



**XLC-25-KN Series 25W
Multiple Stage Constant
Power LED Driver**



MEAN WELL XLC-25-KN Series 25W Multiple Stage Constant Power LED Driver Owner's Manual

[Home](#) » [MEAN WELL](#) » MEAN WELL XLC-25-KN Series 25W Multiple Stage Constant Power LED Driver Owner's Manual 

Contents

- 1 MEAN WELL XLC-25-KN Series 25W Multiple Stage Constant Power LED Driver
- 2 Product Specifications
- 3 Product Usage Instructions
- 4 Features
- 5 Model Encoding
- 6 SPECIFICATION
- 7 BLOCK DIAGRAM
- 8 DIMMING OPERATION
- 9 EFFICIENCY vs LOAD
- 10 MECHANICAL SPECIFICATION
- 11 FAQ
- 12 Documents / Resources
 - 12.1 References



MEAN WELL XLC-25-KN Series 25W Multiple Stage Constant Power LED Driver



Product Specifications

- **Model:** XLC-25-H-KN
- **Output:**
 - **Open Circuit Voltage:** 60V
 - **Default Current:** 300mA
 - **Current Adjustment Range:** 0.3-1.05A
 - **Constant Current Region:** 9-54V
 - **Rated Power:** 25W
 - **Current Ripple**
 - **Current Tolerance**
 - **Dimming Range Setup, Rise Time:** Note.5

Product Usage Instructions

Installation

Follow these steps to install the XLC-25-H-KN LED Driver:

1. Ensure the DC input voltage is within the range of 176-280VDC.
2. Connect the LED driver to the appropriate LED lighting system.
3. Secure all connections and ensure proper grounding.

Operation

To operate the LED driver:

1. Apply power within the specified input voltage range.
2. Adjust the current within the recommended range for desired brightness.
3. Monitor current ripple and ensure it is within acceptable limits.



XLC-25-KN-S Series

- (Built-in type)

XLC-25-KN Series

- (Independent type)

Dimming Functionality

If dimming functionality is required:

1. Refer to Note.5 for dimming range setup and rise time information.
2. Follow the dimming instructions provided in the user manual.

Features

- Constant power mode output with multiple stage selectable by the ETS database
- Plastic housing with Class II and PFC design
- Flicker free, complying with CE ErP directive
- Standby power consumption <0.5W
- Meet emergency lighting (EL) application
- KNX/EIB protocol, support KNX data security
- Minimum dimming level 0.5%
- Function: operation hours, power consumption feedback, log/linear curve selection, etc
- 5 years warranty

Applications

- Recessed Light
- Down Light
- Panel Light
- Commercial Lighting
- Decorative Lighting
- KNX digital Lighting

GTIN CODE

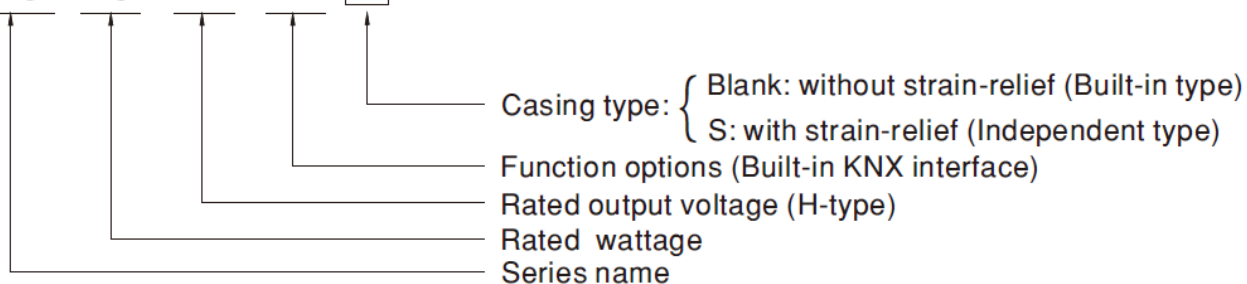
- MW Search: <https://www.meanmell.com/seviceGTIN.asox>

Description

- XLC-25-KN Series is a 25W with constant power output LED driver. It can operate from 100-305VAC and output current ranging between 300 mA to 1050 mA, selectable by the ETS database. The integrated KNX interface avoids using the complicated KNX-DALI gateway. Thanks to high efficiency up to 88%, it can operate for -25 °C ~85°C case temperature under free air convection. XLC-25-KN is designed based on the latest safety regulations, and provides more flexibility for LED Lighting application.

Model Encoding

XLC - 25 - H - KN



Type	Function	Note
KN	Built-in KNX interface, without strain-relief (Built-in type)	In stock
KNS	Built-in KNX interface, with strain-relief (Independent type)	In stock

SPECIFICATION

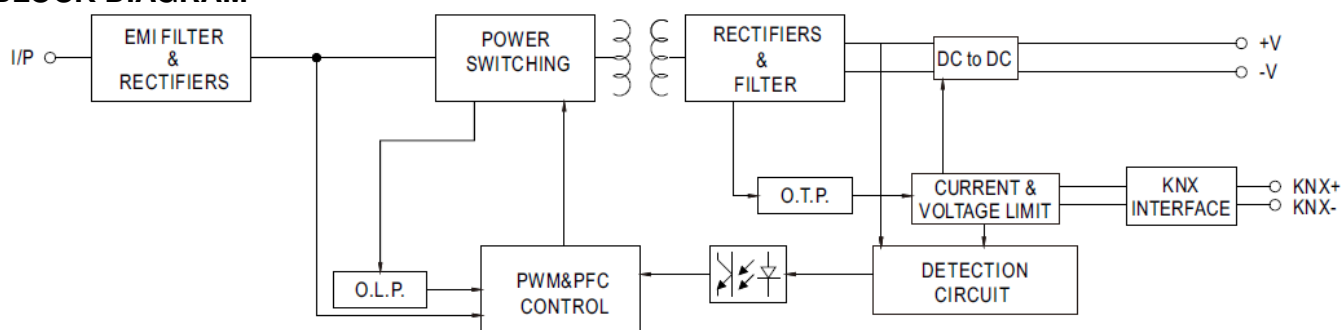
MODEL		XLC-25-H-KN
OUT PUT	OPEN CIRCUIT VOLTAGE Note. 2	60V
	DEFAULT CURRENT	300mA
	CURRENT ADJ. RANGE (BY ETS Database)	0.3~1.05A
	CONSTANT CURRENT REGION Note.3	9~54V
	RATED POWER Note.4	25W
	CURRENT RIPPLE	<4%(@full load)
	CURRENT TOLERANCE	±5%
	DIMMING RANGE	0~100%
	SETUP, RISE TIME Note.5	500ms, 100ms/230VAC, 1000ms, 100ms/115VAC
	VOLTAGE RANGE	100~ 305VAC 141 ~ 400VDC

INPUT	FREQUENCY RANGE	47 ~ 63Hz
	POWER FACTOR	PF \geq 0.97/115VAC, PF \geq 0.95/230VAC, PF \geq 0.92/277VAC@full load (Please refer to “POWER FACTOR (PF) CHARACTERISTIC” section)
	TOTAL HARMONIC DISTORTION	THD<10%(@load \geq 50%/230VAC; @load \geq 75%/277VAC), THD<15%(@load \geq 50%/115VAC) (Please refer to “TOTAL HARMONIC DISTORTION(THD)” section)
	EFFICIENCY (Typ.) Note.6	88%
	AC CURRENT	0.35A / 115VAC 0.18A / 230VAC 0.15A/277VAC
	INRUSH CURRENT(Typ.)	COLD START 10A(twidth=100 μ s measured at 50% Ipeak) at 230VAC; Per NEMA 410
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	71 units (circuit breaker of type B) / 71 units (circuit breaker of type C) at 230VAC
	LEAKAGE CURRENT	<0.75mA / 277VAC
	STANDBY POWER CONSUMPTION Note.7	Standby power consumption<0.5W(Dimming off)
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed
	OVER TEMPERATURE	Stage 1: De-rating to 75% loading; Stage 2: De-rating to 50% loading. Recovers automatically after fault condition is removed.
ENVIRONMENT	WORKING TEMP.	Tcase=-25 ~ 85°C (Please refer to “ OUTPUT LOAD vs TEMPERATURE” section)
	MAX. CASE TEMP.	Tcase=85°C
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	\pm 0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes

SAFETY & EMC	SAFETY STANDARDS	ENEC BS EN/EN61347-1, BS EN/EN61347-2-13(EL) appendix J suitable for emergency installations(DC input 176-280VDC), BS EN/EN62384; GB/T19510.1, GB/T19510.213, EAC TP TC 004 approved; Design refers to AS/NZS 61347-1, AS/NZS 61347-2-13		
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC		
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH		
	EMC EMISSION	Parameter	Standard	Test Level/Note
		Conducted	BS EN/EN55015(CISPR15) , GB/T 17743	—
		Radiated	BS EN/EN55015(CISPR15) , GB/T 17743	—
		Harmonic Current	BS EN/EN61000-3-2 , GB17625.1	Class C @load≥50%
		Voltage Flicker	BS EN/EN61000-3-3	—
		BS EN/EN61547		
	EMC IMMUNITY	Parameter	Standard	Test Level/Note
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 2, 4 KV contact
		Radiated	BS EN/EN61000-4-3	Level 2
		EFT/Burst	BS EN/EN61000-4-4	Level 2
		Surge	BS EN/EN61000-4-5	Level3, 1KV/Line-Line
		Conducted	BS EN/EN61000-4-6	Level 2
		Magnetic Field	BS EN/EN61000-4-8	Level 2
		Voltage Dips and Interruptions	BS EN/EN61000-4-11	70% residual voltage for 10 period, 0% residual voltage for 0.5 periods
	KNX	Certified protocol		
	FLICKER Note.8	PstLM ≤ 1, SVM ≤ 0.4		

OTHERS	MTBF	3949.8 K hrs min. Telcordia SR-332 (Bellcore) ; 338.5 Khrs min. MIL-HDBK-2 17F (25°C)
	DIMENSION	147*40*32mm,107*40*32mm (L*W*H)
	PACKING	141.6g; 60pcs/9.5Kg/0.58CUFT(for blank type); 160g; 50pcs/9Kg/0.57CUFT(for S-type)
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</p> <p>2. Output hiccups under no-load condition.</p> <p>3. Please refer to “DRIVER METHODS OF LED MODULE”.</p> <p>4. De-rating may be needed under low input voltages. Please refer to “STATIC CHARACTERISTIC” sections for details.</p> <p>5. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to an increase of the set up time.</p> <p>6. Efficiency is measured at 500mA/50V output set by ETS database.</p> <p>7. Standby power consumption is measured at 230VAC.</p> <p>8. Flicker is measured at full load with LED modules.</p> <p>9. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify the EMC Directive on the complete installation again.</p> <p>(as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)</p> <p>10. For XLC(except -S) series: RCM is on a voluntary basis and meets relevant IEC or AS/NZS standards complying with AS/NZS 4417.1.</p> <p>11. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly at junction point (or TMP, per DLC), is about 70°C or less. 12. The ambient temperature de-rating of 3.5°C/1000m with fanless models and 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>13. For more information, please contact MEAN WELL sales.</p> <p>Product Liability Disclaimer: For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>	

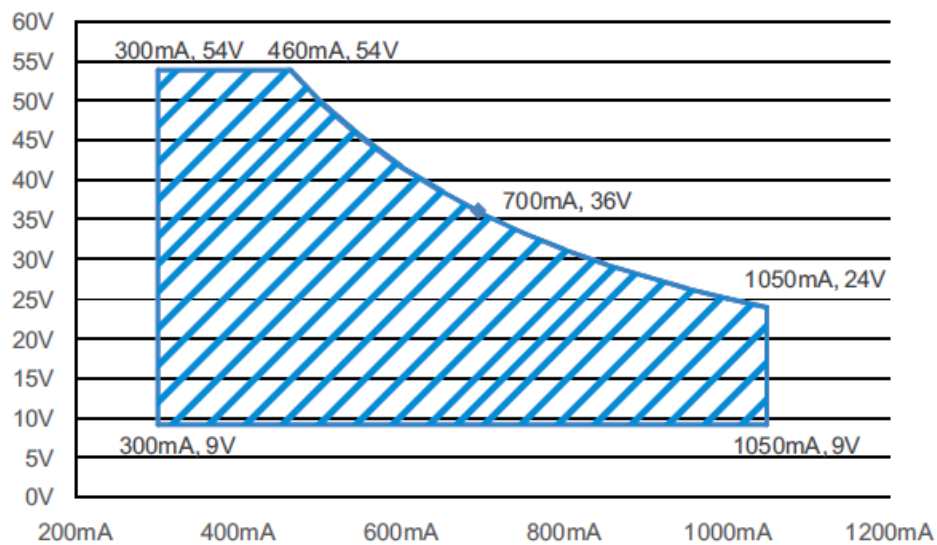
BLOCK DIAGRAM



DRIVING METHODS OF LED MODULE

- I-V Operating Area
- XLC-25-H-KN

For 25W application



CONSTANT POWER TABLE

XLC-25-KN is a multiple-stage constant power driver, selection of output current through the Database.

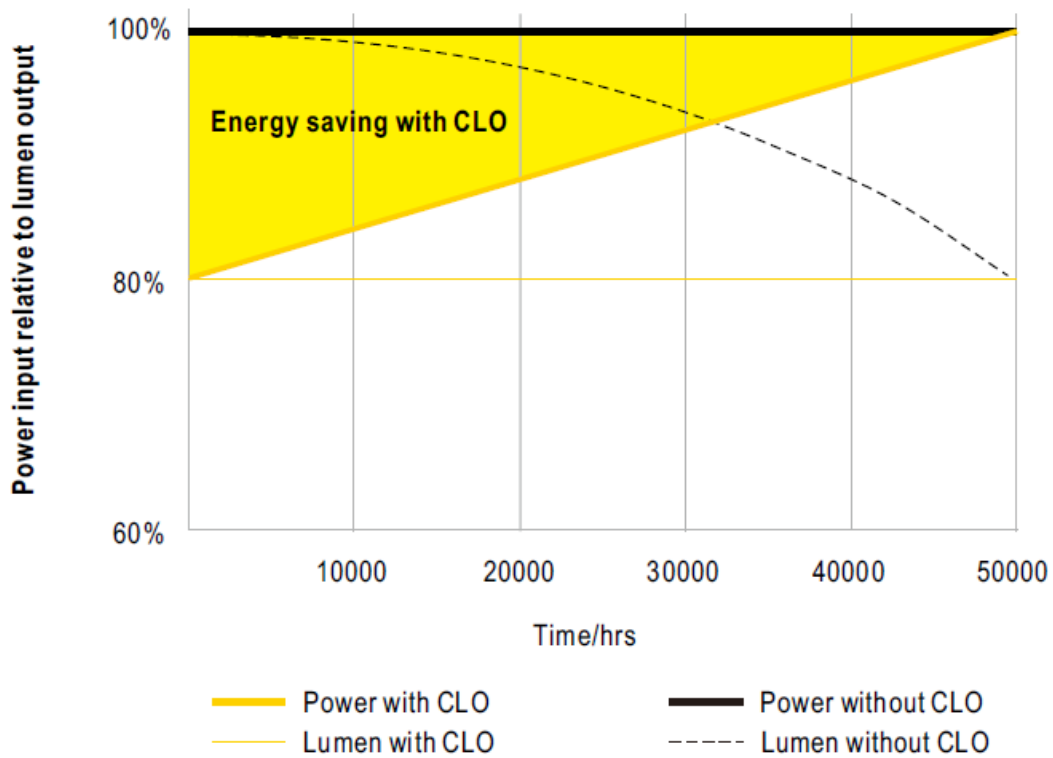
Vo	Io	Vo	Io
9~54V	300mA(Default)	9~36V	700mA
9~54V	350mA	9~33V	750mA
9~54V	400mA	9~31V	800mA
9~50V	450mA	9~29V	850mA
9~50V	500mA	9~28V	900mA
9~45V	550mA	9~26V	950mA
9~42V	600mA	9~25V	1000mA
9~38V	650mA	9~24V	1050mA

DIMMING OPERATION

- **KNX interface**
- Apply KNX Bus cable between KNX+ and KNX-
- The application program(database) can be downloaded via Online Catalogs from ETS or via <http://www.meanwell.com/productCatalog.aspx>

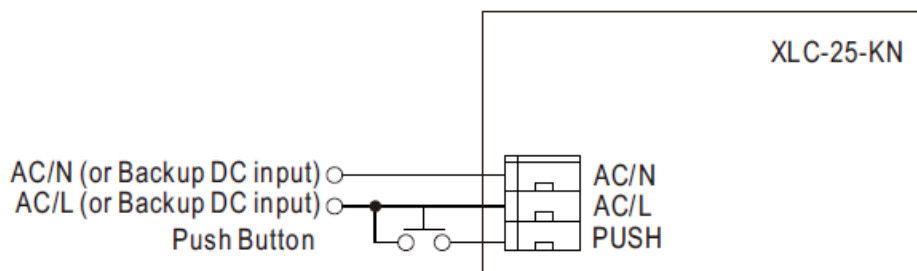
Parametrization options	Description
Device Setting	Select current level Select model Behavior bus power up
Parameter Setting	Basic Setting normal Dimmer, staircase light switch function relative dimming function absolution dimming function Feedback Setting dimming value report on/off state report lamp failure report Lock function
Scenes	Learn scene scene1~scene32
Automatic function	Automatic function1~4
operating hours	Counting of operating hours Constant light output(CLO) Lifetime pre-warning
Power consumption	Voltage, current, power feedback Energy consumption feedback
Temperature Measurement	customize the alarm temperature Send temperature report cyclically
Auto-dimming over time	Optional gradient dimming
Correction characteristic	Correction by the lux measured value(lux)
Push Dim Port	Push dim AC monitor

• CONSTANT LIGHT OUTPUT



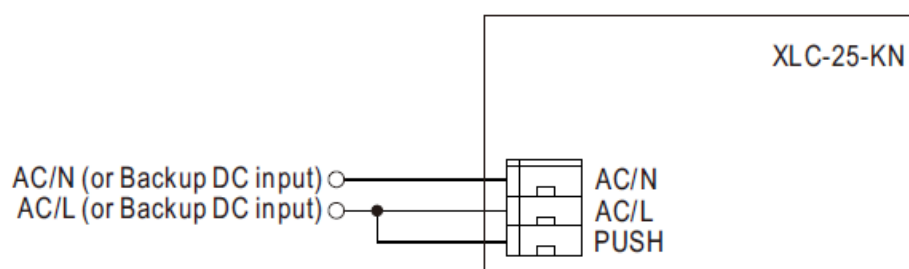
PUSH dimming or AC/DC input monitor(Primary side)

PUSH dimming



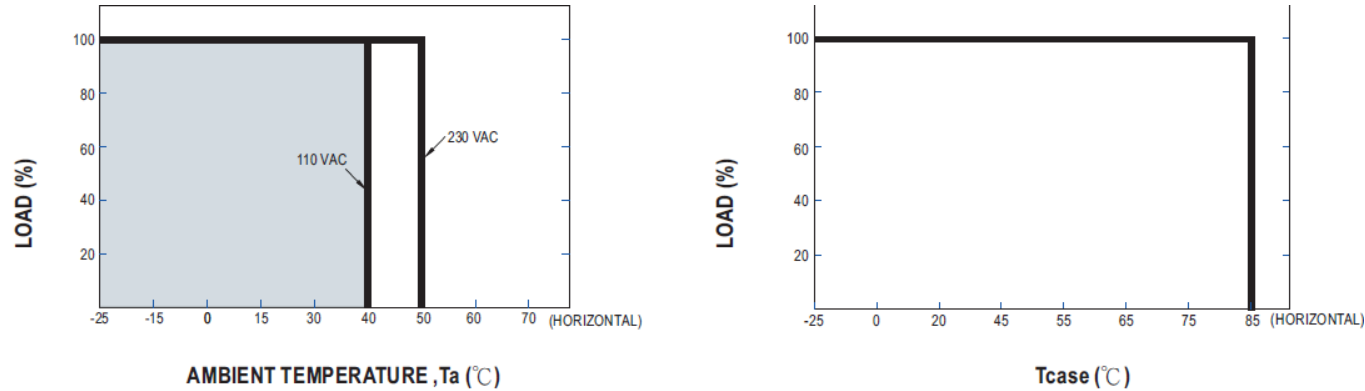
- KNX bus need to be connected when using PUSH Dimming
- The detailed function of PUSH dimming, please refer to the database.
- The maximum length of the cable between the push button and driver is 20 meters.
- The mechanical push button can be connected only between the PUSH terminal, as displayed in the diagram, and AC/L (in brown or black); It will not function properly if it is connected to AC/N.
- In case the PUSH dimming is set locally, up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.
- In case the PUSH dimming is set independently via ETS, the number of drivers is done through group address and determined by the ETS project designer.

AC/DC input monitor

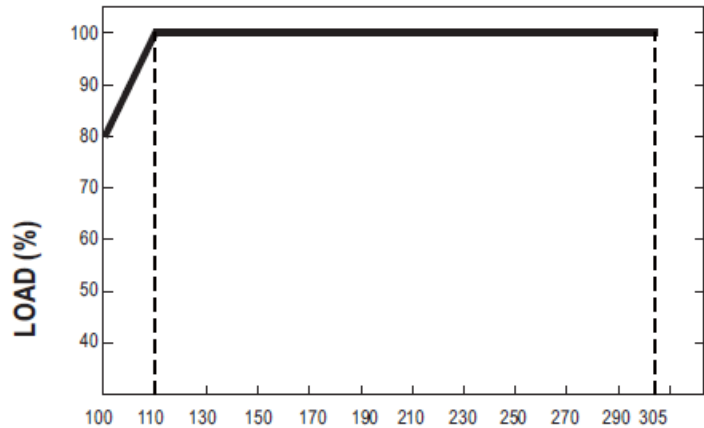


- KNX bus need to be connected when using AC/DC input monitor
- The detailed function of AC/DC input monitor(emergency lighting), please refer to the database and instruction manual.

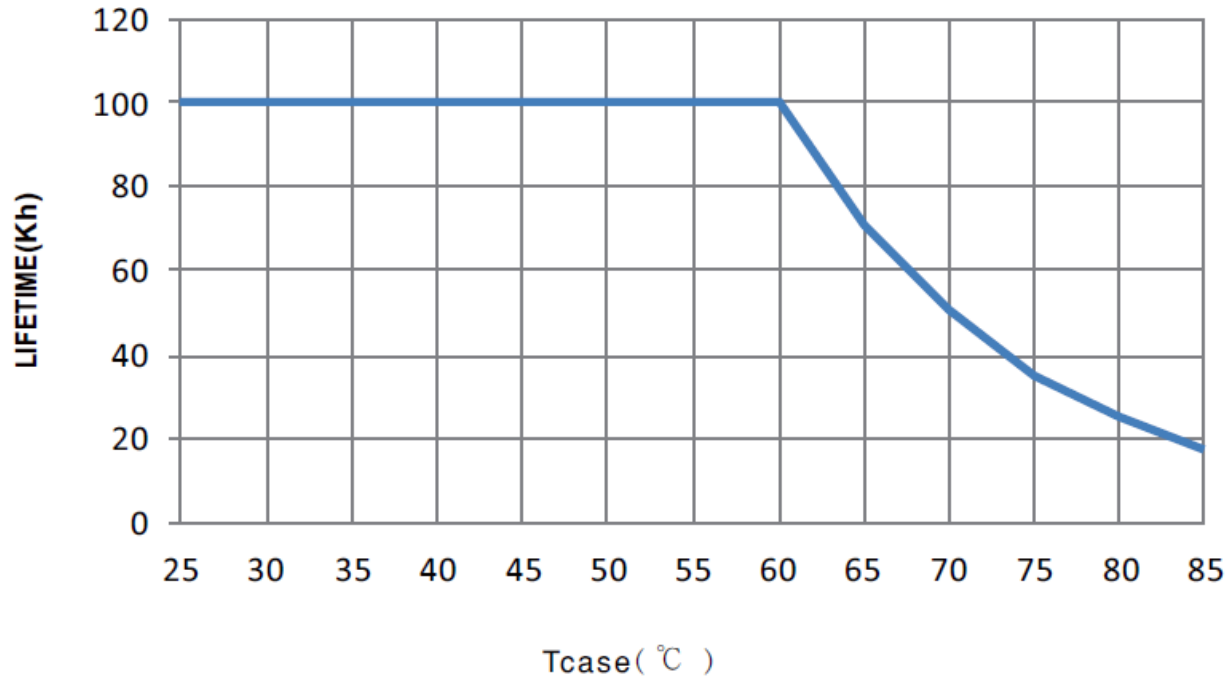
OUTPUT LOAD vs TEMPERATURE



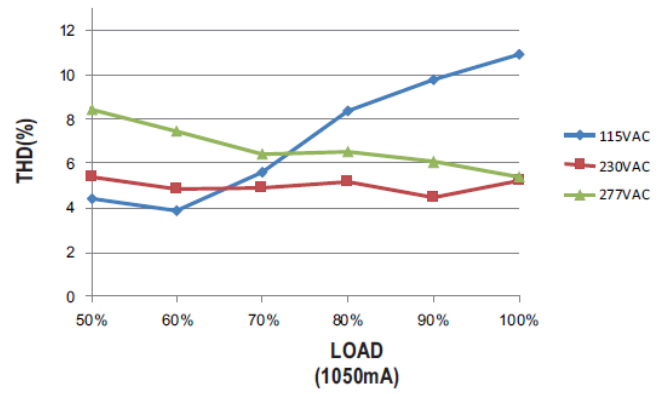
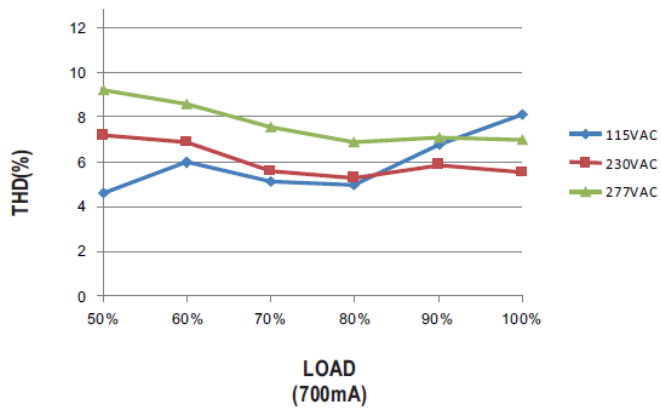
STATIC CHARACTERISTIC



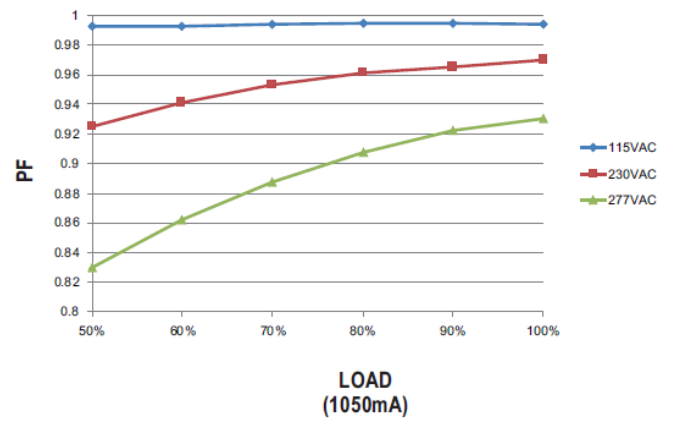
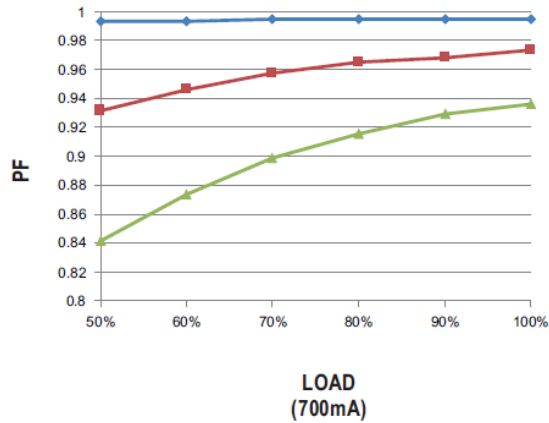
LIFE TIME



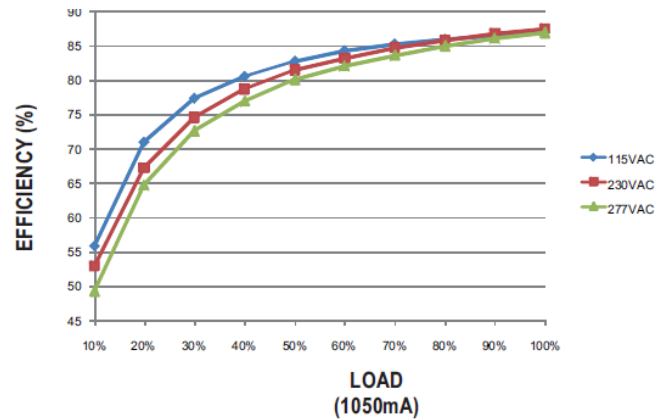
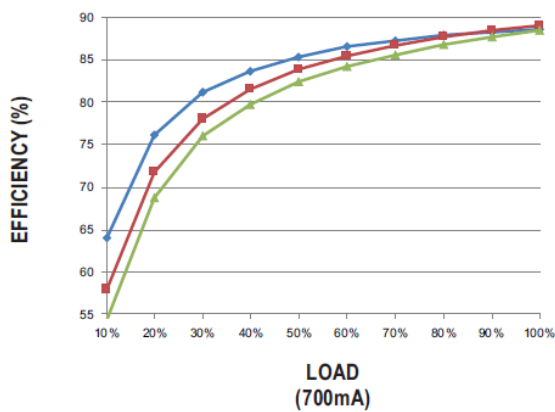
TOTAL HARMONIC DISTORTION (THD)



POWER FACTOR (PF) CHARACTERISTIC



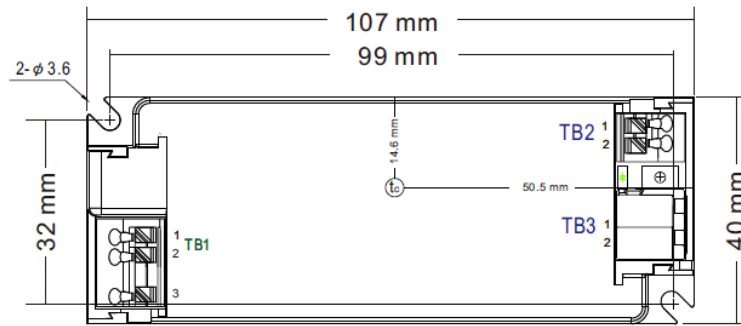
EFFICIENCY vs LOAD



- XLC-25-KN series possess superior working efficiency that is up to 88% in field applications.
- XLC-25-H-KN, Tcase at 75°C

MECHANICAL SPECIFICATION

※ XLC-25-KN Built-in Type



※ Terminal Pin No. Assignment(TB1)

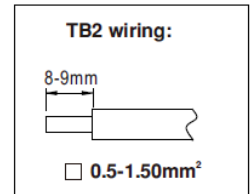
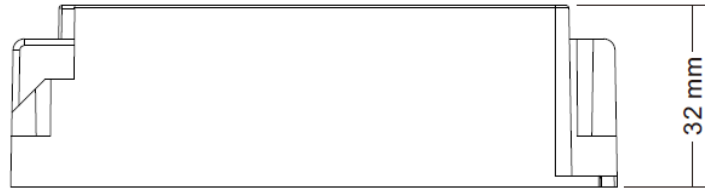
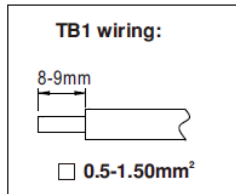
Pin No.	Assignment
1	AC/N
2	AC/L
3	PUSH

※ Terminal Pin No. Assignment(TB2)

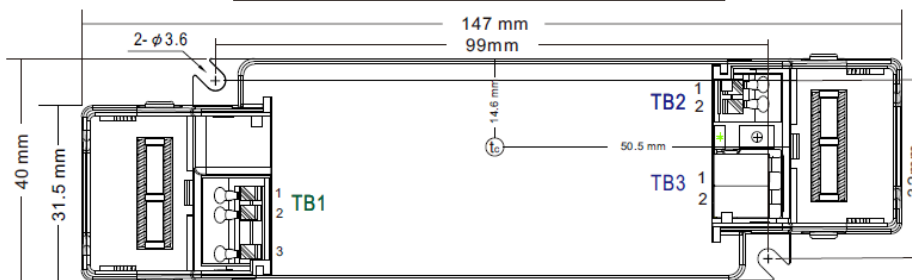
Pin No.	Assignment
1	+V
2	-V

※ Terminal Pin No. Assignment(TB3)

Pin No.	Assignment
1	KNX+
2	KNX-



Item	Order No.	Quantity(MOQ/1Bag)
Strain-relief cap	1**3XLC-SET	50pcs (2pcs 1 set)



※ Terminal Pin No. Assignment(TB1)

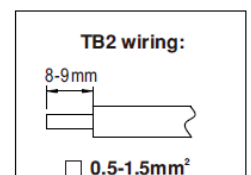
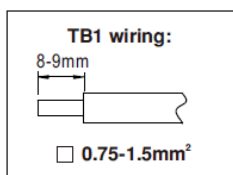
Pin No.	Assignment
1	AC/N
2	AC/L
3	PUSH

※ Terminal Pin No. Assignment(TB2)

Pin No.	Assignment
1	+V
2	-V

※ Terminal Pin No. Assignment(TB3)

Pin No.	Assignment
1	KNX+
2	KNX-



Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>



FAQ

Q: What is the default current output of the XLC-25-H-KN LED Driver?

A: The default current output is 300mA.


Q: What is the open circuit voltage of the LED driver?

A: The open circuit voltage is 60V.

Q: How do I adjust the current output of the LED driver?

A: The current output can be adjusted within the range of 0.3-1.05A.

Documents / Resources

	<p>MEAN WELL XLC-25-KN Series 25W Multiple Stage Constant Power LED Driver [pdf] Own er's Manual</p> <p>XLC-25-H-KN, XLC-25-KN Series 25W Multiple Stage Constant Power LED Driver, 25W Multipl e Stage Constant Power LED Driver, Stage Constant Power LED Driver, Power LED Driver, LED Driver</p>
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References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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