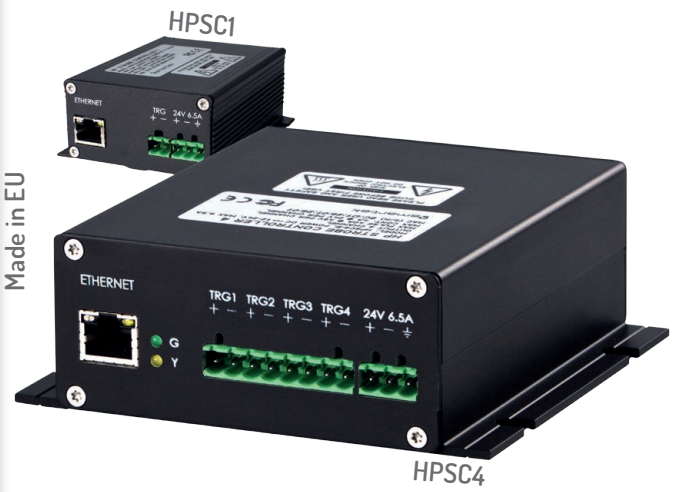
smartek vision



Datasheet

HPSC Series

High Performance Strobe Controllers

HPSC1
HPSC4

Machine vision applications from factory automation to traffic control benefit significantly from the performance of their illumination system. With the HPSC-series SMARTEK Vision offers full control over light-strength, timing, synchronization and overdriving of one or more illuminations, providing enough power to fulfill the demand for increasingly strong high-power LED arrays with unrivaled stability.

Unrivaled Power
The digitally regulated internal switching power supply provides 120W on output to pulse with of up to 40A at 48V in strobe mode, or precisely regulated constant current of up to 5A at 24V, ensuring enough power in every situation!

Efficiency
State of the art hardware design combined with Optimal Autosense for ideal operating conditions at any time, achieving efficiency well in excess of 90%.

Precision Synchronization
Opto-isolated trigger inputs and separate output lines for external synchronization. Input to output delay of only 2µs allowing pulses with a resolution of up to 1µs / 1mA and durations from 1µs to 1s.

Full Asynchronous Operation
The fully revised architecture allows the fully timing- and parameter-independent operation of all available channels, while supporting frequencies of up to 50 kHz.

Three interface options
Configuration and control via three different interface options allow quick integration into any environment:

Ethernet USB2.0 RS-232

4-Way Configuration
Quick and easy device configuration via the ready to use software application, enhanced by RAW command support and a fully described SDK (C, C++, C#.Net, VB.Net, Delphi) for Windows and Linux. With the web interface a platform independent configuration method adds support for Android, iOS and OS X via the web browser.

Further Benefits & Features:

- Unbeaten power in small form factor
- Internal trigger frequency generation
- Online current and voltage measurement
- Protected against hardware damage caused by incorrect configuration
- Connectivity also provided via screwable terminal block connectors for output
- Temperature sensor and overheat control
- DIN rail and panel mounting options available
- 3 year warranty

Customization Concept
Does your application have special requirements in terms of channels, power specifications, features or form factor? The concept of the HPSC series allows for quick and efficient adaptation to almost every requirement!

HPSC Series

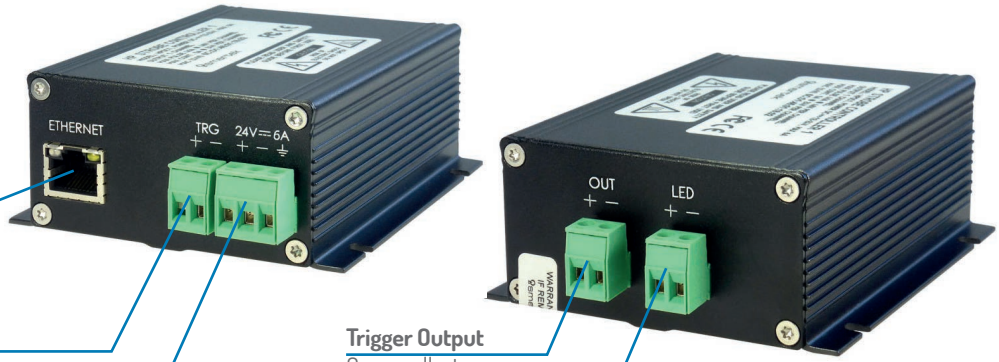
Specifications:

	HPSC1	HPSC4
In-/Output channel(s):	1	4
Operating modes:	Continuous, External Trigger, Internal Trigger, Software Trigger, External Switch	
Maximum voltage:	48V (pulsed/continuous)	
Max. current pulse:	40A @ 48V	
Max. continuous current:	4A @ 24V* 5A @ 24V (with heat sink)	4A @ 24V per channel 5A @ 24V (total)
Pulse output range:	1µs to 1000ms, 1µs resolution	4µs to 60s, 1µs resolution
Maximum frequency (triggered)	4.9kHz	50kHz
Internal trigger generator	up to 997Hz	up to 25kHz
Trigger input:	Opto-isolated, HIGH at 5V to 24V; positive or negative edge	
Trigger output:	Open-collector, max. 30V / 50mA	
Control interface:	Ethernet (10/100BaseT), USB1.x/2.0 or Serial RS-232	
Power requirements:	12V – 24V DC (min. 11V, max. 26V)	
Power consumption:	Max. 150W (depending on output load and working voltage)	
Housing:	Aluminium case, anodized black	
External dimensions (HxWxL):	39 x 88 x 103 mm	45 x 130 x 142 mm
Weight (approx.):	270g	635g
Storage temperature:	From -30°C/-22°F up to +80°C/+176°F	
Operating temperature (ambient):	From -5°C/+23°F up to +50°C/+122°F*	
Operating relative humidity:	From 25% up to 80% (non-condensing)	

*HPSC1: Max. 25°C ambient temperature or heat sinking for continuous currents of over 4A

Connector description:

Connector types: PCB Terminal Blocks



Configuration
Ethernet (shown)
USB1.x/2.0
RS-232

Trigger Input
Opto-isolated

Power Input
External power supply,
12 - 24V, max. 150W

Trigger Output
Open-collector,
max. 30V / 50mA

LED Power Output
Power output for illumination

Software Environment:

Client software:	SMARTEK Vision ScLibClient Strobe controller configuration and control, intuitive graphical user interface for the configuration of all available features
Browser interface:	Fully featured remote configuration via HTTP, no software installation required
SDK:	ScLib SDK with documented API, configuration software and programming samples for C, C++, C# / VB.Net, Delphi

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