FP220 High-Speed 2-channel Lighting Controller

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The FP220 is the first of a new generation of high-power LED lighting controllers which has been designed specifically for demanding machine vision applications.

The controller features a unique output drive technology which can create very fast, accurate light pulses. The result is a lighting controller which has industry-leading performance for high-speed, high-power pulsing with low power dissipation.

In addition to its high-power mode, it has very stable low-current performance down to less than 1mA.

The FP220 is a two channel LED lighting controller housed in an aluminium enclosure which works with both standard and TrinitiTM lighting. It can be configured using a web browser and with Ethernet or RS232 commands in the same way as Gardasoft's other controllers.

This controller is suitable for all machine applications. It is particularly useful for high speed pulsing including linescan applications, but also high power, long pulse systems such as UV curing.

Distributor:

www.gardasoft.com

GARDASOFT
Industrial LED technology

General

Parameter	Specifications
Range name	FP220
Model variants	FP220 (Ethernet)
	FP260 (RS232)
Applicable lighting	LED lighting up to 3A rating.
SafeSense™	Yes
SafePower™	Yes

Timing

Parameter	Specifications
Max trigger frequency	10KHz
Overdrive	Max 999%, 20A
Pulse width limits	>10A, max 2ms
	>5A, max 5ms
	>2A, max 15ms
Pulse delay	1µs to 5 seconds in steps of 1µs/100us
Pulse width	1µs to 5 seconds in steps of 1µs/100us, depending on configuration
Timing repeatability	±1µs for pulses < 500us

Lighting Output

Parameter	Specifications
Drive method	Constant current drive with fast pulse drive
Lighting control modes	Continuous, pulse, switched
Lighting output channels	2
Max continuous current	3A
Max pulse current	20A
Current drive resolution	<= 300mA: 100µA
	> 300mA: 6mA
Output current accuracy	<= 300mA: ±3% ±1mA
	> 300mA: ±3% ±10mA
Output current repeatability	<= 300mA: ±1% ±1mA
	> 300mA: ±1% ±6mA
Lighting voltage	1.5V to 48V
Maximum output voltage	72V
Max average output power per channel	50W
Max average output power per controller	100W
Lighting connection detection	SafeSense™, Triniti™
Lighting error detection	Short circuit, open circuit, low voltage, high voltage, low current, high current.

Configuration

Parameter	Specifications
Configuration control	FP220: Ethernet webpages, Ethernet commands
	FP260: RS232 commands
Communications	FP220: UDP/TCP, third party protocols
	FP260: 115Kbaud

Connections

Parameter	Specifications
Triggers	2 opto-isolated digital inputs. 3V to 24V operation
Ethernet	100base-Tx
Power supply	21.6V to 54.5V at 10A

Mechanical and Environment

Parameter	Specifications
Dimensions	112mm long by 140mm wide by 61mm high
Mounting	6 off M4 clearance holes on integral mounting flanges. Fix to heatsinking surface. DIN rail mounting option
Cooling method	Ambient air or panel mount
Operating environment	5°C to 40°C
Storage environment	-20 °C to +70°C non-condensing

Standards

Parameter	Specifications
EMC directive	2014/30/EU: EN 61000-6-4 EN 61000-6-2
LVD Safety Directive	2014/35/EU: BS EN 61010-1:2010
RoHS directive	2011/65/EU: BS EN 50581:2012
REACH	Regulation (EC) 1907/2006
WEEE Directive	2012/19/EU
FCC	CFR47 part 15 Subpart B Class A
ESD exposure	EN 61000 4 2 Level 4

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