

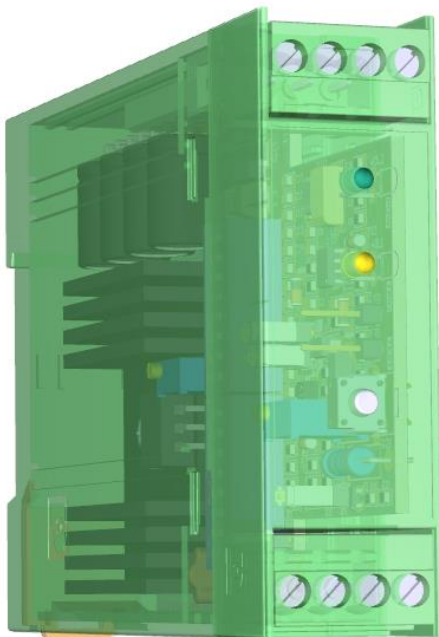


SP029, SP030 – 1 Channel Strobe LED Driver

User Manual - Rev 1.2

Features

- 1-channel strobe LED driver
- Two models available:
8A (SP029 – discontinued) and 12A (SP030)
- Programmable constant current
- Programmable strobe time
- Programmable strobe mode
- LED indicators for Power-on and Trigger
- TEST switch
- Wide input settings
- Compact design
- 35mm DIN-rail mounting according EN60715
- CEI EN 61326-1 (2013) compliance
- 100% full load burn-in test



The 1-channel strobe led drivers SP029 and SP030 are programmable-precision constant-current LED drivers featuring an optically isolated strobe input, in a 35mm DIN-rail mounting, compact design enclosure.

Specifications

Logic Power Supply	24Vdc
LED Driving Power Supply	24Vdc ÷ 48Vdc
Output Led+ Led–	Max 8A pulsed (SP029) Max 12A pulsed (SP030) Max 45V
Input Voltage IN+ IN– (setting by JP4)	TTL threshold at 2.5Vdc (JP4 closed) 24Vdc threshold at 10Vdc (JP4 open)
Input Current IN+ IN– (setting by JP5)	Typ. 5mA, Max 6mA (JP5 open) Typ. 12mA, Max 13mA (JP5 closed)
Strobe Time (setting by SW1)	Adjustable: 27µs ÷ 7ms, 256 steps
Current Setting (setting by SW2)	Adjustable: 32mA ÷ 8A, 256 steps (SP029) 46mA ÷ 12A, 256 steps (SP030)

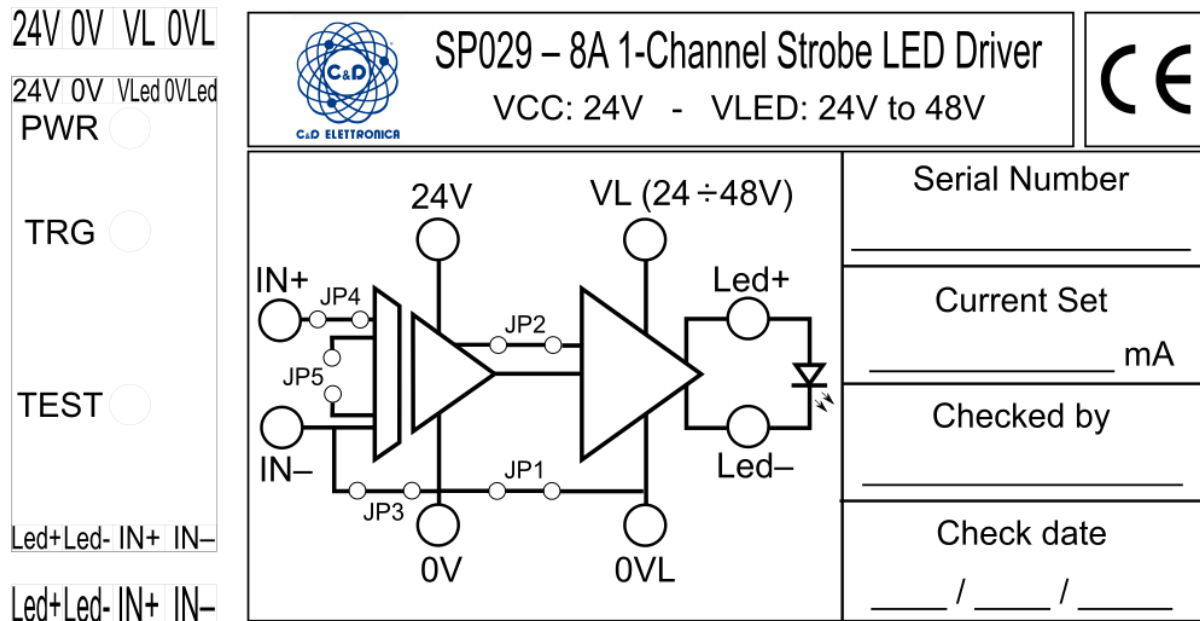
Settings

(factory settings in **boldface**)

- JP1
 - **closed: Logic_GND and LED_GND are shorted.**
 - open: Logic_GND and LED_GND are isolated.
- JP2
 - **closed: the strobe pulse has the same duration as the trigger signal (up to a maximum determined by SW1).**
 - open: the strobe pulse has a fixed duration (determined by SW1).
- JP3
 - **closed: IN– and Logic_GND are shorted.**
 - open: IN– and Logic_GND are isolated.
- JP4
 - **closed: TTL trigger threshold (>2.5V).**
 - open: 24V trigger threshold (>10V).
- JP5
 - closed: input termination ON (Input Current IN+ IN– 12/13mA).
 - **open: input termination OFF (Input Current IN+ IN– 5/6mA).**
- SW1 (**1ms**, calibrated) (SP029, SP030) (see Appendix A)
- SW2
 - SP029 (**900mA**, max. **8A**, calibrated) (see Appendix A) – **discontinued**
 - SP030 (**900mA**, max. **12A**, calibrated) (see Appendix A)

Functional overview

The following label is displayed on the front cover of the 1-channel strobe LED driver. It shows the electrical connections, the power and trigger LEDs and the TEST switch.



- IN+, IN–: optically isolated input.
- TEST switch: this switch allows testing the Output LED during installation. The switch is accessible from the hole located in the front cover with the tip of a screwdriver (as indicated by the front label). The switch allows the manual execution of a trigger cycle as set by the switches SW1 and SW2. The device will execute the trigger cycle for no more than a maximum time (by default $t_{MAX} = 1ms$); this avoids the breakdown of the illuminator even if the operator holds down the button.
- Yellow LED (TRG): Strobe. Enabled during the test cycle, it is ON when the TEST switch is pressed. During normal operations, it reflects the state of the output LED (by default $t_{MAX} = 1ms$).
- Green LED (PWR): power on.
- Tool-free mounting.
- Practical and easy-to-wire conductor connection using extra finely stranded sturdy screw terminal blocks up to 2.5mm².
- Fast snap-on mounting on symmetrical DIN rails according to EN 60715.
- Shock- and contamination-proof (IP40 housing, IP20 terminal blocks).
- Dimensions: 75mm (length), 107.5mm (height), 22.5mm (width).

Appendix A

The following label is displayed on the back cover of SP029 (8A 1-Channel Strobe Driver).

SW1 – Strobe time		SW2 – Current setting	
JP2 closed: strobe pulse has same duration as trigger pulse (limited to the max time set by the switch below) JP2 open: strobe pulse duration is fixed (set by the switch below) Duration setting (pulse on LED+ LED-): the duration is the sum +1 of the durations set by the selected switches below (min = precision = 7ms/256 ≈ 27.34μs) (max = 7ms)		Current setting (pulse on LED+ LED-): the current is the sum +1 of the currents set by the selected switches below (min = precision = 8A/256 = 31.25mA) (max = 8A) examples all bits off: 31.25mA bit 1 on: 31.25mA+31.25mA = 62.5mA	
27.3 μs 54.7 μs 109 μs 219 μs 438 μs 875 μs 1.75 ms 3.5 ms		31.25mA 62.5mA 125mA 250mA 500mA 1A 2A 4A	
SW N°	1 2 3 4 5 6 7 8	SW N°	1 2 3 4 5 6 7 8
ON	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	ON	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
BIT VAL	1 2 4 8 16 32 64 128	BIT VAL	1 2 4 8 16 32 64 128

The following label is displayed on the back cover of SP030 (12A 1-Channel Strobe Driver).

SW1 – Strobe time		SW2 – Current setting	
JP2 closed: strobe pulse has same duration as trigger pulse (limited to the max time set by the switch below) JP2 open: strobe pulse duration is fixed (set by the switch below) Duration setting (pulse on LED+ LED-): the duration is the sum of the durations set by the selected switches below (min = precision = 7ms/256 ≈ 27.34μs) (max = 7ms)		Current setting (pulse on LED+ LED-): the current is the sum of the currents set by the selected switches below (precision 12A/256 ≈ 46.88mA) (max = 12A) examples all bits off: 46.88mA bit 1 on: 46.88mA+46.88mA = 93.75mA	
27.3 μs 54.7 μs 109 μs 219 μs 438 μs 875 μs 1.75 ms 3.5 ms		46.9mA 93.8mA 188mA 375mA 750mA 1.5A 3A 6A	
SW N°	1 2 3 4 5 6 7 8	SW N°	1 2 3 4 5 6 7 8
ON	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	ON	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
BIT VAL	1 2 4 8 16 32 64 128	BIT VAL	1 2 4 8 16 32 64 128

Revision history

1.0	06 April 2016	First revision.
1.1	12 October 2017	Discontinued SP029. Changed current specs for SP030.
1.2	21 October 2026	Updated

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		LABORATORIO EMC PROVE DI COMPATIBILITA' ELETTRONICA		DAL 1980

Dichiarazione di conformità - Declaration of conformity

C&D Elettronica S.r.l. dichiara la conformità dei suoi prodotti alla seguenti direttive:

- DIRETTIVA 2014/30/UE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO del 26 febbraio 2014 concernente l'armonizzazione delle legislazioni degli Stati membri relative alla compatibilità elettromagnetica.
- DIRETTIVA 2011/65/UE DEL PARLAMENTO EUROPEO E DEL CONSIGLIO dell'8 giugno 2011 sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche.
- C&D Elettronica S.r.l. hereby confirm that the mentioned products complies the following specifications:
- DIRECTIVE 2014/30/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility.
- DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Nome del fabbricante: C&D Elettronica S.r.l.
Name of manufacturer:

Indirizzo del fabbricante: Via Oprandi, 17 Bergamo
Address of manufacturer:

Descrizione del materiale: SP029 – DRIVER 1 CHANNEL STROBO 8A
Description of goods: SP030 – DRIVER 1 CHANNEL STROBO 12A

Modello: SP029 (= ANTSP029D)
Model: SP030 (= ANTSP030D)

Anno di fabbricazione: 2016
Year of manufacturing:

Costruito a: Bergamo (ITALY)
Made in:

Il sottoscritto dichiara che il materiale di cui sopra è interamente conforme ai requisiti EMC definiti dalle seguenti norme:
 The undersigned hereby declares that the above mentioned goods is entirely conform to the following EMC specifications:

Emissione / Emission:

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CEI EN 61326-1 (2013) Apparecchi elettrici di misura, controllo e laboratorio - Prescrizioni di compatibilità elettromagnetica. Parte 1: Prescrizioni generali

Data: 24/03/2016

Date:

Luogo: Bergamo (IT)

Place:

Nome e Cognome: Mario Campana
Name and surname:

Funzione: Amministratore
Position:

Timbro e Firma:
Timbre et Signature:

C & D ELETTRONICA s.r.l.

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