

Product Highlights:

- Designed for LED General Lighting Applications
- Externally adjustable maximum output current through RSET
- Universal AC input (108~305Vac)
- Built-in active PFC provide PF>0.90 over entire input range
- Instant Response (< 0.5s Turn on/off time with soft start)
- Built-in Transient Suppression up to 2.5kV
- Class 2 power supply
- Industry standard T5 metal case cooled by air convection
- Protections: Short Circuit / Over Voltage / Over Current / Over Temperature
- Dimmable output with flexible architecture
 - DC Dimming (0-10V) (2 wire dimming input)
 - Dimming supports majority of available dimming solutions
 - Wide dimming range from 10% to 100%



Compliance:

- Safety: UL8750, CSA C22.2 No. 250.0-08
- EMI: FCC Part 15 /18 Class A Compliant
- Materials: RoHS Compliant
- Noise Rating: Class A

Orderable Part Numbers

The part numbers below represent the most common variants for this product but do NOT represent all variants available. If you have a specific Current or Voltage requirement for the target application, please confirm with the EHWZ sales team (sales@ehwz.com) the exact orderable part number to use. At EHWZ, we are able to accommodate most Current and Voltage combination requests. So don't hesitate to ask about a unit that best suits the application.

Constant Current Variants

Part Number	Output Current (mA)	Output Voltage Range Max (V)	Line/Load Reg.	Max. Effic.	Max. Output Power (W)
XEL-A100B-024-C3X30-Z	3260	15 ~ 24	±5%	86%	80
XEL-A100B-042-C2X75-Z	2750	25 ~ 36	±5%	87%	100
XEL-A100B-042-C2X45-Z	2450	30 ~ 41	±5%	88%	100
XEL-A100B-050-C2X10-Z	2100	36 ~ 47.6	±5%	88%	100
XEL-A100B-050-C1X75-Z	1750	48 ~ 54	±5%	88%	100

Constant Voltage Variants

Part Number	Output Voltage (V)	Max Output Current Max (mA)	Line/Load Reg.	Max. Effic.	Max. Output Power (W)
XEL-A100B-024-V3X30	24	3300	±5%	86%	80
XEL-A100B-042-V2X75	36	2750	±5%	87%	100
XEL-A100B-042-V2X45	41	2450	±5%	88%	100
XEL-A100B-050-V2X10	48	2100	±5%	88%	100
XEL-A100B-050-V1X75	54	1750	±5%	88%	100

- For Constant Current Units, the -Z at the end of the part number means the unit has 0-10V Dimming. For Non-Dimmable units replace the -Z with a -N when ordering. variant.
- cUL is only applicable to units with output voltage below 42Vdc.

General Specification

SERIES	XEL-A100B	
OUTPUT	DC VOLTAGE RANGE	15 ~ 54Vdc (see orderable parts table for details)
	RATED CURRENT RANGE	1.75A ~ 3.30A (see orderable parts table for details)
	RATED POWER	up to 100W
	LOAD REGULATION ¹	±5%
	TURN ON/OFF TIME	Turn on < 500ms over full input voltage range, Turn off < 400ms under any dimming condition
INPUT	VOLTAGE RANGE	108 ~ 305Vac
	FREQUENCY RANGE	47 ~ 63Hz
	POWER FACTOR (Typ.)	PF > 0.9 at 80% of load when input range is 120 ~ 277 Vac
	EFFICIENCY (Typ.)	≥ 86 % at 80% of load when input range is 120 ~ 277 Vac
	AC CURRENT (Typ.)	1.4A @ 120Vac and 0.7A @ 277Vac
	INRUSH CURRENT (Typ.)	< 10A @ 25°C, 120Vac or < 20A @ 25°C, 277Vac cold start with full load
	LEAKAGE CURRENT	< 250µA @ 120Vac
DIMMING	THD (TOTAL HARMONIC DIST.)	< 20%
	MODES (For Constant Current models)	DC Dimming Control 0-10Vdc Wide dimming range from 10% up to 100% Dimming over entire input voltage range. Unit capable of interfacing with either sourcing or sinking dimmers
PROTECTION	SHORT CIRCUIT	Hiccup mode protection. Recovers automatically after fault condition is removed
	OVER VOLTAGE	< 30% above the maximum output voltage listed for the specific part number
	OVER CURRENT	< 20% above the maximum output current listed for the specific part number
	OVER TEMPERATURE	Unit turns off when Tc > 85°C
ENVIRONMENT	WORKING TEMPERATURE	-40°C ~ + 70°C at Full Load (Tcase rated for 85C)
	WORKING HUMIDITY	5% ~ 95% RH non-condensing
	STORAGE TEMPERATURE	-40°C ~ + 85°C
	STORAGE HUMIDITY	5% ~ 95% RH non-condensing
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 30min. each along X, Y, Z axes

SAFETY & EMC	SAFETY STANDARDS	UL8750, CSA C22.2 No. 250.0-08 (except for 42V-54V),
	EMI CONDUCTION & RADIATION	Compliance to FCC Part 15 /18 Class A
	HARMONIC CURRENT	Compliance to EN61000-3-2 Class C
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level, criteria A
	TRANSIENT SUPPRESSION	2kV (100kHz ring wave at 2kV common mode and differential)
OTHERS	LIFETIME	50,000 hours at case temperature ≤ 85C

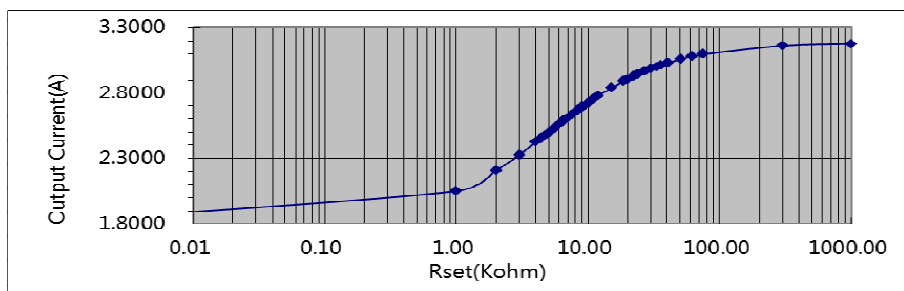
Note 1: Load Regulation includes line regulation, load regulation and set-up tolerance
 Note 2: All specifications not specifically mentioned are measured at 230Vac and 25°C ambient temperature

Adjustable Output Current

This unit has a feature that allows the user to configure the maximum output current as needed. To use this feature a resistor must be placed between the two RSET wires. The table below has a summary of the expected maximum output current as a function of the value of the resistor across RSET and the figure below outlines the expected behavior. If no RSET is present the unit defaults to the maximum output current specified for the unit. The below table indicates what the maximum output current would be, as a percentage of total max power, for several RSET values. As an example and making the assumption that the user has selected a unit with a maximum output current of 3.26A, the table below outlines what the expected output current values would be for the respective resistor values for the 3.26A unit.

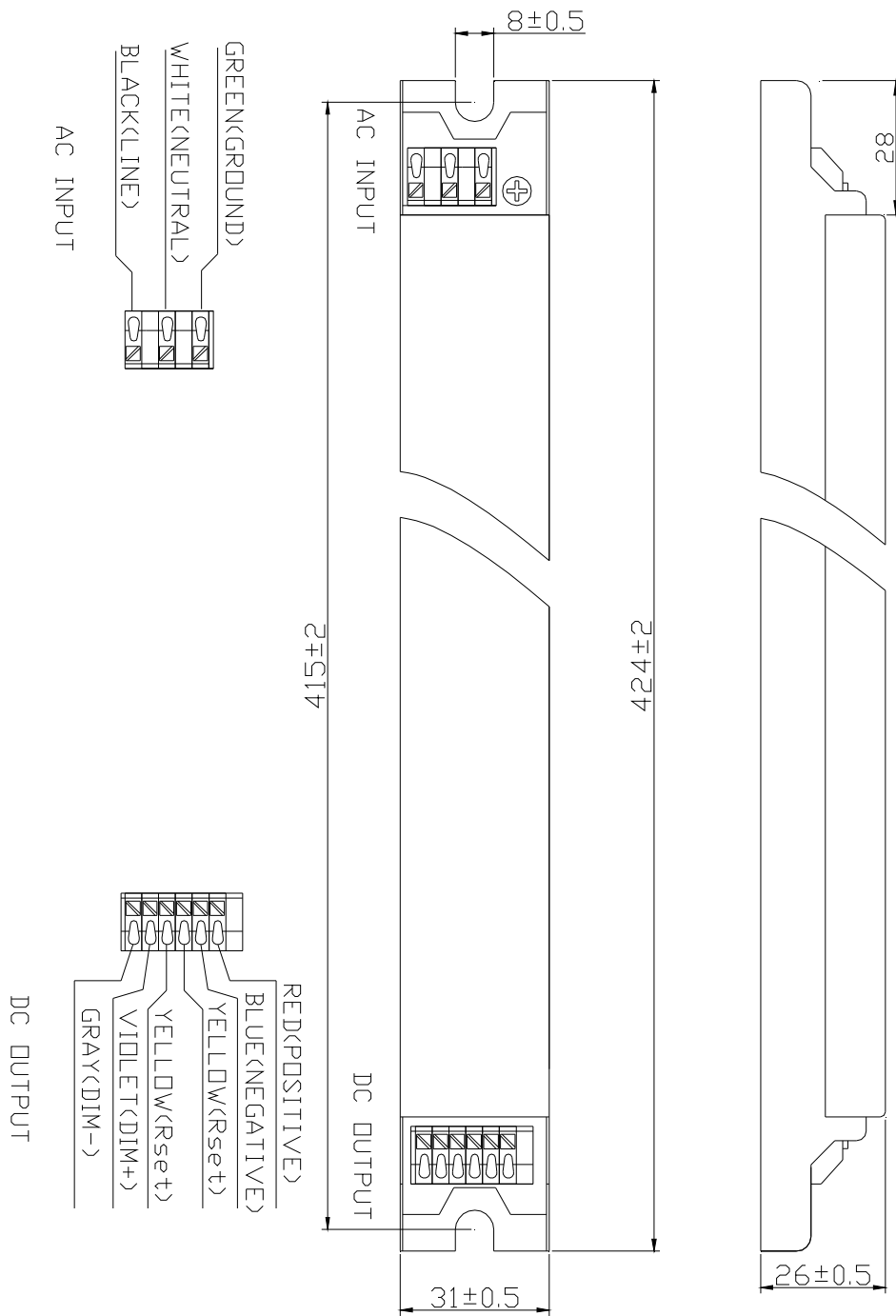
RSET (kΩ)	Output Current (A)	Output Current (%)
OPEN	3.2600	100
0.00	1.8242	55.96
1.00	2.0469	62.79
2.00	2.2070	69.70
3.00	2.3274	71.39
4.02	2.4230	74.33
4.30	2.4456	75.02
4.70	2.4757	75.94
5.10	2.5034	76.79
5.60	2.5351	77.76
6.20	2.5694	78.82
6.80	2.6003	79.76
7.50	2.6326	80.75
8.20	2.6615	81.64
8.87	2.6865	82.41
9.09	2.6941	82.64
10.00	2.7235	83.54

RSET (KΩ)	Output Current (A)	Output Current (%)
11.00	2.7520	84.42
12.00	2.7771	85.19
15.00	2.8374	87.03
18.70	2.8909	88.68
20.00	2.9059	89.14
22.00	2.9262	89.76
24.00	2.9438	90.30
27.00	2.9659	90.98
30.00	2.9843	91.54
33.00	2.9998	92.02
36.00	3.0131	92.43
40.20	3.0287	92.90
51.00	3.0580	93.80
62.00	3.0782	94.42
75.00	3.0949	94.94
300.00	3.1585	96.88
1000.00	3.1742	97.37



Please note that when the maximum output current is set by the value of RSET, the dimming will be proportional to the maximum output value set (i.e. if the max output current is set for 2A and the dimmer input is 5V, the expected current output value would be $2A * 0.5 = 1A$).

Mechanical Details



Drawing not to scale

Terminals	Colors
Input	White (Neutral)
	Black (Line)
Output	Red (Positive)
	Blue (Ground)
Dimming (CC only)	Purple (Dim +)
	Gray (Dim -)

Case	
Material	Metal
Unit Weight	430 gms
Dimensions	424mm (L) x 31mm (W) x 26mm (H)

For more detailed information about this product
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