



■ Features

- Universal AC input / Full range (up to 305VAC)
- Convert DALI signal to PWM signal
- 4 DALI addressable output channels
- Built-in push dim function
- Comply with DALI standards (IEC62386-101, 102, 207)
- PWM active high or active low selectable by jumper
- Linear or logarithm dimming curve selectable (meet IEC62386-207)
- Dimming range : 1 ~ 100%
- Built-in relay for ON/OFF control of LED power supply
- Fully isolated plastic case
- Class II power unit, no FG
- IP20 design
- Power consumption < 0.5W (Note.1)
- 3 years warranty

■ Applications

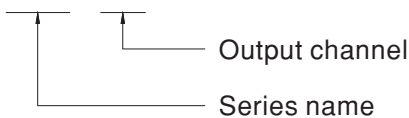
- Indoor lighting
- Office lighting
- Decorative lighting
- Input signal : DALI or push dim
- Output signal : open collector PWM signal

■ Description

DAP-04 is a "DALI signal to PWM signal converter" which is suitable to use along with MEAN WELL's AC/DC LED power supplies which have 3-in-1 dimming function (1~10V / PWM / Resistance).

■ Model Encoding

DAP - 04

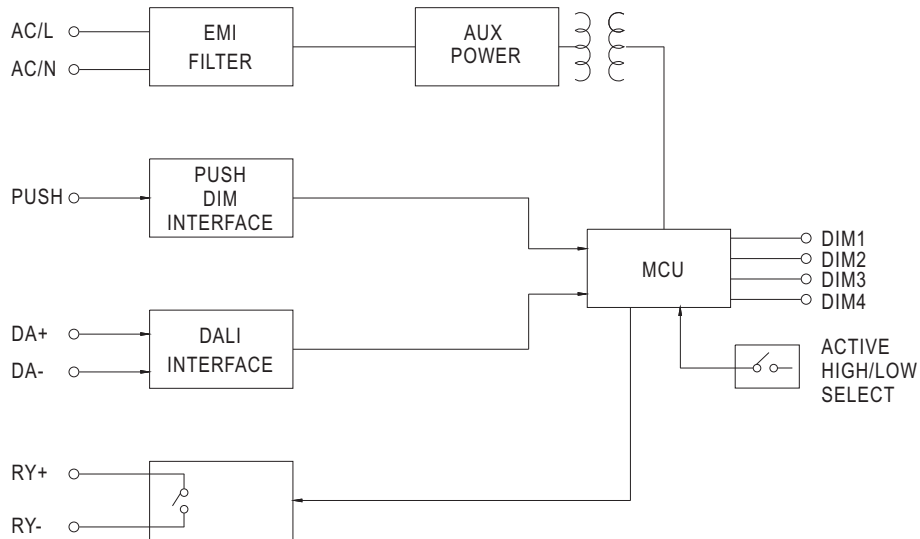




SPECIFICATION

MODEL	DAP-04	
OUTPUT	NUMBER OF OUTPUT CHANNEL	4
	OUTPUT SIGNAL	PWM, 1KHz (Typ.)
	OUTPUT PWM LOGIC	Active high or active low selectable by jumper ; Factory setting is active high
	DIMMING RANGE	1 ~ 100%
INPUT	VOLTAGE RANGE	90 ~ 305VAC 127 ~ 431VDC [DC input operation possible by connecting AC/L(+), AC/N(-)]
	FREQUENCY RANGE	47 ~ 63Hz
	AC CURRENT (Typ.)	0.1A
	INRUSH CURRENT (Typ.)	COLD START 20A / 230VAC
	LEAKAGE CURRENT	<0.5mA / 240VAC
	POWER CONSUMPTION (Typ.)	0.5W
	INPUT SIGNAL	DALI or push dim
FUNCTION	REALY SWITCH	240VAC / 8A, ON / OFF control refer to DIM1
ENVIRONMENT	WORKING TEMP.	-30~ +60°C
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
SAFETY & EMC	SAFETY STANDARDS	Design refer to EN61347-1, EN61347-2-11, EN61058-1 Clause 8/17/20/25
	DALI STANDARDS	Comply with IEC62386-101, 102, 207
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH
	EMC EMISSION	Compliance to EN55015, EN61000-3-2,3
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547 light industry level (surge 2KV), criteria A
	MTBF	246.9K hrs min. MIL-HDBK-217F (25°C)
	DIMENSION	165*46*23mm (L*W*H)
	PACKING	0.16Kg; 84pcs/14.4Kgs/1.14CUFT
NOTE	1. Power consumption<0.5W is measured at 230VAC.	

■ Block Diagram



■ DIMMING OPERATION

※ PUSH dim(primary side)

Ignore	To avoid reaction on AC spike	<0.05 sec.
Short push	Push to turn ON-OFF	0.1~1 sec.
Long push	Dimming up or down	1.5~10 sec.
Reset push	Setting light to 100%	>11 sec.

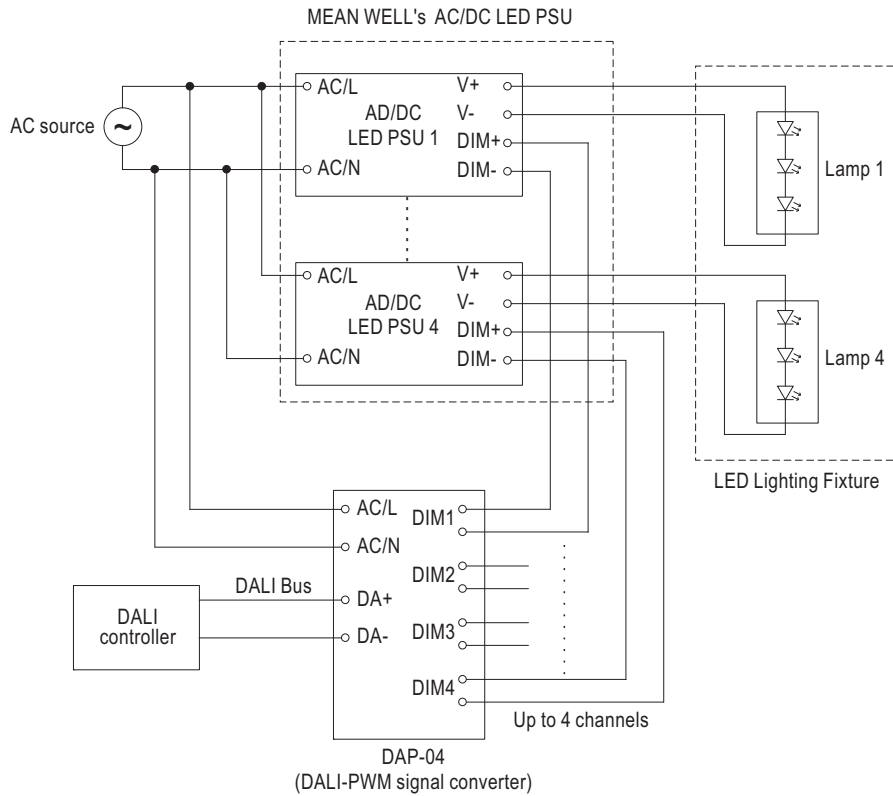
- Maximum length of the cable, from push button to last driver is 20 meter.
- Factory setting at 100%.
- When the light is lower than 10% it will always dim up, or when the light output is higher than 90% it will always dim down.

※ DALI interface(primary side)

- DALI protocol including 16 groups and 64 addresses.

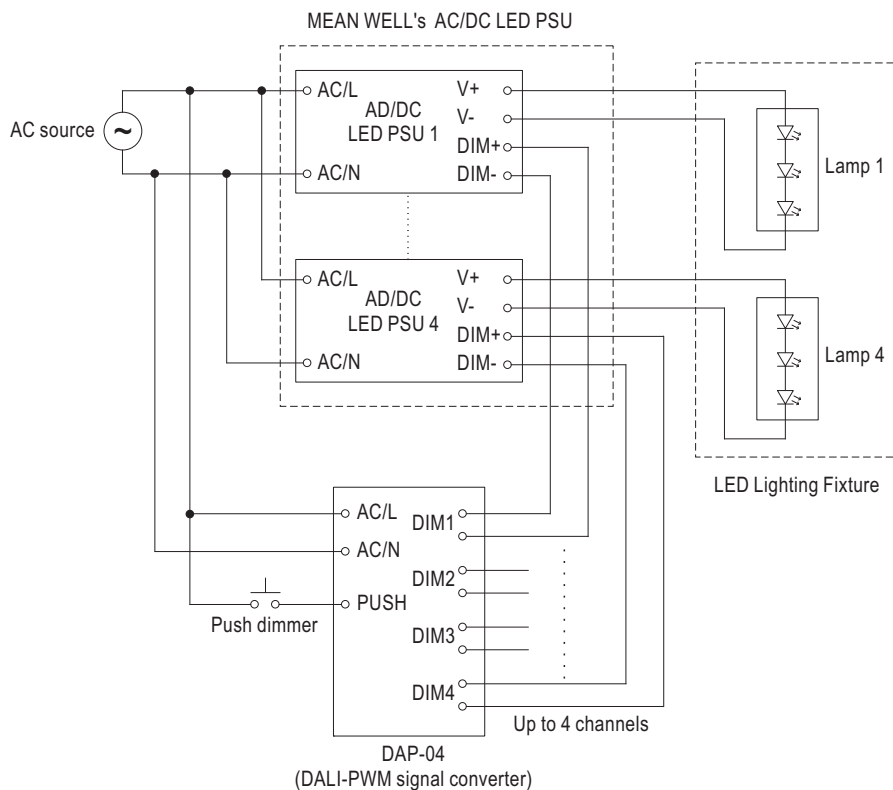
■ Connection of Dimming Operation

- DALI Dimming solution :
DAP-04 with MEAN WELL's LED power supply



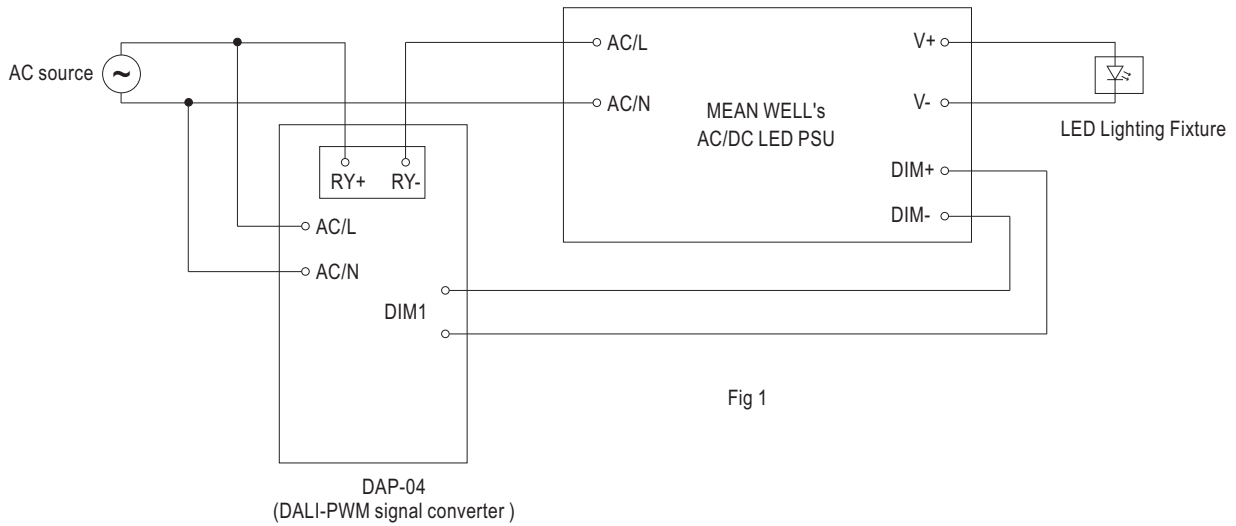
※Note: Choose a suitable cable for connecting the DAP-04 and DALI controller and make sure the maximum voltage drop between these two units should not be higher than 2V. (Maximum cable length for 1.5mm² cables is 300m.)

- Push Dimming Solution :
DAP-04 with MEAN WELL's LED power supply

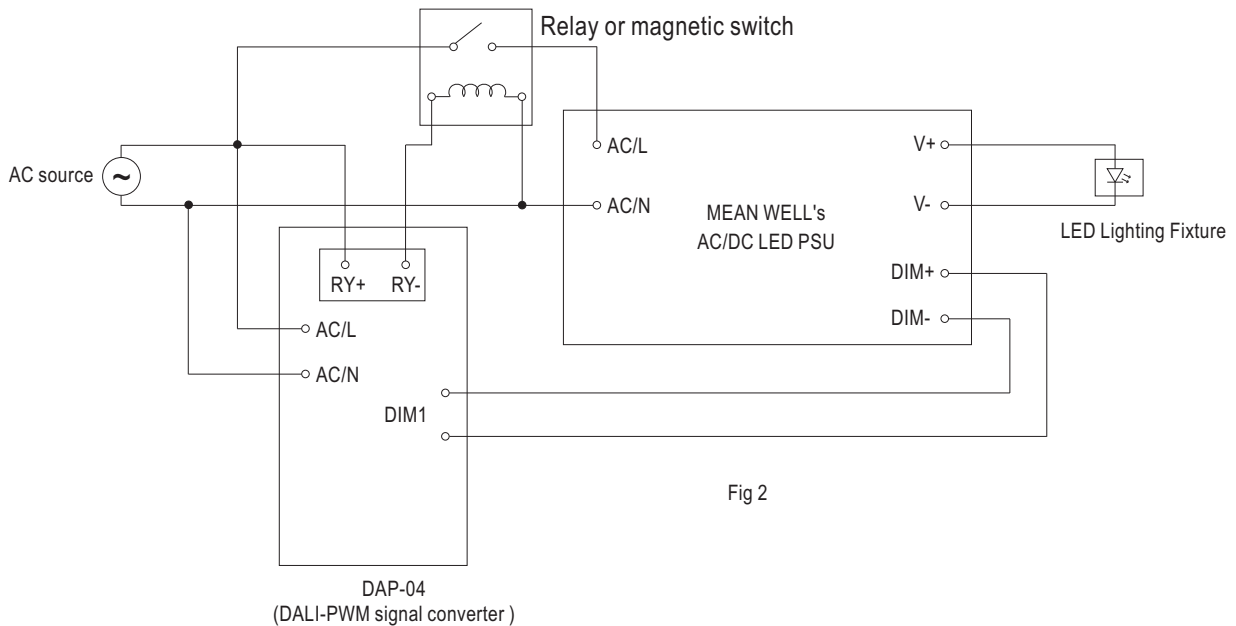


■ Dimming Connection Diagram with ON/OFF Function

- DAP-04 incorporates a built-in relay, allowing the control of Mean Well LED PSU ON/OFF. This relay can be controlled only by DIM1.

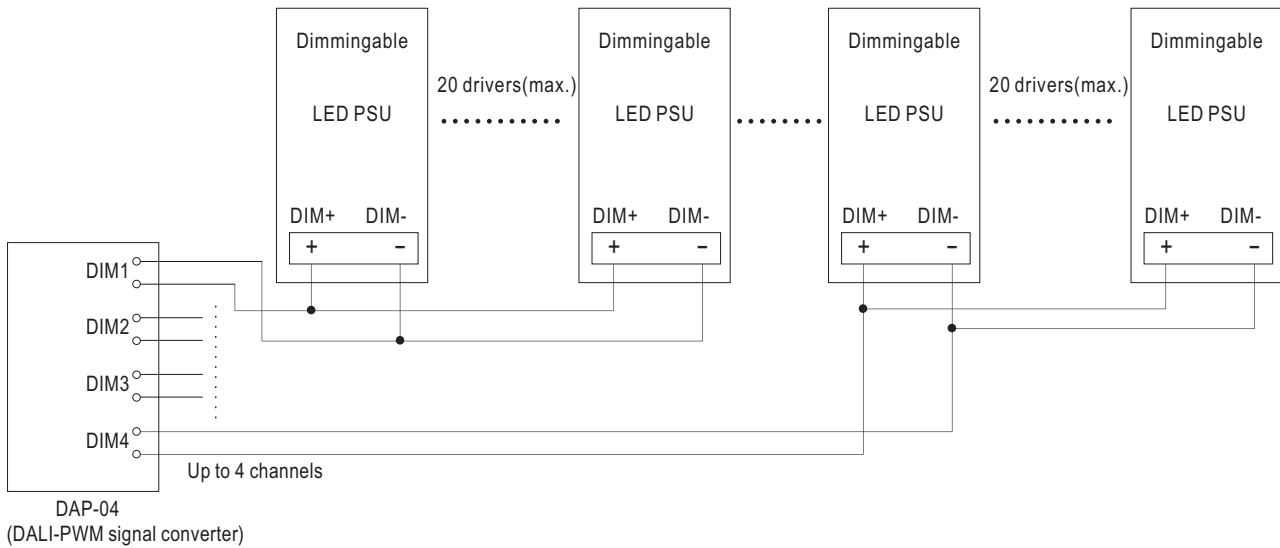


- When the input AC current of Mean Well LED PSU is greater than 8A, or the inrush current of that is greater than 50A, the users need to put up an additional external relay or magnetic switch. Please reference Fig2 for the configuration.



■ SYNCHRONIZATION OPERATION

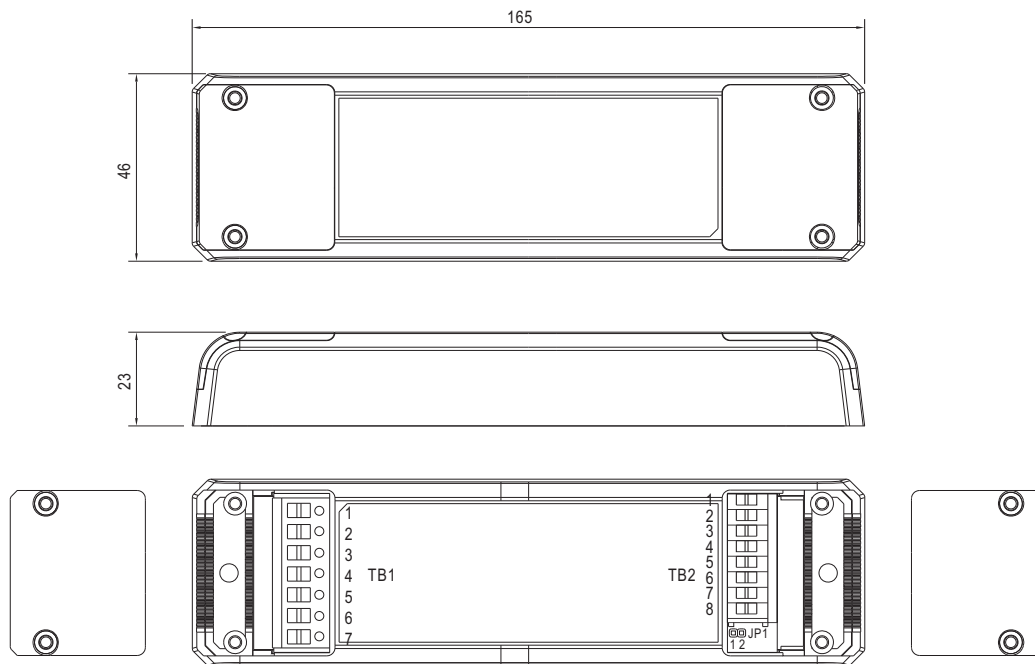
- DAP-04 provides 4-channel outputs; every channel controls up to 20 units of Mean Well LED PSU. The 4 channels can thus control up to 80 units of Mean Well LED PSU. (Note. 1)
- The dimming percentage of the Mean Well LED PSUs controlled by the same channel of DAP-04 is the same. The dimming percentage per DAP-04 channel can be controlled independently.
- Maximum cable length between DAP-04 and LED power : Keep the voltage drop <0.5V



Note. 1 : When one of LED power is power OFF. It will cause all LED power output dimming down.

Mechanical Specification

Case No.DAP-04 Unit:mm



Terminal Pin No. Assignment(TB1)

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	DA-
2	AC/N	6	RY+
3	PUSH	7	RY-
4	DA+		

Terminal Pin No. Assignment(TB2)

Pin No.	Assignment	Pin No.	Assignment
1	DIM1+	5	DIM3+
2	DIM1-	6	DIM3-
3	DIM2+	7	DIM4+
4	DIM2-	8	DIM4-

Terminal Pin No. Assignment(JP1)

Pin No.	Assignment
1,2	ACT-HI

Function Description of TB1

Pin No.	Function	Description
1	AC/L	AC Line connection.
2	AC/N	AC Neutral connection.
3	PUSH	Dimming input. One pushbutton connected between the PUSH and AC/L.
4	DA+	DALI Signal positive.
5	DA-	DALI Signal negative.
6,7	RY+ / RY-	Relay contact rating(max.) : 240VAC / 8A resistive "Short" when DIM1 output duty cycle >0 ; "Open" when DIM1 output duty cycle=0

Function Description of TB2

Pin No.	Function	Description
1,2	ACT-HI	PWM active High / Low select. Short : Active High. Open : Active Low.

Function Description of TB3

Pin No.	Function	Description
1,3,5,7	DIM+	Dimming output Connect to DIM+(Blue) line of dimmingable LED power.
2,4,6,8	DIM-	Dimming output Connect to DIM-(White) line of dimmingable LED power.

Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>