

IPSC4-r2



Efficient
Led Lighting
effiLux

Formation Alim Smartek

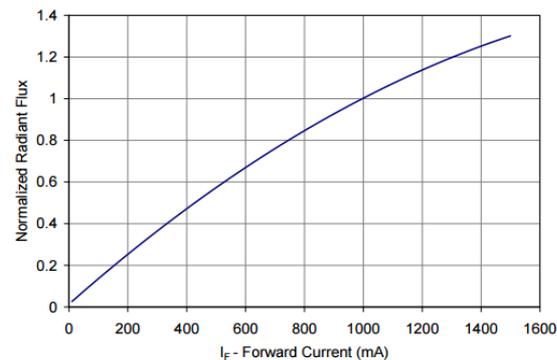
Novembre 2015

- Présentation
- Branchement
- Interface Logiciel
- Pilotage LED
- Questions/Réponses + Démo



Smartek = Driver de courant

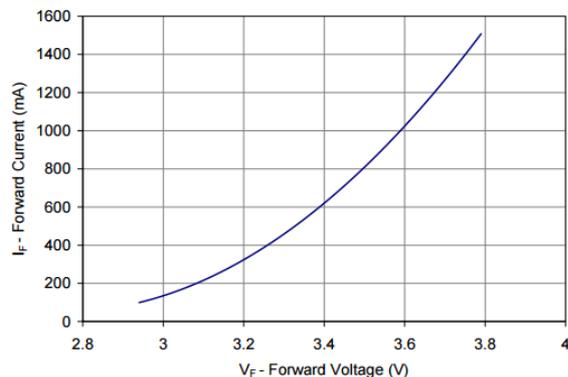
Réglage du courant par l'utilisateur (selon flux)



Caractéristiques

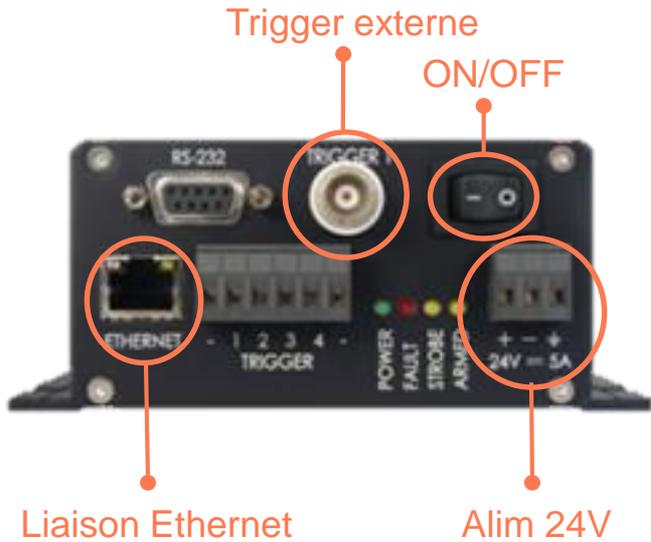
- Interface Ethernet
- Alimentation : 24V – 5A
- 4 sorties
- $I_{\text{max/sortie}} = 1\text{A (CW) et } 10\text{A (Strobe)}$
- $U_{\text{max/sortie}} = 30\text{V (CW) et } 200\text{V (Strobe)}$
- Pulse : $1\mu\text{s} < t_p < 1000\text{ms}$

Adaptation en tension par le Smartek (selon nombre LED et courant)



Branchement

Input



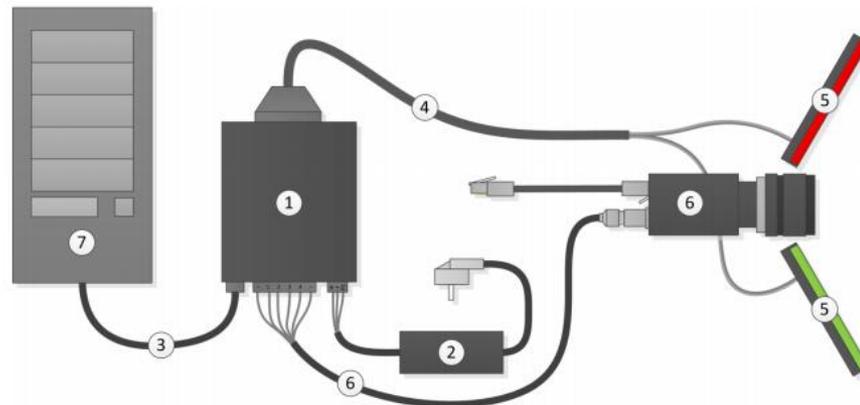
Output



Connector type: Deltron DTS 13W3 PZ



- 1 - Channel 1, GND
- 2 - Channel 2, GND
- 3 - Channel 3, GND
- 4 - Channel 4, GND
- A1 - +24V DC, max 0.5A (for light head cooling fan)
- A2 - Power GND
- A3 - +V, Common Output voltage



Trigger Externe

Figure 3 - Voltage carrying trigger source (max. 24V)

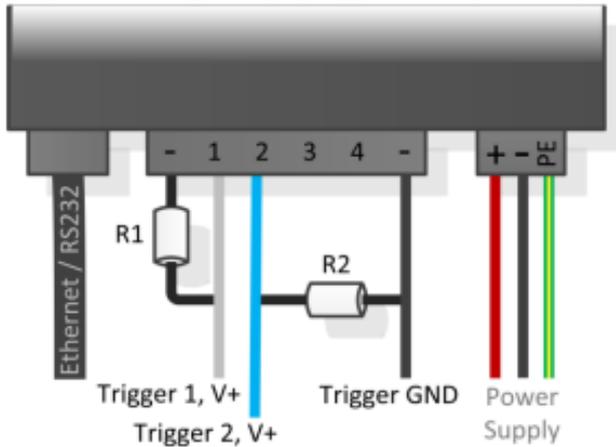
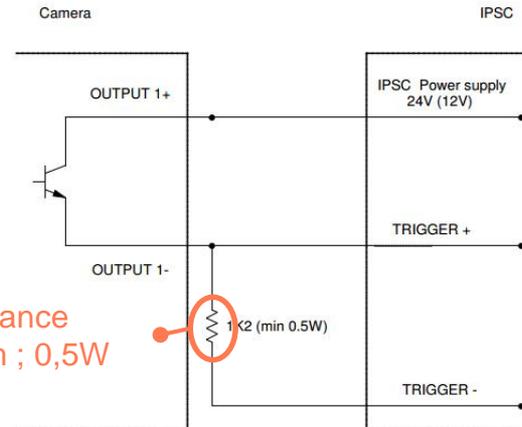
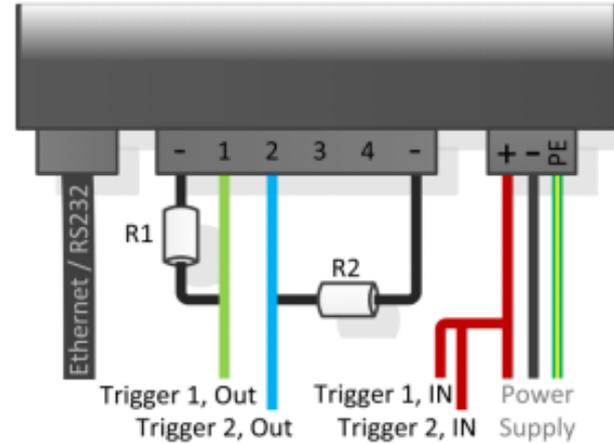


Figure 4 - Opto-coupled trigger source (max. 24V)



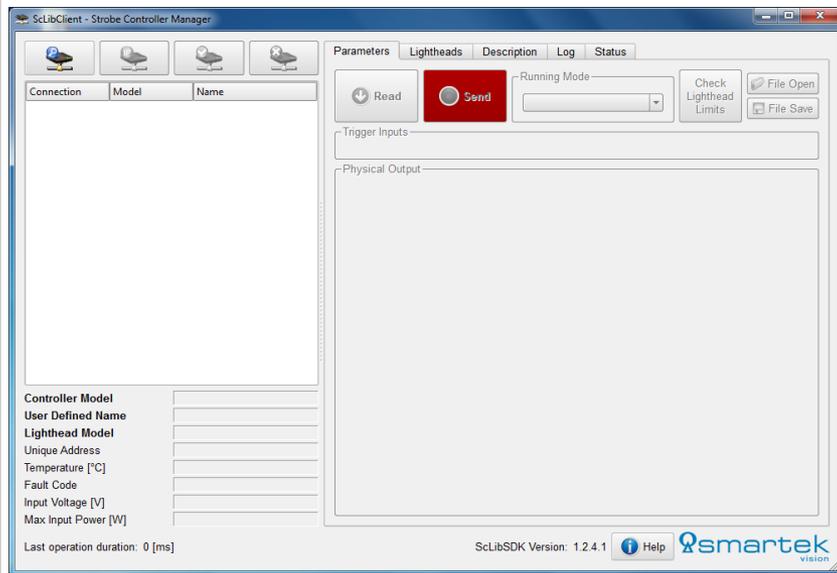
Résistance
1,2 kOhm ; 0,5W

Camera optocoupler should be able to supply min. 20mA current and be rated for min. 24V voltage.

ScLib « version SMARTEK »

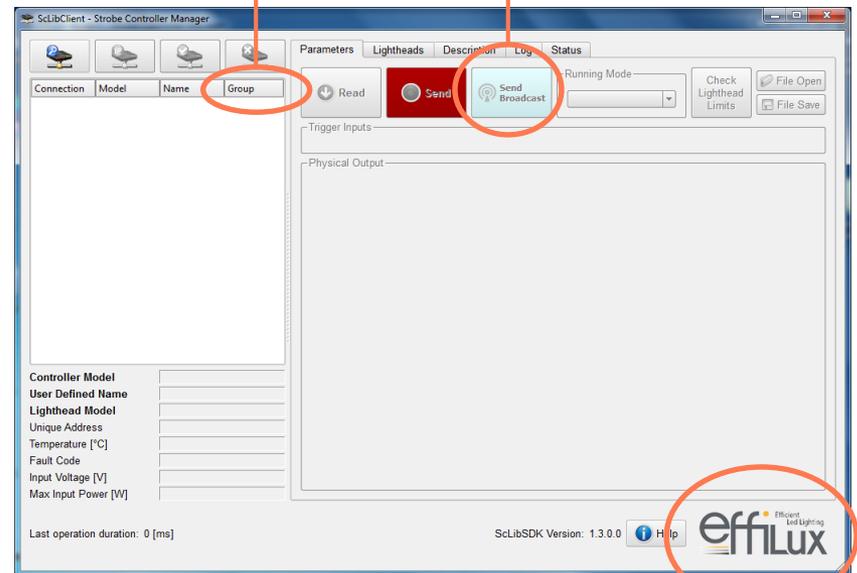


ScLib « version EFFILUX »



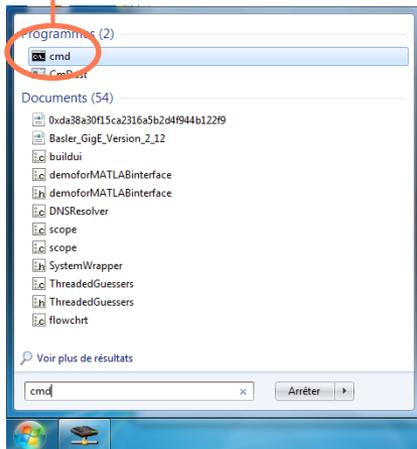
Groupement des Smarteks

Envoi groupé de la configuration



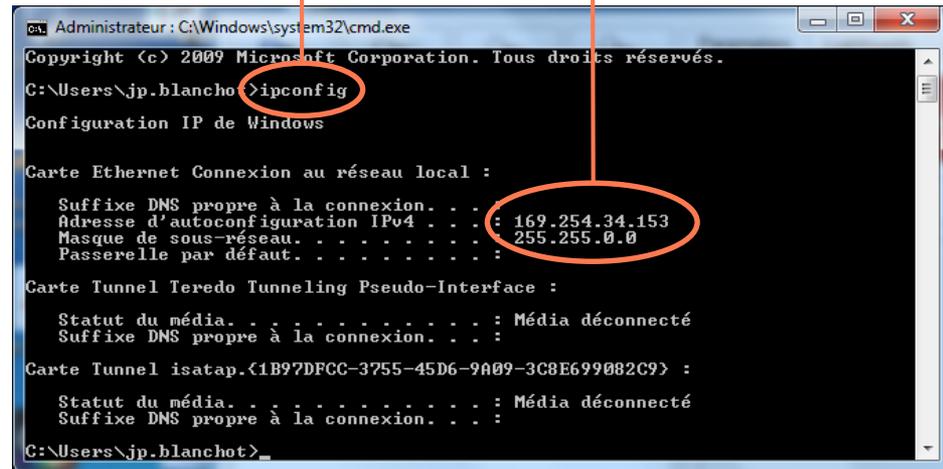
Logo EFFILUX
Accès direct site internet

1. Taper « cmd »



2. Taper « ipconfig »

3. Adresse IP



Connection Smartek

1. Recherche Smartek

2. Configurer IP

3. Recherche Smartek
(reconfiguration)

4. Connecter Smartek

Connection

Connection	Model	Name	Group
169.254.34.161	EFFI-IPSC4	SMARTEK_2	1
169.254.34.160	EFFI-IPSC4	SMARTEK_1	1
169.254.34.162	EFFI-IPSC4	SMARTEK_3	2

Controller Model: EFFI-IPSC4
User Defined Name: SMARTEK_1
Lighthouse Model:
Unique Address: 6C:D1:46:01:01:E5
Temperature [°C]: 0
Fault Code: 0
Input Voltage [V]: 0.0
Max Input Power [W]:

Set Device Ip Address

Ip Configuration

DHCP

Permanent Ip Address

Ip Address: 169.254.34.160

Subnet Mask: 255.255.0.0

Name: SMARTEK_1

Group ID: 1

OK Cancel

Trigger Inputs

Enable	Delay Time	On Time	Off Time	Frequency	Event Counter	Trigger Status
	1000000[μs]			[Hz]		
	200			4926.1	Fire	0 Active 1
	200			4926.1	Fire	0 Active 2
	200			4926.1	Fire	0 Active 3
	200			4926.1	Fire	0 Active 4

Measured Current [mA] Measured Voltage [V]

	Measured Current [mA]	Measured Voltage [V]
1	0.0	0.0
1	0.0	0.0
1	0.0	0.0
1	0.0	0.0

Max Voltage: 5 - 200[V] Optimal Autosense

Output Voltage [V] Measured Voltage [V]

Output Voltage [V]	Measured Voltage [V]
0	0.0

Voltage Output 1: 5

ScLibSDK Version: 1.3.0.0

Help

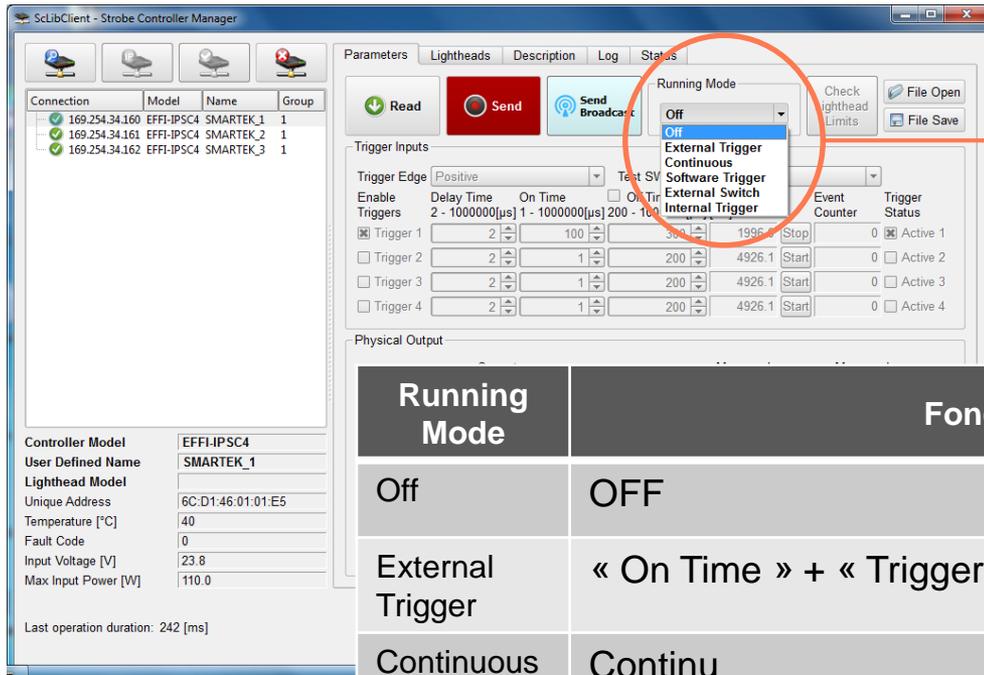
effiLux Efficient Led Lighting

169.254.34.153
255.255.0.0

Attribution adresse IP (!/! changer dernier nombre)

Choix groupe : de 0 (sans groupe) à 254

Modes de fonctionnement



Choisir le mode de fonctionnement

Running Mode	Fonctionnement	Groupe Synchrone
Off	OFF	X
External Trigger	« On Time » + « Trigger Edge » + Fréquence externe	X
Continuous	Continu	X
Software Trigger	« On Time » + « Test SW Trigger »	X
External Switch	Réglage totalement externe par générateur de pulse	
Internal Trigger	« On Time » + « Off Time »	

Paramétrage

ScLibClient - Strobe Controller Manager

Parameters | Lighthoods | Description | Log | Status

Read Send Send Broadcast Running Mode Software Trigger Check Lighthouse Limits File Open File Save

Connection	Model	Name	Group
169.254.34.160	EFFI-IPSC4	SMARTEK_1	1
169.254.34.161	EFFI-IPSC4	SMARTEK_2	1
169.254.34.162	EFFI-IPSC4	SMARTEK_3	1

Controller Model: EFFI-IPSC4
User Defined Name: SMARTEK_1
Lighthouse Model:
Unique Address: 6C:D1:46:01:01:E5
Temperature [°C]: 41
Fault Code: 0
Input Voltage [V]: 23.8
Max Input Power [W]: 110.0

Trigger Inputs

Trigger Edge: Positive Test SW Trigger: Repeated 10Hz

Enable	Delay Time	On Time	Off Time	Frequency	Event Counter	Trigger Status
<input checked="" type="checkbox"/>	2	300	<input type="checkbox"/>	10000	16.4	Stop 224 <input checked="" type="checkbox"/> Active 1
<input type="checkbox"/>	2	1	<input type="checkbox"/>	1000	997.0	Start 0 <input type="checkbox"/> Active 2
<input type="checkbox"/>	2	1	<input type="checkbox"/>	1000	997.0	Start 0 <input type="checkbox"/> Active 3
<input type="checkbox"/>	2	1	<input type="checkbox"/>	1000	997.0	Start 0 <input type="checkbox"/> Active 4

Physical Output

Load Channel	Current	Trigger	Measured Current	Measured Voltage
Load Channel 1	0	Trigger 1	0.0	1.9
Load Channel 2	0	Trigger 1	0.0	3.2
Load Channel 3	400	Trigger 1	395.2	20.0
Load Channel 4	400	Trigger 1	395.2	19.7

Voltage Output	Max Voltage	Optimal Autosense	Output Voltage	Measured Voltage
Voltage Output 1	55	<input type="checkbox"/>	55	56.7

Last operation duration: 128 [ms]

ScLibSDK Version: 1.3.0.0 Help

Effilux Efficient Led Lighting

Réglages selon mode de fonctionnement

Courant / Trigger par voie + Voltage Output + Décocher « Optimal Autosense »

Communication Smartek ↔ Logiciel

Enregistrer paramétrage

 File Open

 File Save

Lire état du Smartek

 Read

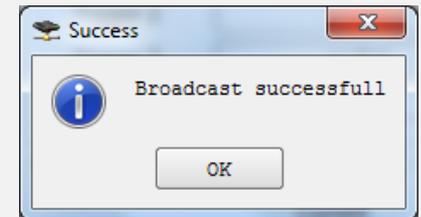
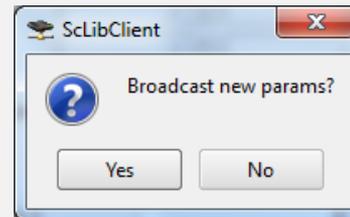
Envoyer les paramètres de fonctionnement au(x) Smartek(s)

Smartek individuel

 Send

Groupe de Smarteks

 Send Broadcast



Rappel caractéristiques

IPStrobeController4 – IPSC4
Strobe controller with 4 output channels

Main features

- Control over Ethernet and RS-232
- Internal switching power supply with step-up (boost) or step-down (buck) function
- Adjustable output voltage from 5V to 200V
- Max current pulse 10A @ 200V
- Max continuous current 1A @ 30V
- Pulse width 1µs to 1000ms
- Online current and voltage measurements
- Digital light head coding
- Temperature sensor

File: file:///C:/Program Files/Effilux/SclibSDK/defs/controllers/effilux/EFFIIPSC4.htm

Connection	Model	Name	Group
169.254.34.160	EFFI-IPSC4	SMARTEK_1	1
169.254.34.162	EFFI-IPSC4	SMARTEK_3	2
169.254.34.161	EFFI-IPSC4	SMARTEK_2	1

Controller Model: EFFIIPSC4
User Defined Name: SMARTEK_2
Lighthouse Model: [empty]
Unique Address: 6C:D1:46:01:01:E6
Temperature [°C]: 41
Fault Code: 0
Input Voltage [V]: 23.8
Max Input Power [W]: 110.0

Last operation duration: 126 [ms] SclibSDK Version: 1.3.0.0

Listing info/erreur Smartek

Log tab showing a table of log entries:

Time	Source	Message
2015.11.17_15:4	SclibAPI	Connected to device.

Dropdown menu options: Info, Warning, Error, Critical Error

Controller Model: EFFIIPSC4
User Defined Name: SMARTEK_2
Lighthouse Model: [empty]
Unique Address: 6C:D1:46:01:01:E6
Temperature [°C]: 41
Fault Code: 0
Input Voltage [V]: 23.8
Max Input Power [W]: 110.0

Last operation duration: 126 [ms] SclibSDK Version: 1.3.0.0

Durée de vie LED : 50 000h dans les conditions suivantes :

Configuration	Current	Max T _{ON} (µs)	D
1	1.2A	50000	0.5
2	1.5A	10000	0.1
3	2A	1000	0.01
4	2.5A	100	0.001
5	3.5A	40	0.0004

$$D = T_{ON}[s] \times f[\text{Hz}]$$

$$D \cdot U_{out} \cdot \sum_{n=1}^4 i_{out_n} < 120W$$

G _{Φmax}	400nm	460nm	525nm	590nm	625nm	850nm	White
Configuration 1	1,5	1,4	1,4	1,5	1,6	1,5	1,4
Configuration 2	2	1,8	1,7	2,1	2	1,8	1,7
Configuration 3	2,6	2,2	2,1	2,7	2,6	2,4	2
Configuration 4	3,2	2,6	2,3	3,4	3,2	2,9	2,4
Configuration 5	4	3,1	2,9	4	4,4	3,6	2,8

Basé sur un courant continu de 700mA



Questions / Réponses

Démonstration