



XLC-40-KN-S Series  
(Independent type)



XLC-40-KN Series  
(Built-in type)

User's Manual



## Features

- Constant power mode output with multiple stage selectable by 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) function application
- KNX/EIB protocol, support KNX data secure
- 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

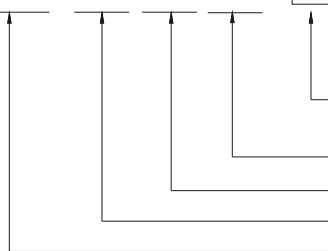
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## Description

XLC-40-KN Series is a 40W with constant power output LED driver . It can operate from 100~305VAC and output current ranging between 600 mA to 1400 mA selectable by ETS database. The integrate KNX interface avoids using the complicated KNX-DALI gateway. Thanks to high efficiency up to 88%, it is able to operate for -25℃~90℃ case temperature under free air convection. XLC-40-KN is designed based on latest safety regulations and provides more flexibility for LED Lighting application.

## Model Encoding

XLC - 40 - H - KN



- Casing type: { Blank: without strain-relief (Built-in type)  
S: with strain-relief (Independent type)
- Function options (Built-in KNX interface)
- Rated output voltage(H-type)
- Rated wattage
- Series name

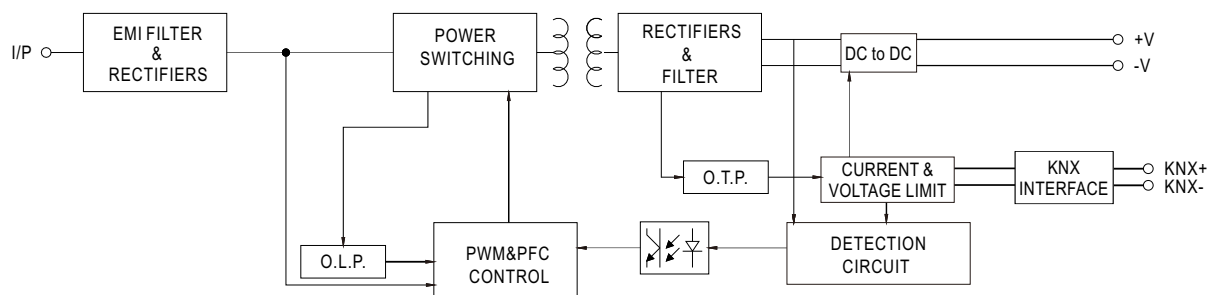
| Type | Function                                                      | Note     |
|------|---------------------------------------------------------------|----------|
| KN   | Built-in KNX interface, without strain-relief (Built-in type) | In stock |
| KNS  | Built-in KNX interface, with strain-relief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

# SPECIFICATION

|              |                                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------|-----------------------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MODEL        |                                         | XLC-40-H-KN□                   |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| OUTPUT       | OPEN CIRCUIT VOLTAGE                    | Note.2                         | 60V                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|              | DEFAULT CURRENT                         |                                | 600mA                                                                                                                                                                                                                                                                                                                                                                                                                                |
|              | CURRENT ADJ. RANGE (BY ETS Database)    |                                | 0.6~1.4A                                                                                                                                                                                                                                                                                                                                                                                                                             |
|              | CONSTANT CURRENT REGION                 | Note.3                         | 9~54V                                                                                                                                                                                                                                                                                                                                                                                                                                |
|              | RATED POWER                             | Note.4                         | 40W                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|              | CURRENT RIPPLE                          |                                | <4%(@full load)                                                                                                                                                                                                                                                                                                                                                                                                                      |
|              | CURRENT TOLERANCE                       |                                | ±5%                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|              | DIMMING RANGE                           |                                | 0~100%                                                                                                                                                                                                                                                                                                                                                                                                                               |
| INPUT        | SETUP, RISE TIME                        | Note.5                         | 500ms, 100ms/230VAC, 1000ms, 100ms/115VAC                                                                                                                                                                                                                                                                                                                                                                                            |
|              | VOLTAGE RANGE                           |                                | 100 ~ 305VAC 141 ~ 400VDC                                                                                                                                                                                                                                                                                                                                                                                                            |
|              | FREQUENCY RANGE                         |                                | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                                                            |
|              | POWER FACTOR                            |                                | PF ≥ 0.97/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.92/277VAC@full load<br>(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)                                                                                                                                                                                                                                                                                                       |
|              | TOTAL HARMONIC DISTORTION               |                                | THD<10%(@load ≥ 50%/230VAC; @load ≥ 75%/277VAC), THD<15%(@load ≥ 50%/115VAC)<br>(Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)                                                                                                                                                                                                                                                                                           |
|              | EFFICIENCY (Typ.)                       | Note.6                         | 88%                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|              | AC CURRENT                              |                                | 0.5A / 115VAC 0.25A / 230VAC 0.2A/277VAC                                                                                                                                                                                                                                                                                                                                                                                             |
|              | INRUSH CURRENT(Typ.)                    |                                | COLD START 10A(twidth=100μs measured at 50% Ipeak) at 230VAC; Per NEMA 410                                                                                                                                                                                                                                                                                                                                                           |
| PROTECTION   | MAX. No. of PSUs on 16A CIRCUIT BREAKER |                                | 51 units (circuit breaker of type B) / 51 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)                                                                                                                                                                                                                                                                                                                                                                                          |
|              | 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.                                                                                                                                                                                                                                                                                                       |
|              | WORKING TEMP.                           |                                | Tcase=-25 ~ 90℃ (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)                                                                                                                                                                                                                                                                                                                                                              |
|              | MAX. CASE TEMP.                         |                                | Tcase=90℃                                                                                                                                                                                                                                                                                                                                                                                                                            |
|              | WORKING HUMIDITY                        |                                | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                           |
| ENVIRONMENT  | STORAGE TEMP., HUMIDITY                 |                                | -40 ~ +80℃, 10 ~ 95% RH                                                                                                                                                                                                                                                                                                                                                                                                              |
|              | TEMP. COEFFICIENT                       |                                | ±0.03%/℃ (0 ~ 50℃)                                                                                                                                                                                                                                                                                                                                                                                                                   |
|              | VIBRATION                               |                                | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                                                                                                                                                                                                                                                                                                                              |
|              | 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 refer 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℃ / 70% RH                                                                                                                                                                                                                                                                                                                                                                                           |
|              | EMC EMISSION                            | Parameter                      | Standard                                                                                                                                                                                                                                                                                                                                                                                                                             |
|              |                                         | 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                                                                                                                                                                                                                                                                                                                                                                                                         |
| SAFETY & EMC | EMC IMMUNITY                            | Voltage Flicker                | BS EN/EN61000-3-3                                                                                                                                                                                                                                                                                                                                                                                                                    |
|              |                                         |                                | BS EN/EN61547                                                                                                                                                                                                                                                                                                                                                                                                                        |
|              |                                         | Parameter                      | Standard                                                                                                                                                                                                                                                                                                                                                                                                                             |
|              |                                         | ESD                            | BS EN/EN61000-4-2                                                                                                                                                                                                                                                                                                                                                                                                                    |
|              | EMC IMMUNITY                            | Radiated                       | BS EN/EN61000-4-3                                                                                                                                                                                                                                                                                                                                                                                                                    |
|              |                                         | EFT/Burst                      | BS EN/EN61000-4-4                                                                                                                                                                                                                                                                                                                                                                                                                    |
|              |                                         | Surge                          | BS EN/EN61000-4-5                                                                                                                                                                                                                                                                                                                                                                                                                    |
|              |                                         | Conducted                      | BS EN/EN61000-4-6                                                                                                                                                                                                                                                                                                                                                                                                                    |
| OTHERS       | PACKING                                 | Magnetic Field                 | BS EN/EN61000-4-8                                                                                                                                                                                                                                                                                                                                                                                                                    |
|              |                                         | 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                                                                                                                                                                                                                                                                                                                                                                                                                 |
|              | MTBF                                    |                                | 3935.2 K hrs min. Telcordia SR-332 (Bellcore); 342.9 Khrs min. MIL-HDBK-217F (25℃)                                                                                                                                                                                                                                                                                                                                                   |
|              | DIMENSION                               |                                | 147*40*32mm, 107*40*32mm (L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                     |
| NOTE         | PACKING                                 |                                | 193g; 60pcs/12.6Kg/0.58CUFT(for blank type); 205g; 50pcs/11Kg/0.57CUFT(for S-type)                                                                                                                                                                                                                                                                                                                                                   |
|              |                                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|              |                                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|              |                                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|              | NOTE                                    |                                | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.                                                                                                                                                                                                                                                                                                                |
|              |                                         |                                | 2. Output hiccups under no-load condition.                                                                                                                                                                                                                                                                                                                                                                                           |
|              |                                         |                                | 3. Please refer to "DRIVER METHODS OF LED MODULE".                                                                                                                                                                                                                                                                                                                                                                                   |
|              |                                         |                                | 4. De-rating may be need under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.                                                                                                                                                                                                                                                                                                                     |
|              | NOTE                                    |                                | 5. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.                                                                                                                                                                                                                                                                                                         |
|              |                                         |                                | 6. Efficiency is measured at 800mA/50V output set by ETS database.                                                                                                                                                                                                                                                                                                                                                                   |
|              |                                         |                                | 7. Standby power consumption is measured at 230VAC.                                                                                                                                                                                                                                                                                                                                                                                  |
|              |                                         |                                | 8. Flicker is measured at full load with the light source provided by MEAN WELL.                                                                                                                                                                                                                                                                                                                                                     |
| NOTE         | NOTE                                    |                                | 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 EMC Directive on the complete installation again.<br>(as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> ) |
|              |                                         |                                | 10. For XLC-S series: RCM is on a voluntary basis. Non IC classification Independent LED control gear is not suitable for residential installations.<br>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                                                                                                                                               |
|              |                                         |                                | 11. The ambient temperature de-rating of 3.5℃/1000m with fanless models and 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).                                                                                                                                                                                                                                                                               |
|              |                                         |                                | 12. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly Ⓢ point (or TMP, per DLC), is about 75℃ or less.                                                                                                                                                                                                                                                                            |
|              | NOTE                                    |                                | 13. For more information, please contact with MEAN WELL sales.                                                                                                                                                                                                                                                                                                                                                                       |
|              |                                         |                                | ※Product Liability Disclaimer: For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>                                                                                                                                                                                                                                               |
|              |                                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|              |                                         |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## BLOCK DIAGRAM

Fosc : 90KHz

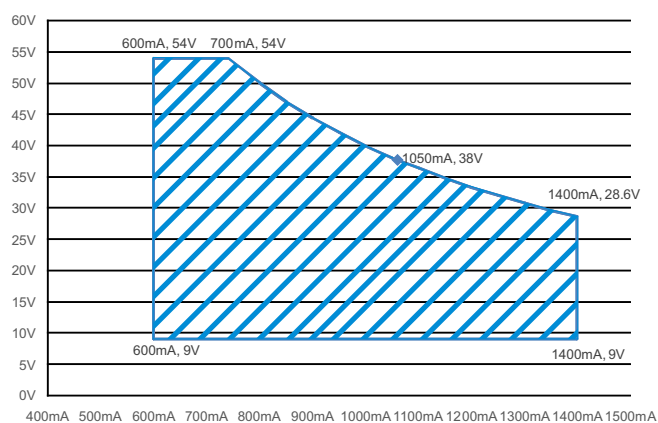


## DRIVING METHODS OF LED MODULE

※ I-V Operating Area

◎ XLC-40-H-KN

For 40W application



## CONSTANT POWER TABLE

XLC-40-KN is a multiple-stage constant power driver, selection of output current through Database.

| Vo    | Io             | Vo    | Io     |
|-------|----------------|-------|--------|
| 9~54V | 600mA(Default) | 9~38V | 1050mA |
| 9~54V | 650mA          | 9~36V | 1100mA |
| 9~54V | 700mA          | 9~35V | 1150mA |
| 9~54V | 750mA          | 9~33V | 1200mA |
| 9~50V | 800mA          | 9~32V | 1250mA |
| 9~47V | 850mA          | 9~31V | 1300mA |
| 9~45V | 900mA          | 9~30V | 1350mA |
| 9~42V | 950mA          | 9~29V | 1400mA |
| 9~40V | 1000mA         |       |        |

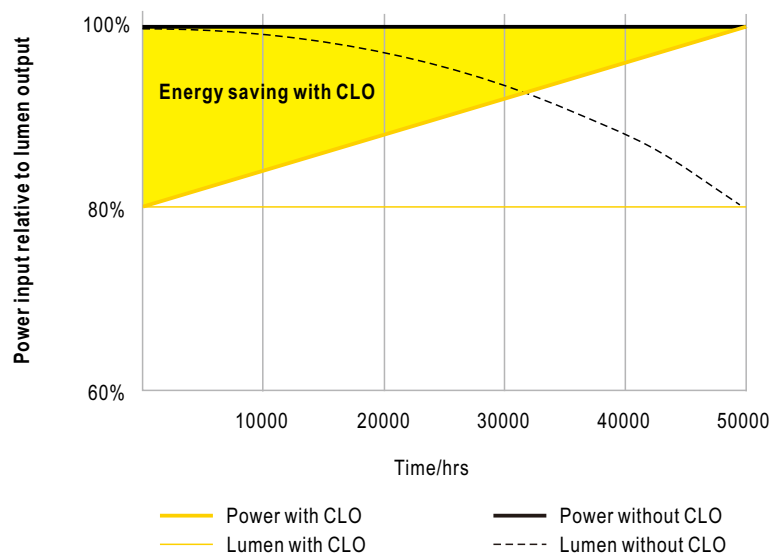
## DIMMING OPERATION

### ※ 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>

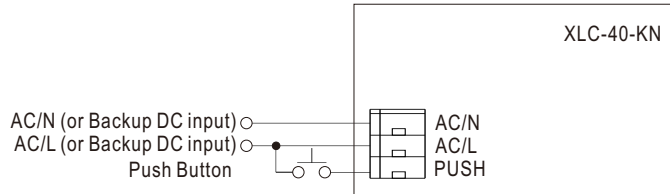
| Parametrization options   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device Setting            | <ul style="list-style-type: none"> <li>•Select current level</li> <li>•Select model</li> <li>•Behavior bus power up</li> </ul>                                                                                                                                                                                                                                                                                                                  |
| Parameter Setting         | <ul style="list-style-type: none"> <li>•Basic Setting <ul style="list-style-type: none"> <li>•normal Dimmer, staircase light</li> <li>•switch function</li> <li>•relative dimming function</li> <li>•absolution dimming function</li> </ul> </li> <li>•Feedback Setting <ul style="list-style-type: none"> <li>•dimming value report</li> <li>•on/off state report</li> <li>•lamp failure report</li> </ul> </li> <li>•Lock function</li> </ul> |
| Scenes                    | <ul style="list-style-type: none"> <li>•Learn scene</li> <li>•scene1~scene32</li> </ul>                                                                                                                                                                                                                                                                                                                                                         |
| Automatic function        | <ul style="list-style-type: none"> <li>•Automatic function1~4</li> </ul>                                                                                                                                                                                                                                                                                                                                                                        |
| operating hours           | <ul style="list-style-type: none"> <li>•Counting of operating hours</li> <li>•Constant light output(CLO)</li> <li>•Life time pre-warning</li> </ul>                                                                                                                                                                                                                                                                                             |
| Power consumption         | <ul style="list-style-type: none"> <li>•Voltage, current, power feedback</li> <li>•Energy consumption feedback</li> </ul>                                                                                                                                                                                                                                                                                                                       |
| Temperature Measurement   | <ul style="list-style-type: none"> <li>•customize the alarm temperature</li> <li>•Send temperature report cyclically</li> </ul>                                                                                                                                                                                                                                                                                                                 |
| Auto-dimming over time    | <ul style="list-style-type: none"> <li>•Optional gradient dimming</li> </ul>                                                                                                                                                                                                                                                                                                                                                                    |
| Correction characteristic | <ul style="list-style-type: none"> <li>•Correction by lux measured value(lux)</li> </ul>                                                                                                                                                                                                                                                                                                                                                        |
| Push Dim Port             | <ul style="list-style-type: none"> <li>•Push dim</li> <li>•AC monitor</li> </ul>                                                                                                                                                                                                                                                                                                                                                                |

### ※ CONSTANT LIGHT OUTPUT



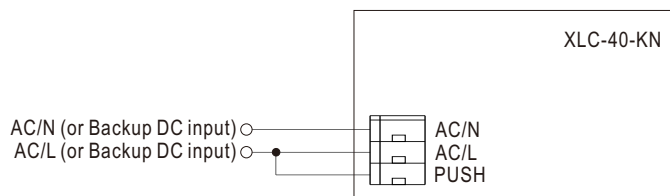
## ※ PUSH dimming or AC/DC input monitor(Primary side)

### ◎ PUSH dimming



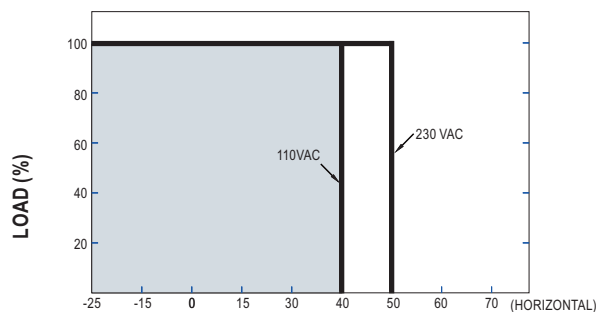
- KNX bus need to be connected when using PUSH Dimming
- The detailed function of PUSH dimming, please refer to the database.
- The maximum length of the cable between the push button and driver is 20 meters.
- The mechanical push button can be connected only between the PUSH terminal, as displayed in 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

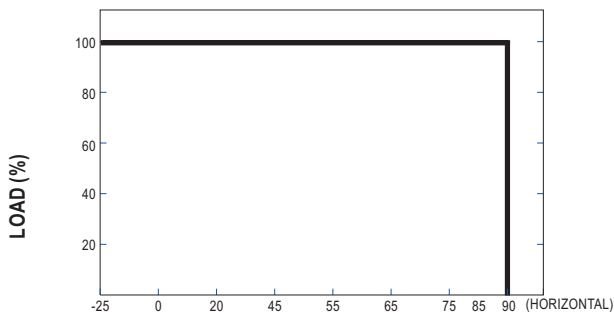


- KNX bus need to be connected when using AC/DC input monitor
- The detailed function of AC/DC input monitor(emergency lighting), please refer to the database and instruction manual.

## OUTPUT LOAD vs TEMPERATURE

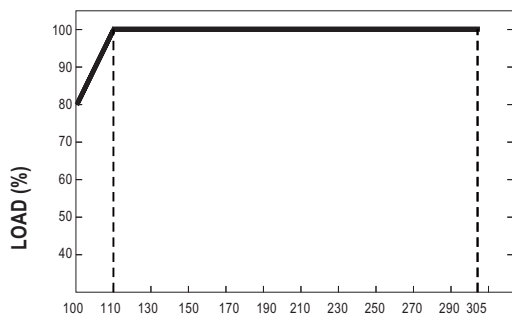


AMBIENT TEMPERATURE, Ta (°C)



Tcase (°C)

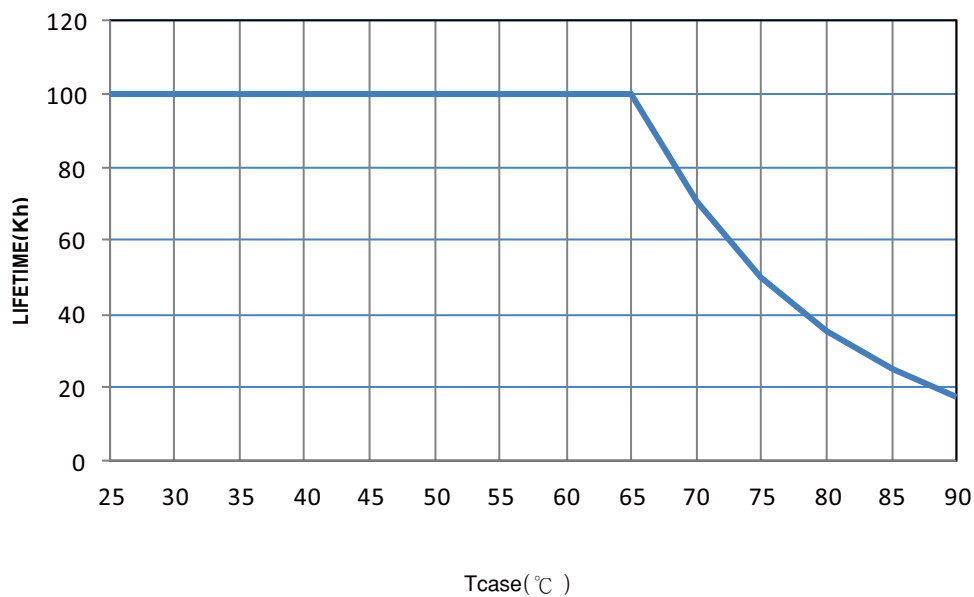
## STATIC CHARACTERISTIC



INPUT VOLTAGE (V) 60Hz

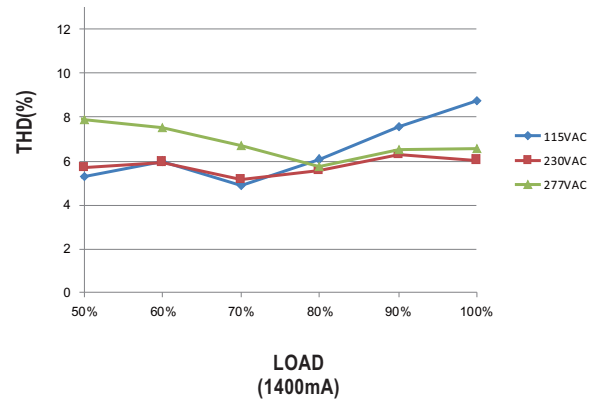
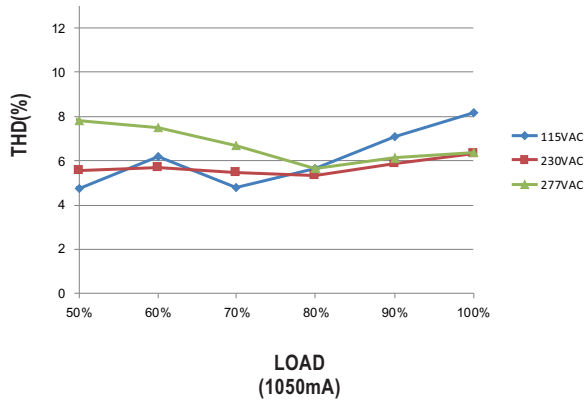
※ De-rating is needed under low input voltage.

## LIFE TIME



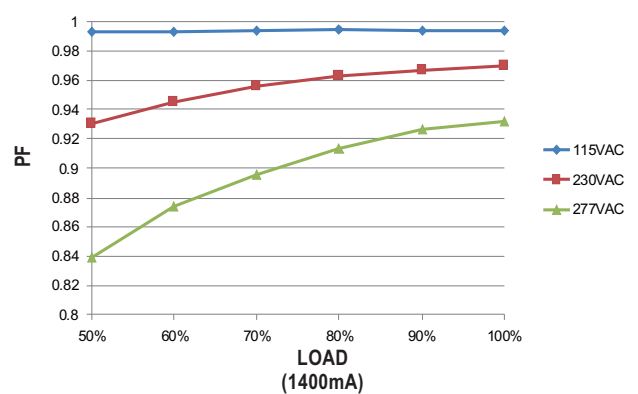
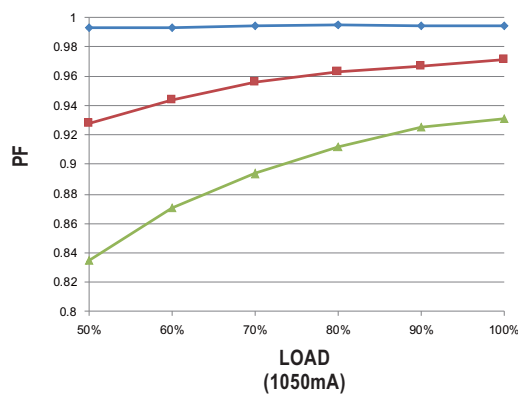
## TOTAL HARMONIC DISTORTION (THD)

※ XLC-40-H-KN Model, T<sub>case</sub> at 75°C



## POWER FACTOR (PF) CHARACTERISTIC

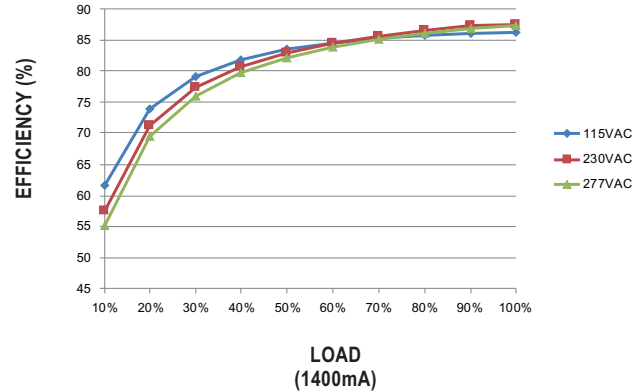
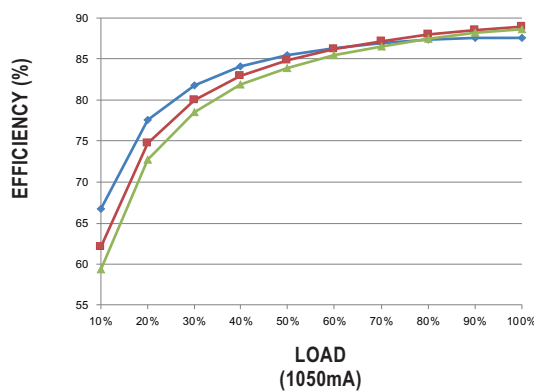
※ XLC-40-H-KN Model, T<sub>case</sub> at 75°C



## EFFICIENCY vs LOAD

XLC-40-KN series possess superior working efficiency that up to 88% can be reached in field applications.

※ XLC-40-H-KN Model, T<sub>case</sub> at 75°C



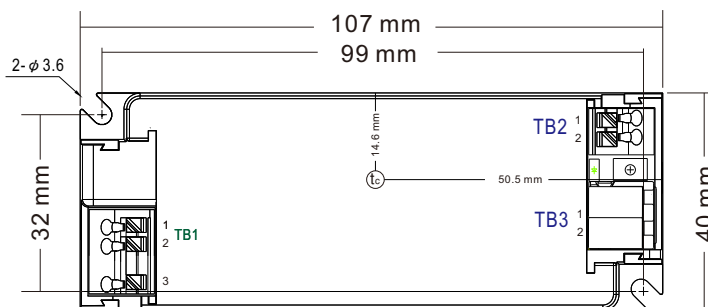
## MECHANICAL SPECIFICATION

Case No.XLC-25

Unit:mm

Tolerance:±1

※ XLC-40-H-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-       |

TB1 wiring:

8-9mm

□ 0.5-1.50mm<sup>2</sup>

TB2 wiring:

8-9mm

□ 0.5-1.50mm<sup>2</sup>

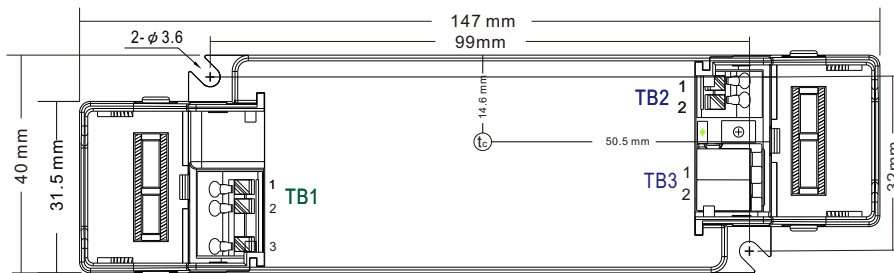
| Item              | Order No.   | Quantity(MOQ/1Bag) |
|-------------------|-------------|--------------------|
| Strain-relief cap | 1**3XLC-SET | 50pcs (2pcs 1 set) |

※ XLC-40-H-KNS Independent Type

Case No.XLC-25-S

Unit:mm

Tolerance:±1



※ 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-       |

TB1 wiring:

8-9mm

□ 0.75-1.5mm<sup>2</sup>

TB2 wiring:

8-9mm

□ 0.5-1.5mm<sup>2</sup>

## Installation Manual

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

 [www.simpex.ch](http://www.simpex.ch)

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## Hauptsitz

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## Manufaktur

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