ADEPT TURNKEY

The Machine Vision and Imaging Specialists
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RT200 Range - LED Lighting Controller With SafePower Technology

SafePower^{TM} and SafeSense^{TM}

High Power Without Heatsinking

Up to 10 Times Overdriving capabilities

Voltage Step-Up

Configure Using Web Browser

The new RT range has all the features of Gardasoft PP range of constant current LED Lighting Controllers with the added benefits of SafePower^{TM} technology.

SafePower^{TM} allows much greater flexibility in the DC power supply used. The advantages of SafePower^{TM} are that no heatsinking is required and the output voltage is not limited to the supply voltage.

No Heatsinking

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

Voltage Step-Up

SafePower^{TM} removes the restriction on the output voltage being less than the input voltage. It will step-up the voltage as needed to drive or overdrive the lighting, up to a limit of 48V.

SafePower^{TM} works automatically without needing any configuration or user. For example, the RT range can run from 24V DC, 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 constant 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 much more light is gained from the LED lighting for your machine vision application.

Miniature Web Server

The RT220 acts 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. The advantage of Ethernet is that it is fast, long distance, standardised worldwide and implementation is inexpensive.

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Flexible Operation

The RT series provides 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.
Switched: Output switched according to a digital input.
Selected: Output intensity selected by a digital input.

Three Ways to Configure

The RT200 can be configured using the front panel display and buttons. This is a very popular and easy to use interface which has been proven on many of Gardasoft's products.

A Web Browser can be used to access the RT220's internal web pages allowing status to be viewed and parameters to be changed.

The RT220 and RT260 can be configured using simple string commands sent from an application program using RS232, 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 RT220 and RT260 can be controlled from a PC using C++.

The configuration is stored in non-volatile memory for turn-key operation.

Specification

	RT200-20	RT220-20	RT260-20	RT200F-20	RT220F-20	RT260F-20
User interface	Pushbutton	Ethernet	RS232	Pushbutton	Ethernet	RS232
Output channels	Two independent constant current outputs with SafeSense™					
Output current	From 0mA to 20A in steps of 5mA. Up to 3A per channel continuous or 20A pulsed					
Output Power	Max 30W per channel					
Trigger inputs	2 opto-isolated digital inputs. Require 3V to 24V					
Timing	From 20us to 999 milliseconds in steps of 20us/100us			From 1us to 999 milliseconds in steps of 1us/100us		
Delay from trigger to pulse	From 20us to 999 milliseconds in steps of 20us/100us			From 3us to 999 milliseconds in steps of 1us/100us		
Timing repeatability	Delay + Pulse up to 10ms: 0.1us for pulse width and 2us for delay. Otherwise 100us					
Output voltage	0V to 47V					
Supply voltage	Regulated 24V to 48V					
Dimensions	112mm long by 97mm wide by 62mm high (excluding DIN fixing)					
Weight	300g					
Mounting	Panel mounting. DIN rail mount option					

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