S-DIAS Pixel LED Module
PL 221

with control for 2x RGB pixel LED stripes and 2x 24 V PWM LED stripes

With the S-DIAS Pixel LED module PL 221, two pixel LED stripes with a maximum of 512 pixel RGB LEDs each and two +24 V PWM dimmable white LED stripes can be controlled.

Pixel LED Outputs Specifications

Number of channels	2
Short-circuit and overload protection	yes (short-circuit or overload can be read from software through a latched status bit)
Supported pixel LEDs	WS2812B, WS2813
Maximum number of pixel LEDs	512 pixel LEDs
Data rate Pixel LED control	800 kB/s
Update frequency	circa 115 Hz @ 288 pixel LEDs, 800 kB/s
Data width per LED	24 bit (8 bit red/green/blue)
Maximum load capacity +5 V	max. 4.5 A at 50 °C environmental temperature max. 4.0 A at 55 °C environmental temperature

24 V PWM LED Outputs Specifications

Number	2
Short-circuit and overload protection	yes (short-circuit or overload can be read from software through a latched status bit)
Maximum permissible continuous load current/channel	2.0 A
Maximum total current	4 A (100% of on-time)
PWM pulse width	0-100 % adjustable in 1 % increments
PWM frequency	adjustable 100 Hz - 2 kHz
Residual current output (off)	≤ 10 µA

Electrical Requirements

External +24 V supply	+18-30 V DC	
External current consumption +24 V	max. total current 5.4 A (2x pixel LED total current max. 1.4 A, 2x PWM output total current max. 4 A)	
Voltage supply from S-DIAS bus	+5 V	
Current consumption on the S-DIAS bus (+5 V supply)	typically 90 mA	maximum 100 mA
Voltage supply from S-DIAS bus	+24 V	
Current consumption on the S-DIAS bus (+24 V supply)	typically 6 mA	maximum 8 mA

Article and Miscellaneous

Article number	20-018-221
Dimensions	12.5 x 104.2 x 72 mm (W x H x D)
Approvals	CE

Environmental Conditions

Storage temperature	-20 ... +85 °C	
Environmental temperature	0 ... +55 °C	
Humidity	0-95 %, non-condensing	
Operating conditions	pollution degree 2 altitude up to 2000 m	
EMC resistance	in accordance with EN 61000-6-2 (industrial area)	
EMC noise generation	in accordance with EN 61000-6-4 (industrial area)	
Vibration resistance	EN 60068-2-6	3.5 mm from 5-8.4 Hz 1 g from 8.4-150 Hz
Shock resistance	EN 60068-2-27	15 g
Protection type	EN 60529	IP20