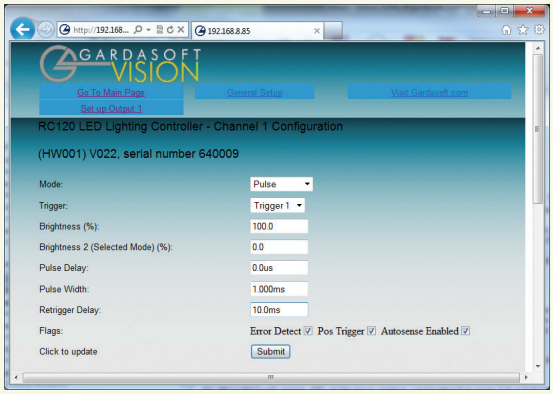
Three modes of operation are provided for each model of the RC Series:

Continuous:	Output is a continuous current
Pulsed:	Output is pulsed once per trigger
Switch:	Output is toggled on or off upon each trigger

Two ways to configure

RC products can be configured by either Ethernet or push-button interface – depending on model type. With the Ethernet options, a web browser can be used to access the RC Series internal Web pages allowing status to be viewed and parameters to be changed.

The Ethernet version of the RC Series can also be configured using simple string commands sent from an application program using TCP/IP or UDP. The Gardasoft Vision website 'www.gardasoft.com' has a free download of a demonstration program (with fully commented source) showing how the RC120 can be controlled from a PC using C++. The configuration is stored in non-volatile memory providing turn-key operation.



SPECIFICATIONS

	RC100	RC120
User interface	Push-button	Ethernet and Push-button
Output channel	One constant current output with SafeSense™	
Output current	Up to 1.0A continuous or 1.0A pulsed	Up to 1.2A continuous or 2.0A pulsed
Output power	Max 25W	
Trigger input	Smart input compatible with 3V-24V, TTL, NPN, and PNP Input impedance (nominal): 50kohm	
Pulse timing	From 100µs to 100ms in steps of 100µs	
Delay from trigger to pulse	From 2µs to 100ms in steps of 100µs	
Timing repeatability (Delay)	±5µs (Delay + Pulse up to 60ms) Otherwise ±50µs	
Timing repeatability (Pulse width)	±0.1µs (Delay + Pulse up to 1ms) ±5µs (Delay + Pulse from >1ms to 60ms) Otherwise ±50µs	
Switch mode latency	Maximum 100µs	
Trigger rate	Maximum 100Hz	
Output voltage	0V to 32V	
Supply voltage	Regulated 24V ±10% A SELV power supply is required	
Dimensions	101mm long by 35mm wide by 120mm high (excluding DIN fixing)	
Weight	175g	
Mounting	DIN rail mount as standard	
Operating temperature	5 to 50°C	
Humidity	Up to 95% non-condensing	

ORDERING INFORMATION

RC100 LED Lighting Controller, 1 channel, 1A pulsed, configuration by Push-button

RC120 LED Lighting Controller, 1 channel, 2A pulsed, configuration by Push-button or Ethernet

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