



DALI Bus Power Supply

DLP-04 series



(DLP-04R)



(DLP-04L)



User's Manual



■ Features

- Compact size with 2SU(35mm) width(type R)
- Universal AC input / Full range
- Withstand 300VAC Surge input for 5 seconds
- Isolation class II
- No load power consumption<0.5W(type L)
- Protections: Short circuit / Over voltage
- Cooling by free air convection
- 3 color LED for status indicator(type R)
- Installed on DIN rail TS-35/7.5 or 15(type R)
- 100% full load burn-in test
- 3 years warranty

■ Applications

- DALI Bus
- DALI Bus Powered Units

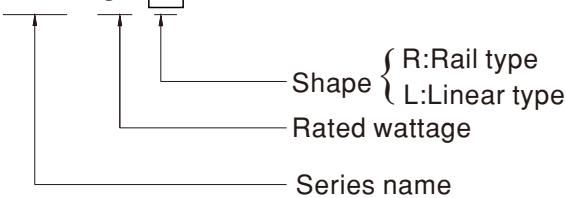
■ Description

The DALI Power Supply DLP-04 is a power supply with high efficiency and a small size, supplying 240mA for DALI control gears and DALI devices which without power supply circuits. The -20~+60°C wide temperature operating range can meet all kinds of applications.

It is perfectly suitable for power up any products labeled with the DALI trademark. with over 35 years of industrial power supply experience, DLP-04 is engineered to be a reliable and safe solution for DALI bus environment.

■ Order Name Encoding

DLP - 04 [R]





SPECIFICATION

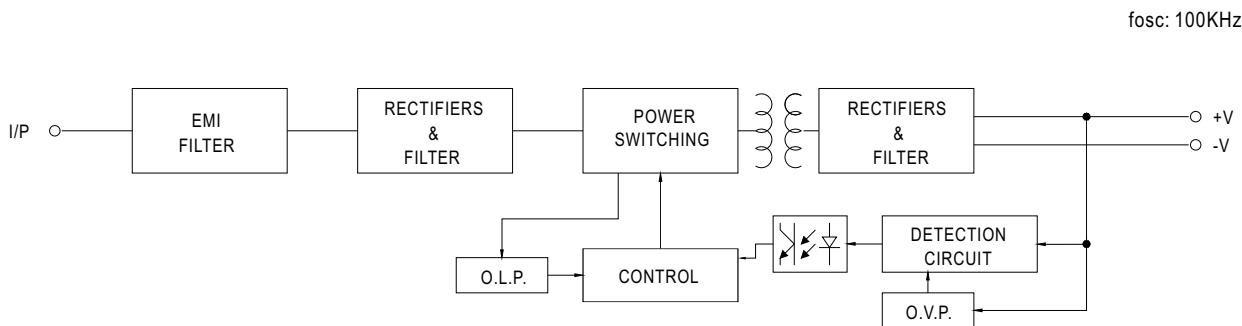
MODEL	DLP-04R		DLP-04L
OUTPUT	RATED DC VOLTAGE	16V	
	DC VOLTAGE RANGE	15.3~18.7V	
	RATED CURRENT	240mA	
	GUARANTEED SUPPLY CURRENT	240mA	
	MAXIMUM SUPPLY CURRENT	250mA	
	RATED POWER	3.84W	
	RISSLE & NOISE (max.)^{Note.2}	50mVp-p	
	SETUP, RISE TIME	250ms, 50ms/115VAC,230VAC	
	HOLD UP TIME (Typ.)	70ms/230VAC	16ms/115VAC at full load
INPUT	VOLTAGE RANGE	90 ~ 264VAC	120 ~ 370VDC
	FREQUENCY RANGE	47 ~ 63Hz	
	AC CURRENT (Typ.)	0.1A/115VAC	0.06A/230VAC; Model label: 0.4A/100-240VAC
	INRUSH CURRENT (Typ.)	COLD START 20A/230VAC	
	LEAKAGE CURRENT	0.5mA / 240VAC	
PROTECTION	NO LOAD POWER CONSUMPTION	Typ. 0.5W	<0.5W
	SHORT CIRCUIT	Protection type : Constant current limiting, recovers automatically after fault condition is removed	
	OVER VOLTAGE	23.6 ~ 27V	
FUNCTION	LED DISPLAY	Green LED: Normal operation	None
		Yellow LED: Bus Communication	None
		Red LED: Bus short detection	None
ENVIRONMENT	WORKING TEMP.	-20 ~ +60°C (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6	
SAFETY & EMC <small>(Note 3)</small>	SAFETY STANDARDS	BS EN/EN61347-1, BS EN/EN61347-2-11, EAC TP TC 004 approved	
	DALI STANDARDS	Compliance to IEC62386-101	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC	
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH	
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61547, BS EN/EN61000-3-2,-3, EAC TP TC 020	
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11, BS EN/EN55024, BS EN/EN61000-6-2, BS EN/EN61204-3, light industry level, criteria A, EAC TP TC 020	
OTHERS	MTBF	604.7K hrs min. MIL-HDBK-217F (25°C)	625.5K hrs min. MIL-HDBK-217F (25°C)
	DIMENSION	35*90*54.5mm (W*H*D)	145*38*22mm(L*W*H)
	PACKING	0.087Kg; 96 pcs/9.5Kg/1.04CUFT	0.084Kg; 60pcs/6Kg/0.48CUFT
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx		



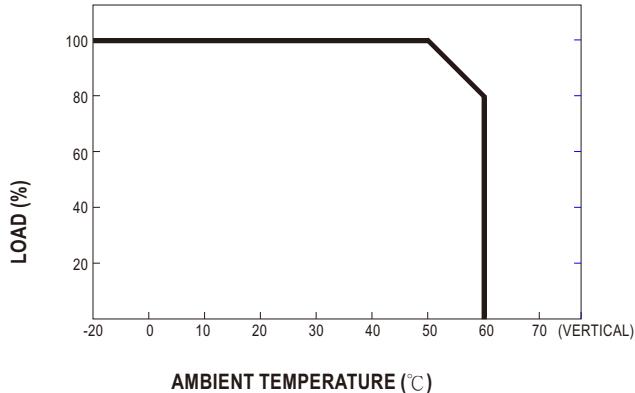
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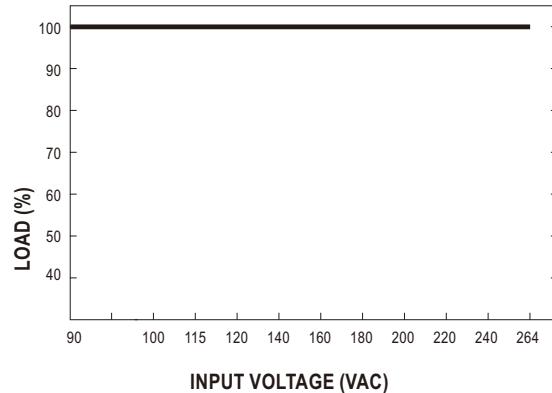
■ Block Diagram



■ Derating Curve

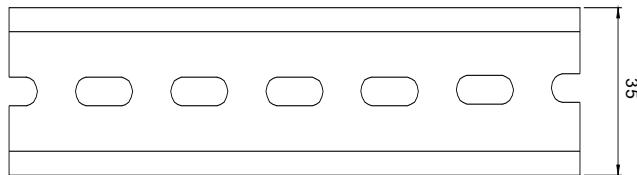
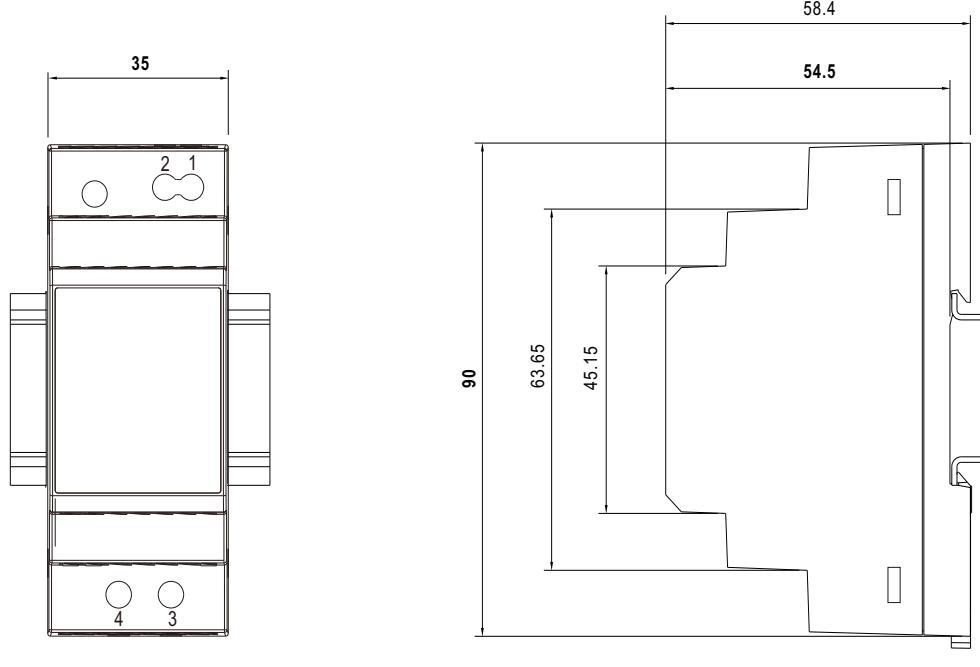


■ Output Derating VS Input Voltage



■ Mechanical Specification**※ R-Type**(Unit:mm,tolerance $\pm 0.5\text{mm}$)

Case No.985A Unit:mm



ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	DA-	3	AC/L
2	DA+	4	AC/N

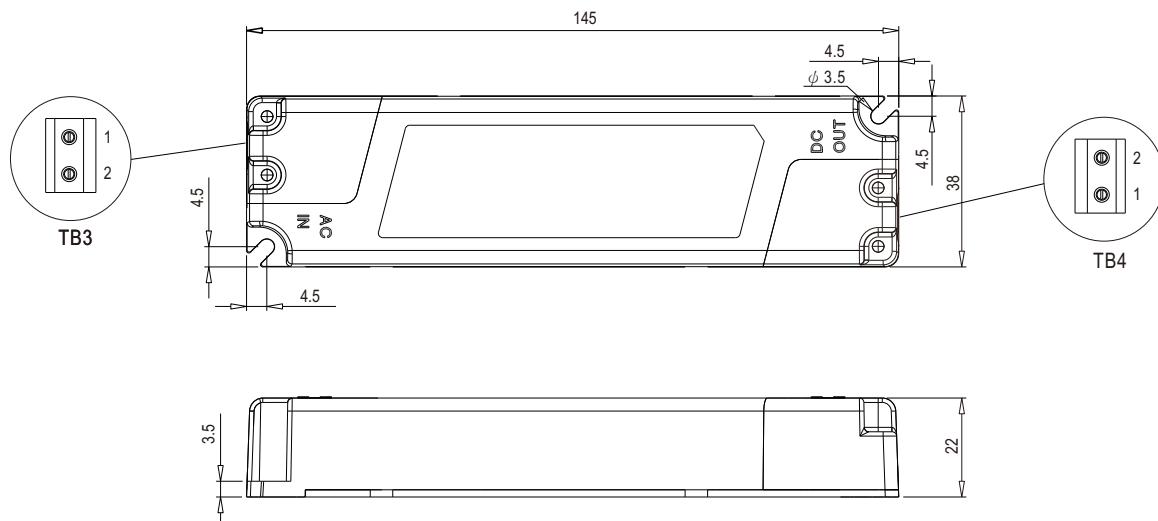


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※ L-Type

Case No.PLM-25 Unit:mm



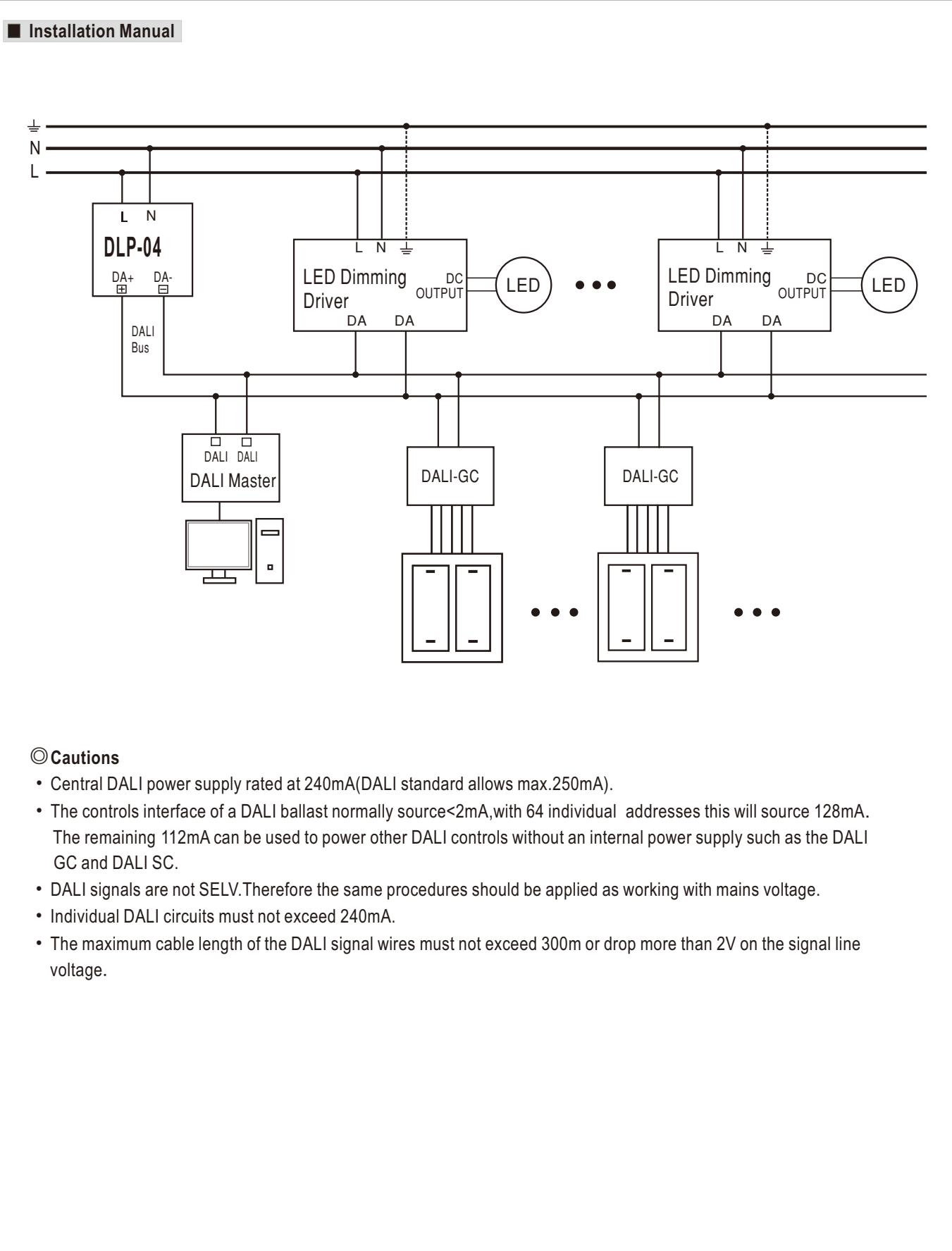
NOTE: The input and output line for using UL1015 18AWG*2C is suggested

Terminal Pin No. Assignment (TB3) :
SWITCHLAB MWX201-75002EB(GRAY)

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

Terminal Pin No. Assignment (TB4) :
SWITCHLAB MWX201-75002B(BLUE)

Pin No.	Assignment
1	DA-
2	DA+





■ System start-up timing

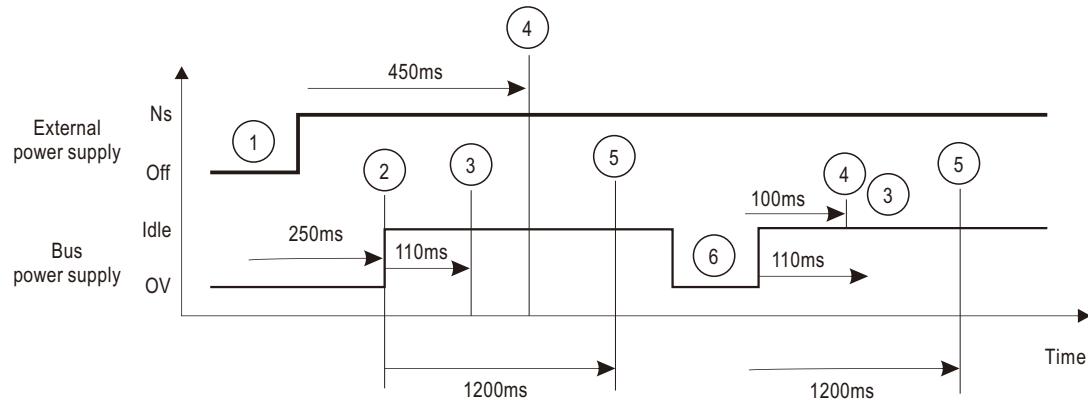
1. After external power-on, timing of a bus power supply shall be as shown in table 1.
2. A receiver shall be ready to receive frames within the maximum receiver start-up time specified in Table 1.
3. A transmitter or a multi-master transmitter shall not start transmissions earlier than the transmitter start-up time specified in Table 1.

◎ Table 1 – Start-up timing

	Minimum	Typical	Maximum	Condition
Bus power supply start-up time			250ms	Guaranteed supply current reached
Advanced bus power supply start-up time			400ms	
Integrated bus power supply start-up time			400ms ^a	
			5s ^b	
Receiver start-up time for externally powered bus units, after external power cycle			450ms ^e	
Receiver start-up time for externally powered bus units, after bus power down			100ms	U=10V ^d
Receiver start-up time after bus power down for bus powered bus units			1200ms	
Transmitter start-up time	110ms ^c			
Multi-master transmitter start-up time	110ms			

^a Applicable if other bus power supplies are allowed in the system
^b Applicable if no other bus power supplies are allowed in the system.
^c Not applicable for transmitters of bus units which cannot determine the bus state.
^d Idle state, bus voltage measured at the interface of the bus unit.
^e If an external power cycle occurred and the bus power is not available within 350 ms, the 100 ms timing is applicable.

◎ Shows an example of the system start-up timing



① External power cycle

④ Latest receiver start-up for externally powered unit

② Latest bus power supply start-up

⑤ Latest receiver start-up for bus powered unit

③ Earliest transmitter start-up

⑥ Bus power down