

Features

- It can measure power and internal temperature
- 0-10V output interfaces are designed to sink or source current up to 25mA
- The date can be read by ESI or DALI port
- DiiA/Zhaga connectivity extensions DT49, DT50, DT51, DT52
- Selection of the desired device type via operating mode
 - 0x00: IEC 62386-102 standard mode, DT5, DT17 supported
 - 0x80: manufacturer specific mode 0, DT7, DT17 supported
 - 0x81: manufacturer specific mode 1, DT6, DT8 Tc, DT17 supported (default)
- Translate DALI dimming commands to 2 CHs analog 0-10V output (ChA: Intensity, ChB: CCT)
- AC load latching relay can be switched off when dimming off by DALI
- Zero-crossing switching function for AC load latching relay
- Built-in DALI PSU, 15V , 55mA
- AC output: 8A Max., 1385VA Max.
- IP24 protection rating
- For luminaries of protection class II
- DALI / 0-10V interface is compliant with SELV
- The full-length mounting or the break-off tab can be removed to create a smaller form factor for a reduced footprint

AC Load Latching Relay Specification

- One (1) SPST Latching Relay
- 1 Million Cycles Minimum Mechanical Lifetime
- Operate Time: 10mS
- Maximum Switching Load Voltage: 347Vac
- Maximum Switching Load Current: 8A



Benefits

- One SKU supports multiple fixture types
- Current states available to a variety of popular LED engines
- Can be used for a variety of lighting fixture and troffers
- DALI bus PSU output for powering sensor, wireless device etc.

DALI CU Series

Electrical Specification

All parameters not specially mentioned are typical and measured at 230Vac, rated current input and 25°C of ambient temperature.

Ordering Information

Model Number	DALICU04-SL-FM
Full Product Name	DALI Controlgear

Input Information

Line Voltage	100 ~ 347Vac
Line Current	0.1A Max. (AC output power is not included)
Line Frequency	50 / 60Hz
Min. Operational Mains Voltage	90Vac
Max. Operational Mains Voltage	370Vac
Inrush Current	Cold Start $\leq 70A$ (twidth = 50us measured at 10% Ipeak) @ 347Vac, Per NEMA 410

Output Information

Analog 0-10V Interface Max. Current	Sourcing / Sinking $\leq 25mA$
DALI Output Voltage Range	14Vdc to 18.5Vdc
DALI Open Circuit Voltage	18.5Vdc Max.
DALI Max. Output Voltage	18.5Vdc
DALI Typ. Output Voltage	15Vdc
DALI Min. Output Voltage	14Vdc
DALI Guaranteed Output Current	55mA
DALI Max. Output Current	62mA
DALI Max. Output Power	1.0W
Protections	Short circuit protection of DA+ / DA-
AC Output Current	8A/120Vac, 6A/230Vac, 5A/277Vac, 4A/347Vac
AC Output Inrush Current	180A, 10ms (max.)

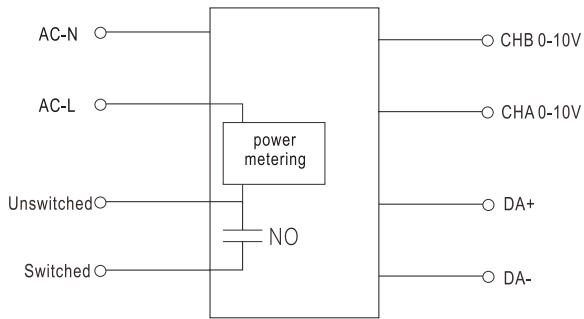
Environment & Approbation

Protection Rating	IP24
Ambient Temp Range	-20°C to +70°C
Max. Case Temperature[Tcase]	80°C for Maintaining Specified Life Expectancy & 85°C for CE Safety Features
Operating Condition	Damp and dry
Safety Standards	EN61347-1, EN61347-2-11
EMC Emission	Compliance to EN55015, EN61000-3-2, EN61000-3-3
EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, surge immunity Line-Line 1KV
Isolation	Refer to table
Audible Noise	< 24dB Class A

Isolation

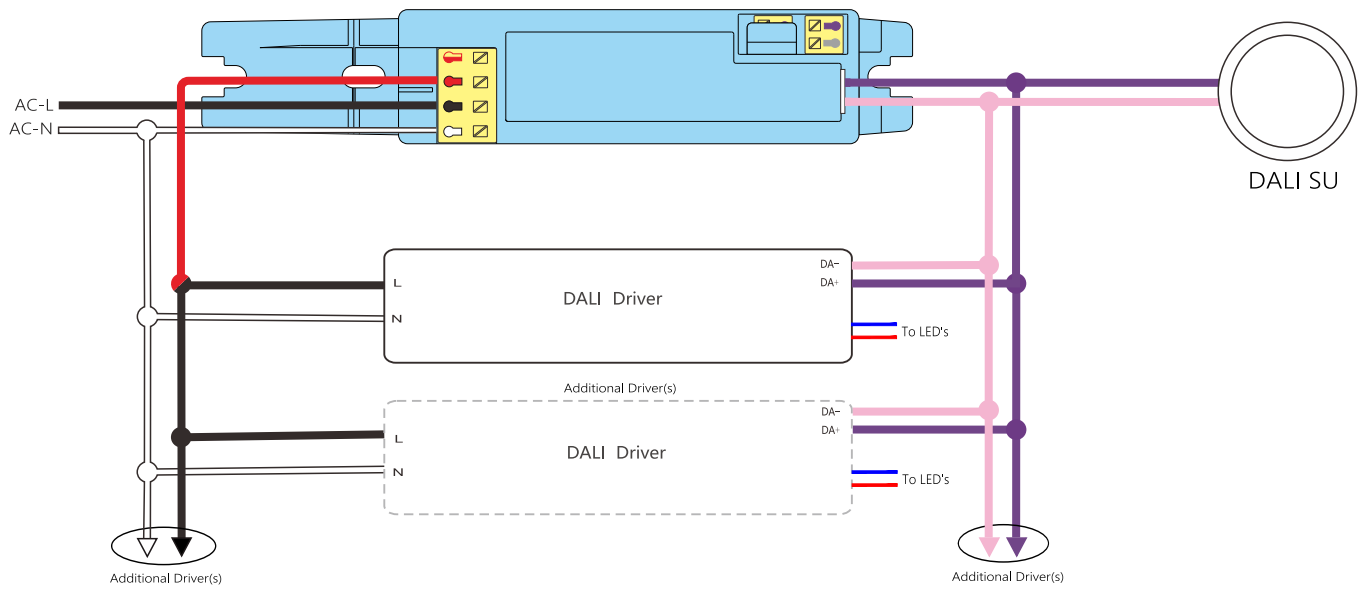
Isolation	AC Input	DALI	0-10V output	AC output
AC Input	/	2U+1KV	2U+1KV	Not Isolation
DALI	2U+1KV	/	Not Isolation	2U+1KV
0-10V output	2U+1KV	Not Isolation	/	2U+1KV
AC output	Not Isolation	2U+1KV	2U+1KV	/

Circuiting

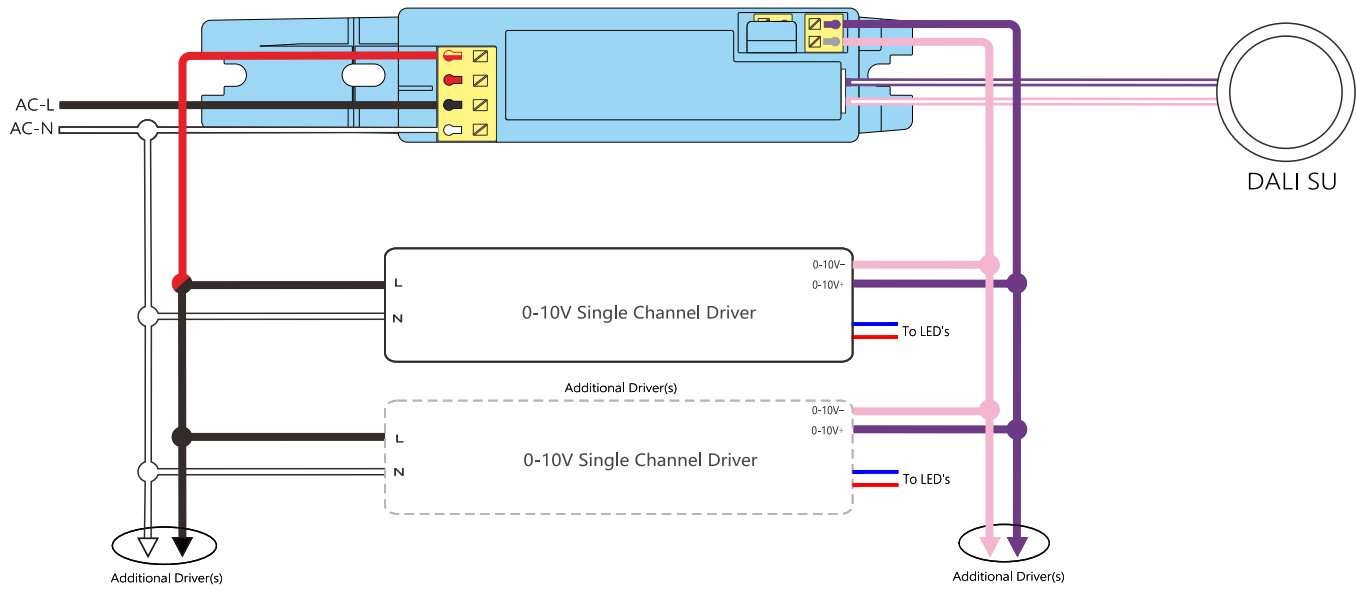


Note: The power output from Unswitched and Switched are both metering.

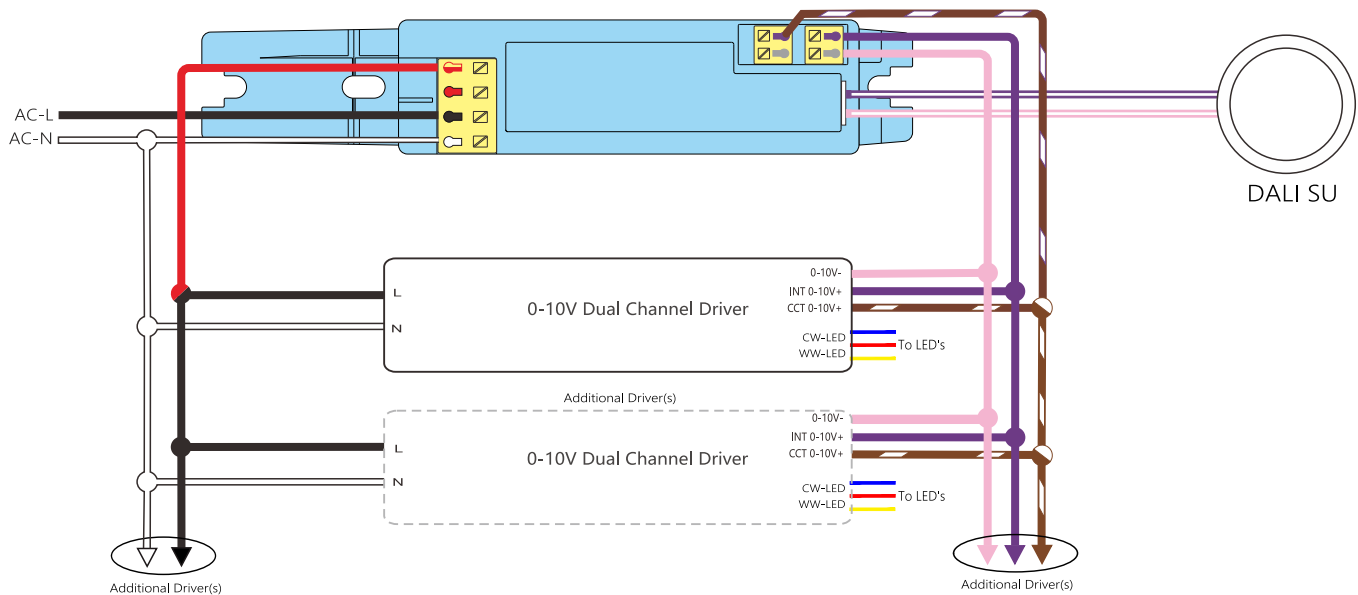
DALI sensor to DALI driver line diagram



DALI sensor to single channel 0-10V driver line diagram



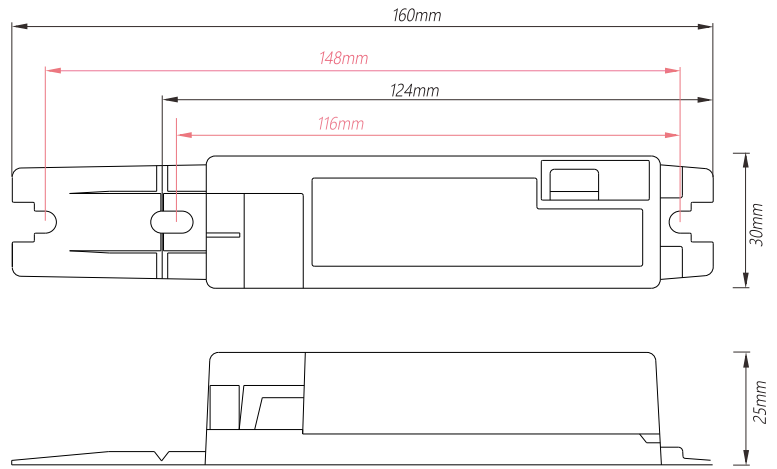
DALI sensor to dual channel 0-10V driver line diagram



DALI CU Series

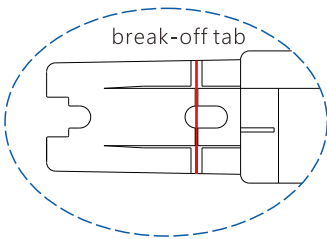
Dimensions & Weight

	inch	mm
Case Length	6.3"	160 (with tab)
	4.88"	124 (without tab)
Case Width	1.18"	30
Case Height	0.98"	25
Mounting Length	5.83"	148 (with tab)
	4.57"	116 (without tab)
Weight	3.2 oz / 90 grams	



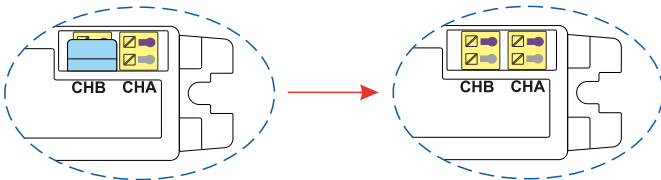
Create a smaller form factor for a reduced footprint

If removing the break-off tab along the red line in the picture below, the length of case will reduce from 160mm to 124mm, and the width and height of case remain the same.

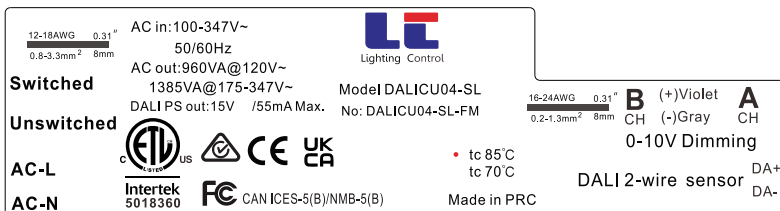


Break the tab of channel B

Use tool to break the tab on channel B as shown below.
(ChA: Intensity, ChB: CCT)



Label



Functional Description

DALI CU is developed according to IEC 62386-101, 102, 205, 207, 208, 209, 218, part 250-253. DALI CU is a power supply, rated at 15Vdc and providing 55mA current.

! With the provided 55mA current up to 25 DALI loads can be connected.

! Standard DALI loads are specified to consume max. 2 mA. Control devices may consume more than 2 mA. If such devices are connected to the DALI CU, the amount of possible connected devices will be reduced. This has to be considered during the application design.

Cable Specification

- Install in accordance with National and Local Electrical Codes.
- Input and output cable requirements preparation for input and output.



Solid conductor:

Input: 0.5...1.5mm² / 20...16 AWG

Output: 0.5...0.75mm² / 20...18AWG

Installation Tips

- Individual DALI circuits must not exceed 55mA.
 - The DALI signal wires must not drop more than 2V.
 - Install in accordance with National and Local Electrical Codes.
- Max. output cable length for DALI

Material	Cross- section	Max. output cable length	
		25 °C	75 °C
Copper	0.20 mm ²	43 m	35 m
	0.50 mm ²	110 m	90 m
	0.75 mm ²	165 m	136 m
	1.00 mm ²	220 m	183 m
	1.50 mm ²	290 m	273 m
Aluminium	0.20 mm ²	23 m	19 m
	0.50 mm ²	62 m	52 m
	0.75 mm ²	100 m	84m
	1.00 mm ²	132 m	111 m
	1.50 mm ²	200 m	167 m

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