



■ Features

- Constant Current mode output with multiple levels selectable by dip switch
- KNX/EIB protocol
- Flicker free design
- Support emergency lighting(EL)
- Integrated constant light output
- Integrated KNX push button interface
- Synchronization up to 10units
- Functions: Manual dim, operation hours, power consumption feedback, log/linear curve selection...etc
- 3 years warranty

■ Applications

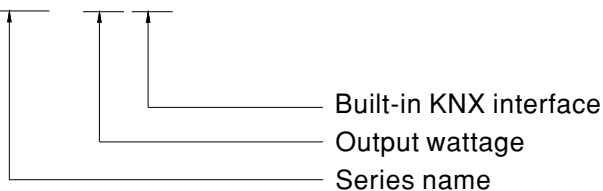
- LED indoor lighting
- LED office lighting
- LED architectural lighting
- LED panel lighting
- Industrial lighting

■ Description

LCM-25KN series is a 25W AC/DC constant current mode output LED driver featuring the multiple levels selectable by dip switch and the KNX interface to avoid using the complicated KNX-DALI gateway. LCM-25KN operates from 180~277VAC and offers different current levels ranging between 350mA and 1050mA. Thanks to the efficiency up to 85%, with the fanless design, the entire series is able to operate for -30°C~+85°C case temperature under free air convection. In addition, LCM-25KN is equipped with push dimming and synchronization so as to provide the optimal design flexibility for LED lighting system.

■ Model Encoding

LCM - 25KN

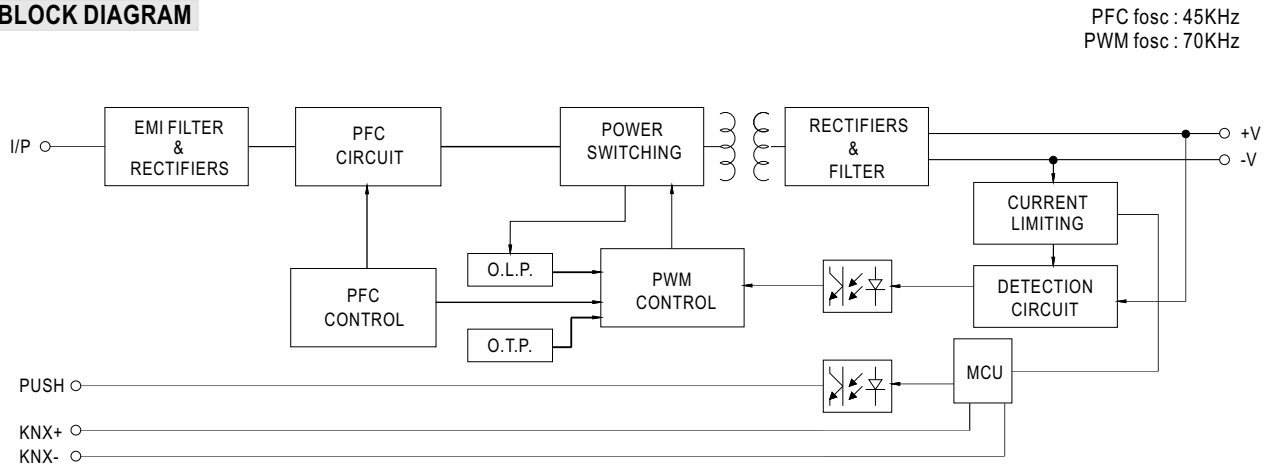




SPECIFICATION

| | | | | | | | |
|---|---|--|---------|---------|----------------|---------|---------|
| MODEL | | LCM-25KN | | | | | |
| OUTPUT | CURRENT LEVEL | Current level selectable via DIP switch, please refer to "DIP SWITCH TABLE" section | | | | | |
| | | 350mA | 500mA | 600mA | 700mA(default) | 900mA | 1050mA |
| | RATED POWER | 18.9W | 25.2W | | | | |
| | DC VOLTAGE RANGE | 6 ~ 54V | 6 ~ 50V | 6 ~ 42V | 6 ~ 36V | 6 ~ 28V | 6 ~ 24V |
| | OPEN CIRCUIT VOLTAGE (max.) | 59V | | | 41V | | |
| | CURRENT RIPPLE | 5.0% max. @rated current | | | | | |
| | CURRENT TOLERANCE | ±5% | | | | | |
| | SETUP TIME Note.3 | 500ms / 230VAC | | | | | |
| INPUT | VOLTAGE RANGE Note.2 | 180 ~ 277VAC 220 ~ 380VDC (Please refer to "STATIC CHARACTERISTIC" section) | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | POWER FACTOR (Typ.) | PF ≥ 0.94/230VAC, PF ≥ 0.91/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section) | | | | | |
| | TOTAL HARMONIC DISTORTION | THD < 20% (@load ≥ 50%/230VAC; @load ≥ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section) | | | | | |
| | EFFICIENCY (Typ.) Note.4 | 85% | | | | | |
| | AC CURRENT (Typ.) | 0.17A/230VAC 0.15A/277VAC | | | | | |
| | INRUSH CURRENT (Typ.) | COLD START 20A (width=260µs measured at 50% I _{peak}) at 230VAC; Per NEMA 410 | | | | | |
| | MAX. No. of PSUs on 16A CIRCUIT BREAKER | 26 units (circuit breaker of type B) / 44 units (circuit breaker of type C) at 230VAC | | | | | |
| | LEAKAGE CURRENT | <0.5mA / 240VAC | | | | | |
| STANDBY POWER CONSUMPTION Note.5 | <0.5W | | | | | | |
| PROTECTION | SHORT CIRCUIT | Constant current limiting, recovers automatically after fault condition is removed | | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | | |
| FUNCTION | DIMMING | Please refer to "DIMMING OPERATION" section | | | | | |
| | SYNCHRONIZATION | Please refer to "SYNCHRONIZATION OPERATION" section | | | | | |
| ENVIRONMENT | WORKING TEMP. | T _{case} = -30 ~ +85°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section) | | | | | |
| | MAX. CASE TEMP. | T _{case} = +85°C | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±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 | CSA C22.2 No.250.13-12, ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384 independent, GB19510.14, GB19510.1, EAC TP TC 004 approved | | | | | |
| | KNX STANDARDS | certification | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P: 3.75KVAC; O/P-KN ±: 500VDC | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P: >100M Ohms / 500VDC / 25°C / 70% RH | | | | | |
| | EMC EMISSION Note.6 | Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@load ≥ 50%); BS EN/EN61000-3-3; GB17625.1, GB17743, EAC TP TC 020 | | | | | |
| EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, light industry level (surge immunity Line-Line 2KV), EAC TP TC 020 | | | | | | |
| OTHERS | MTBF | 213.3K hrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 105*68*23mm (L*W*H) | | | | | |
| | PACKING | 0.173Kg; 72pcs/13.5Kg/1.04CUFT | | | | | |
| NOTE | <ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. 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. Efficiency is measured at 500mA/50V output set by DIP switch. Standby power consumption is measured at 230VAC. 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. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains. <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | | | | |

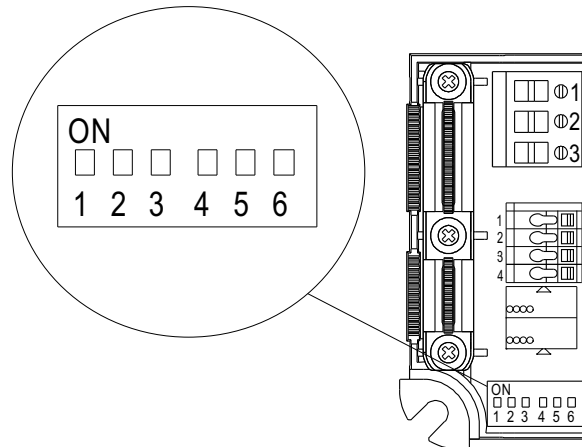
■ BLOCK DIAGRAM



■ DIP SWITCH TABLE

LCM-25KN is a multiple-stage constant current driver, selection of output current through DIP switch is exhibited below.

| Io | DIP S.W. | 1 | 2 | 3 | 4 | 5 | 6 | Max.LED voltage |
|------------------------|----------|------|------|------|------|------|------|-----------------|
| 350mA | | ---- | ---- | ---- | ---- | ---- | ---- | 54V |
| 500mA | | ON | ---- | ---- | ---- | ---- | ---- | 50V |
| 600mA | | ON | ON | ---- | ---- | ---- | ---- | 42V |
| 700mA(factory default) | | ON | ON | ON | ---- | ---- | ON | 36V |
| 900mA | | ON | ON | ON | ON | ---- | ON | 28V |
| 1050mA | | ON | ON | ON | ON | ON | ON | 24V |



More current options through DIP switch are listed below.

| Io | DIP S.W. | 1 | 2 | 3 | 4 | 5 | 6 | Max.LED voltage |
|-------|----------|------|------|------|------|------|------|-----------------|
| 450mA | | ---- | ON | ---- | ---- | ---- | ---- | 54V |
| 550mA | | ---- | ---- | ---- | ON | ---- | ---- | 46V |
| 800mA | | ON | ON | ---- | ON | ---- | ---- | 31V |

Note: The Max. LED voltage connected at the output should be always less than the table above.

■ DIMMING OPERATION

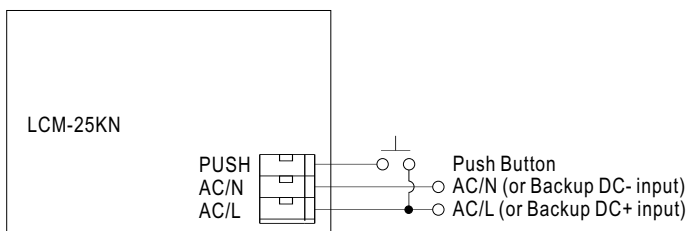
✧ **KNX interface**

- 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 |
|----------------------------|--|
| Switch functions | <ul style="list-style-type: none"> • Turn on brightness • Dimming speed for turn on/off • Switch telegram and status • Switch on/off delay |
| Dimming | <ul style="list-style-type: none"> • Dimming speed for 0~100% • Allow switch on via relative dimming • Push dimming with AC inut port • Block object for push dimming |
| Brightness value | <ul style="list-style-type: none"> • Dimming speed for transition brightness values • Permit set switch on and off brightness via value • Brightness value and status |
| Fault message | <ul style="list-style-type: none"> • Lamp fault • AC/DC input monitor fault messages |
| Other functions | <ul style="list-style-type: none"> • Reaction on KNX voltage failure/recovery • Power-On level • Dimming curve select(linear/log) • Synchronous dimming output • Block function(Block1&Block2) • Staircase lighting function(multi-stage switch-off) |
| General function | <ul style="list-style-type: none"> • Cyclic monitoring telegram(In operation) |
| 8 Scenes | <ul style="list-style-type: none"> • Recall and save via KNX with 8-bit telegram |
| Operating hours & CLO | <ul style="list-style-type: none"> • Operating hours counter • Constant light out(5 scheduled divisions) |
| Power consumption feedback | <ul style="list-style-type: none"> • Power consumption report |

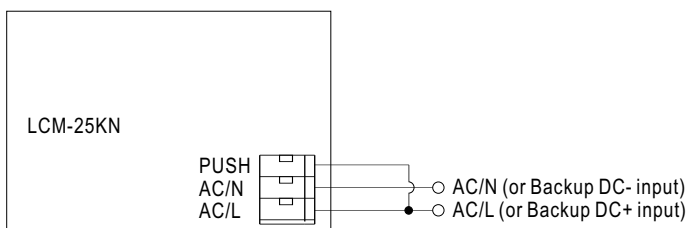
✧ **PUSH dimming or AC/DC input monitor(Primary side)**

◎ **PUSH dimming**



- The detail function of PUSH dimming, please refer to the database.
- Up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.
- The maximum length of the cable from the push button to the last driver is 20 meters.
- The additive push button can be connected only between the PUSH terminal, as displayed in the diagram, and AC/L (in brown or black); it will lead to short circuit 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.

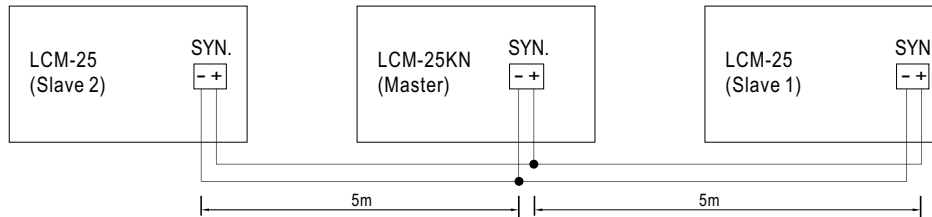
◎ **AC/DC input monitor**



- KNX Bus need to connected when using AC/DC input monitor
- The detail function of AC/DC input monitor, please refer to the database.

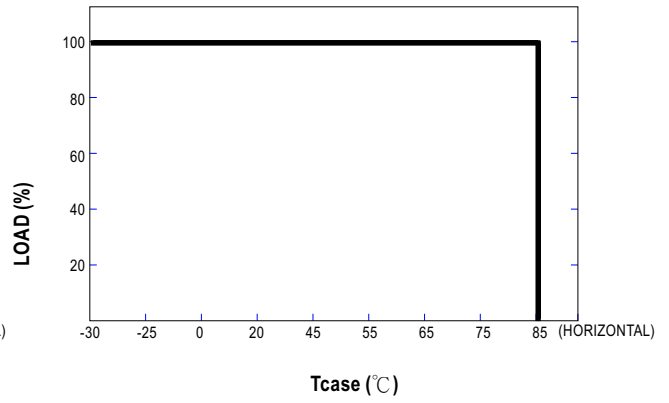
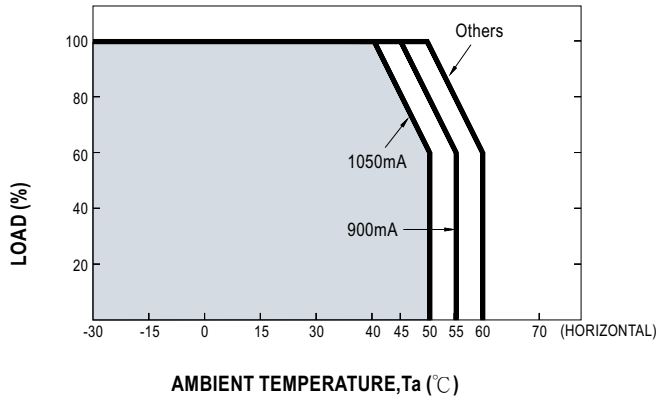
■ SYNCHRONIZATION OPERATION

- Synchronization up to 10 drivers (1 master + 9 slaves)
- Dimming operating range : 10%~100%
- Sync cable length : < 5m
- Sync cable type : Flat cable
- Sync cable cross section area : 22 – 24 AWG (0.2~0.3mm²)

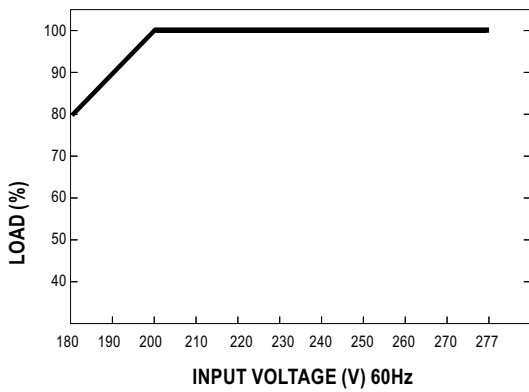


- NOTE: 1. Please make sure all units are set to 100% dimming setting (factory default) before synchronizing.
2. Min. Dimming operating range depends on database setting.

■ **OUTPUT LOAD vs TEMPERATURE**



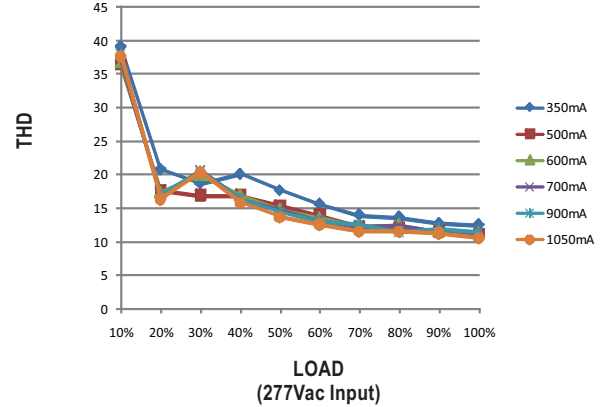
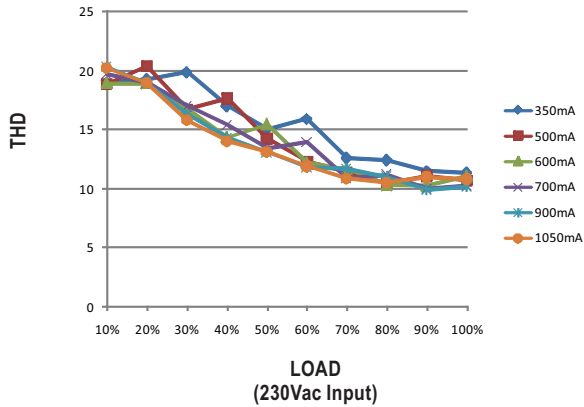
■ **STATIC CHARACTERISTIC**



※ De-rating is needed under low input voltage.

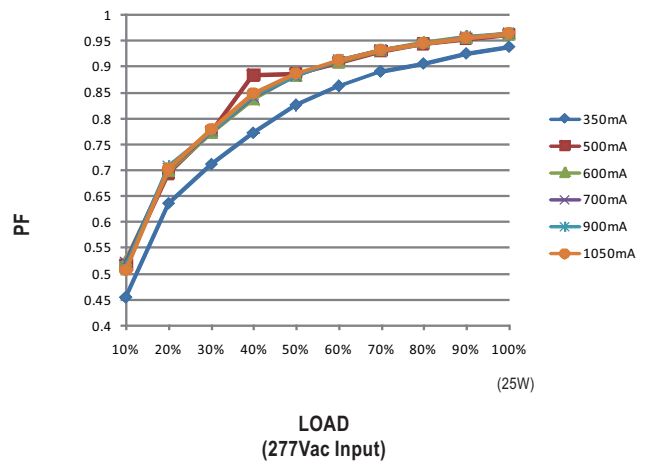
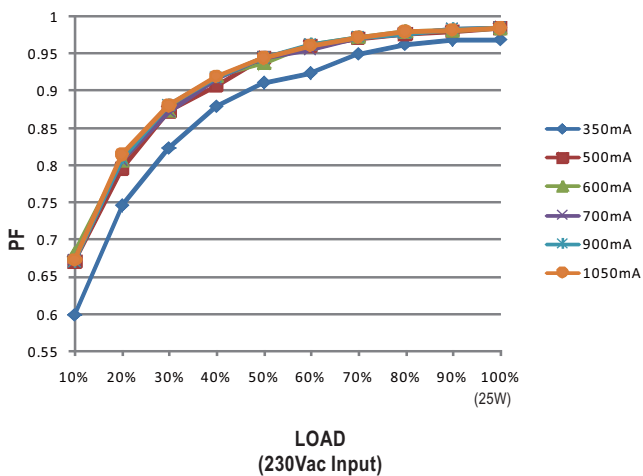
TOTAL HARMONIC DISTORTION (THD)

※ Tcase at 75°C



POWER FACTOR (PF) CHARACTERISTIC

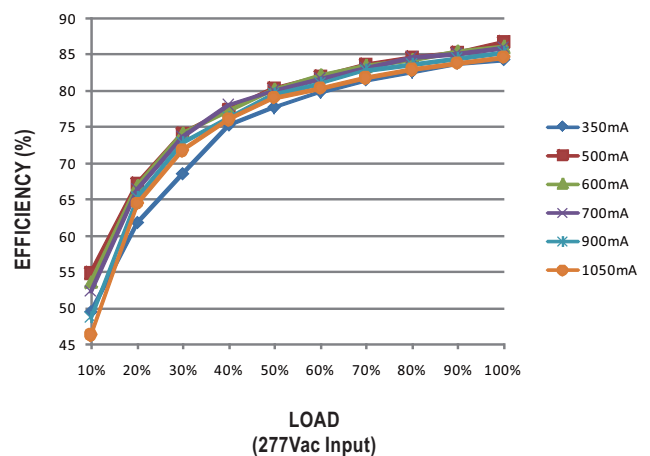
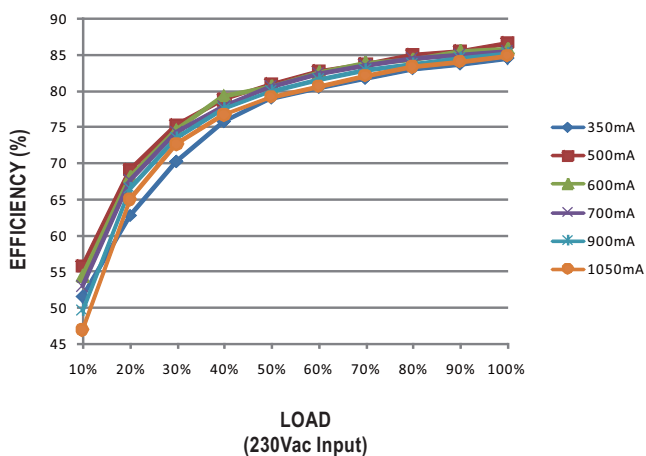
※ Tcase at 75°C



EFFICIENCY vs LOAD

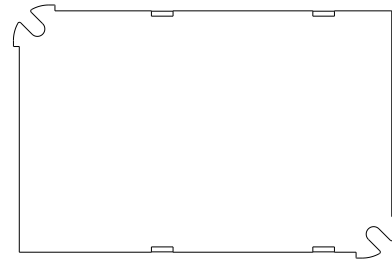
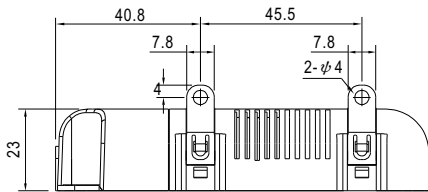
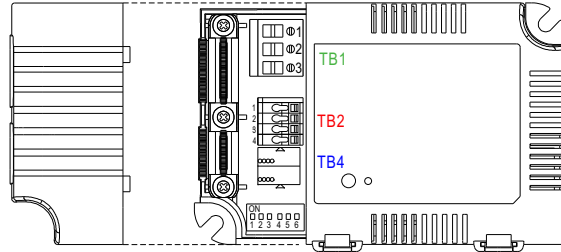
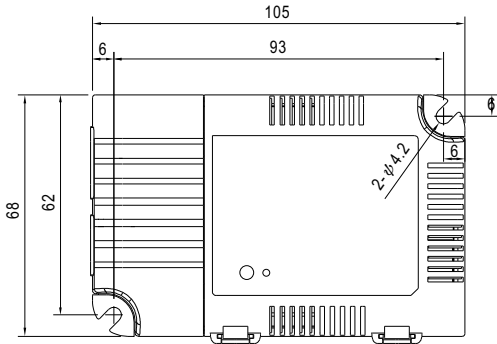
LCM-25KN series possess superior working efficiency that up to 86% can be reached in field applications.

※ Tcase at 75°C



MECHANICAL SPECIFICATION

Case No.LCM-25 Unit:mm



Bottom View

※ Terminal Pin No. Assignment(TB1)

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

※ Terminal Pin No. Assignment(TB2)

| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|------------|
| 1 | +Vo | 3 | -SYN. |
| 2 | -Vo | 4 | +SYN. |

※ Terminal Pin No. Assignment(TB4)

| Pin No. | Assignment |
|---------|------------|
| 1 | KNX- |
| 2 | KNX+ |

Note:Please use wires with a cross section of 0.5~2.5mm²(14~20AWG) for TB1 and wires with a cross section of 0.5~1.5 mm²(16~20AWG) for TB2.

INSTALLATION MANUAL

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