

Features

DALI Converter

- Compliant with DALI Standard (IEC62386 Part 102 & Part 206)
- Screw-less Connectors, Easy to Install
- Selectable Output for DC 0-10V / DC 1-10 / PWM
- Built-in Relay to Turn ON/OFF Driver Completely (Zero Standby Current)
- Over Voltage and Short Circuit Protection

Description

The RELI-DA01/R is a DALI to analog control signal interface which is compliant with the DALI IEC62386 standard and listed on the agDALI website.. The output is selectable between 0-10V and 1-10V or PWM ⁽¹⁾ and is compatible with all RECOM dimmable LED drivers as well as other manufacturer's products. The output can control several LED drivers, allowing the lighting in a whole room or office to be dimmed with just one DALI address. A built-in relay can be used to switch off the LED drivers under software control to give zero no-load consumption. The interface is universal AC powered (110VAC, 230VAC or 277VAC).

Selection Guide

Part Number	Input Voltage (VAC)	Power Consumption (W)	DALI Bus Power Consumption (mA)	DALI Standard IEC62386	Dimming Output
RELI-DA01/R	90-290	1.6 typ.	2 max.	Part-102 Part-206	DC 0-10V DC 1-10V or PWM ⁽¹⁾

Note1: PWM output is not included in the IEC62386 standard

Specifications (measured at $T_A = 25^{\circ}\text{C}$ and nominal input voltage)

Input Voltage Range	90-290VAC, 50/60Hz	
Power Consumption	1.6W typ. / 3W max.	
DALI Bus Current Consumption	2mA max.	
Suitable Electric Wire	22 AWG - 16 AWG	
PWM Frequency	500Hz typ.	
PWM High Level Voltage	9.5VDC min. / 10VDC typ. / 10.5VDC max.	
PWM Low Level Voltage	0VDC typ.	
PWM Output Current Sourcing (mA)	-60mA min. / 60mA max.	
DC 0/1-10V Output Accuracy	$\pm 3\%$	
DC Output Current Sourcing (mA)	-5mA min. / 60mA max.	
DALI Standard	IEC62386 Part-102 & Part-206	
Short Circuit Protection	(Dimming Output)	cont., current limited to 240mA
Over Voltage Protection	(DALI connector)	24V Zener Diode clamp
Operating Temperature Range (free air convection)	Ambient Temperature	-20 to +40°C
	Case Temperature	46°C
Relay Switch	1 Channel, 2A cont. / 70A inrush handling	
IP Rating	IP20	
Dimensions	150 x 40 x 28mm	
Weight	100g $\pm 10\%$	
Safety Standards (100-240VAC)	Report: P201311017	EN61347-1, 2nd Edition EN61347-2-11, 1st Edition
EMC Emission	Report: HA140050	IEC61000-3-2, 3 EN55015
EMC Immunity	IEC61000-4-2,3,4,5,6, 8, 11; Class A EN61547	
MTBF (+25°C)	using MIL-HDBK 217F	200 x 10 ³ hours min.

LIGHTLINE

DALI-Converter AC/DC
with 5 year Warranty

RECOM

1.6 Watt DALI- Converter



IEC 62386-102 Compliant
IEC 62386-206 Compliant
EN55015 Certified
EN61347 Certified
EN61547 Certified

RELI-DA01/R

Refer to Application Notes

Typical Characteristics

DALI Declaration for Factory Variables (for Part 102)

Variable	Default Value	Reset Value	Range of Validity
Actual Dim Level	254	254	0, Min Level - Max Level
Power on Level	254	254	0 - 255 (Mask)
System Failure Level	254	254	0 - 255 (Mask)
Min Level	Physical Min Level	Physical Min Level	Physical Min Level - Max Level
Max Level	254	254	Min Level - 254
Fade Rate	7 (45 steps/s)	7 (45 steps/s)	1-15
Fade Time	0 (no fade)	0 (no fade)	0-15
Short Address	255 (Mask)	no change	0-63 255 (Mask)
Search Address	FF FF FF	FF FF FF	00 00 00 - FF FF FF
Random Address	FF FF FF	FF FF FF	00 00 00 - FF FF FF
Group 0-7	0000 0000 (no group)	0000 0000 (no group)	0 - 255
Group 8-15	0000 0000 (no group)	0000 0000 (no group)	0 - 255
Group 0-15	255 (Mask)	255 (Mask)	0 - 255 (Mask)
Status Information	1xx0 xxxx	0x10 0xxx	0 - 255
Version Number	1	no change	Factory-defined

x = actual value depend on the operation status

DALI Declaration for Factory Variables (for Part 206)

Variable	Default Value	Reset Value	Received Command	Range of Validity
Dimming Curve	0	No change	0	0-1; (2 - 255 reserved)
Converter Features	0011 a101	No change	0011 a101	53; 61
Failure Status	0000 0000	No change	0000 0000	0 - 255
Converter Status	0000 0000	No change	0000 0000	0 - 255
Extended Version Number	1	No change	1	Factory-defined
Device Type	5	No change	5	Factory-defined
Physical min Level	1	No change	1	1-253

a = 0 Relay Function dissabled; a = 1 Relay Function enabled

DALI Command Set

The RELI-DA01/R has been accepted by agDALI as conforming to the DALI standard for Control Gear (IEC 62386-102) and Device Type 5 (IEC 62386-206). It supports all relevant commands of the defined command set.

Command Number	Command Name	Function
-	DIRECT ARC POWER	set directly the light level
0	OFF	switch off the light
1	UP	dim up the light
2	DOWN	dim down the light
5	RECALL MAX	recall the maximum light level
6	RECALL MIN	recall the minimum light level

Not supported commands include the "QUERY LAMP FAILURE" and the "QUERY LAMP POWER ON". Additionally the features to disable the Relay Switch, set the output to PWM, change the PWM from active-high to active-low are additional and not tested by DALI (refer to the RELI-DA01/R instruction manual).

Recommended LED Drivers, DALI-Bus Power Supplies and DALI Master

AC/DC LED Driver

RACD20-xxxD
RACD60-xxxxA
RACD45-xxxxA
RACD100-xxxxA
RACD150-xxxxA

DC/DC LED Driver

RCD24-xxx
RCD48-xxx
RBD12-xxx

DALI Master

custom commands tested with DALI-USB
Tridonic Osram (IEC62386 compatibility
confirmed by DIAL ag using Prohibit Tester)

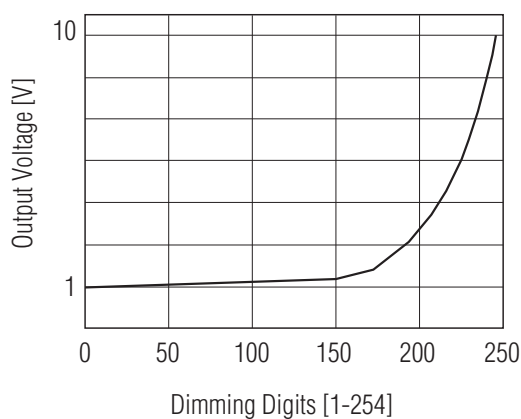
*Software masterCONFIGURATOR V2.6.8.1005 Tridonic

Note:

For one DALI Converter (RELI-DA01/R) up to 6pcs of RECOM AC/DC LED-Drivers with 3in1 dimming can be connected.

Typical Characteristics

Default-Setting Log. 1-10V Dimming



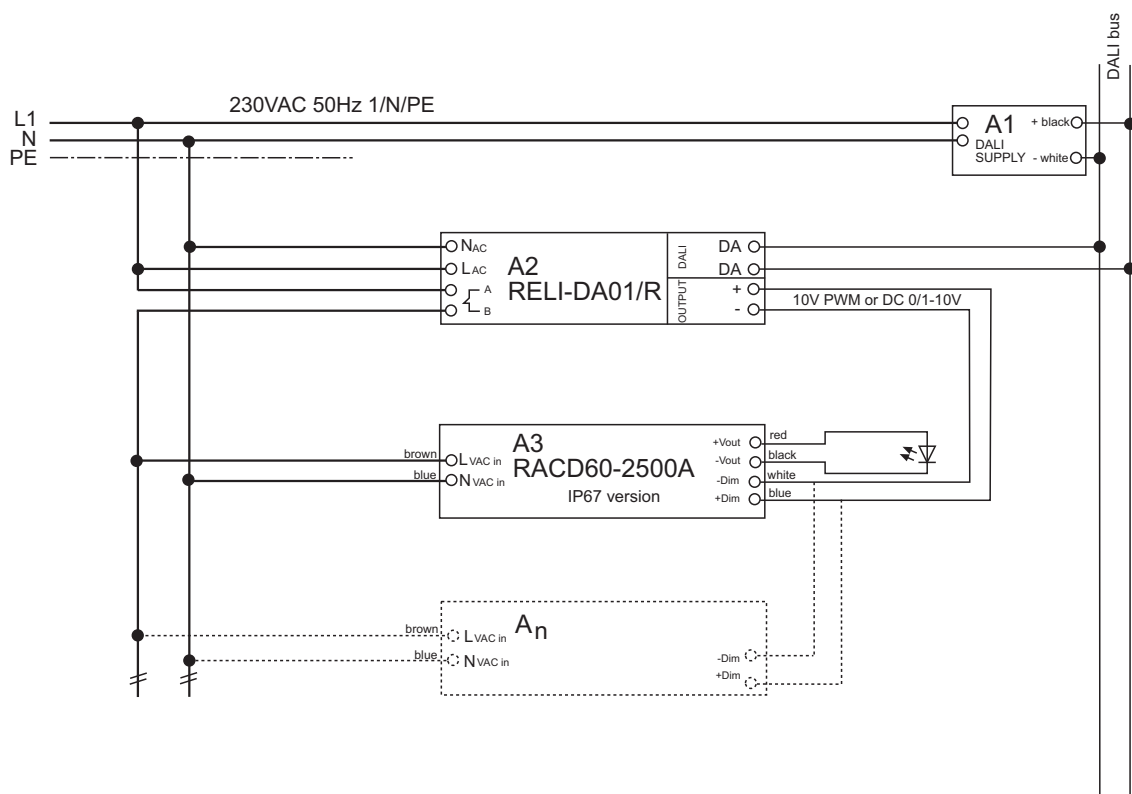
DALI-COMMAND

Logarithmic Dimming; 1-10V

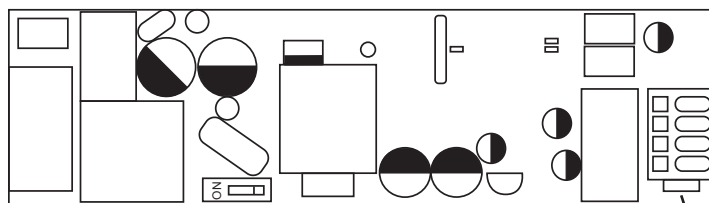
6	Recall MIN Level
257	DATA TRANSFER REGISTER (DTR) / Value: 0 dec
272	ENABLE DEVICE TYPE X / Value: 5 dec
224	QUERY APP EXT Cmd224
224	QUERY APP EXT Cmd224
272	ENABLE DEVICE TYPE X / Value: 5 dec
229	QUERY APP EXT Cmd229
229	QUERY APP EXT Cmd229

Internal switch: OFF

DALI Connection



Package Style



 ON / OFF
PWM / DC
By internal switch

Indicator LED
flashes with
DALI signal

ON: PWM 10V (Default active high)
OFF: DC 1-10V (Default DC)
DC 0-10V (software control)

Delivery setting:
Output signal: DC 1-10V
Dimming curve: Logarithmic PWM active high

Refer to instruction sheet for DALI commands for alternate settings (linear dimming curve, DC 0-10V, PWM active low, Independent Relay control)

Dimensions

