Instruction for the use of RECOM Digital Lighting Interface

Model: RELI-DA01/R

Applications

This interface in exclusively designed as an adapter between LED Ballasts (drivers) and a Digitally Adressable Lighting Interface (DALI) system (IEC62386 Part 206). The unit converts digital commands into an analog (1-10V or 0-10V) or 10V PWM* (switch selectable) control outputs. The units also contains a relay with volt-free output contacts which can be switched by DALI commands. (*PWM output is not included in the DALI standard)

This converter is a signal translator, with a protection function as below.

Over Voltage Protection (Input) 24V Zener Diode Clamp
Short Circuit Protection (Output) Continuous

Important information for the installation

The unit uses hazardous mains voltage (90-290V~) and it should only be installed by qualified electricians according to European safety standards or relevant national regulations. Failure to observe any of the installation instructions may cause fire, shock or other hazards.

With terminal cover and cable clamp, the Interface can be independently installed.

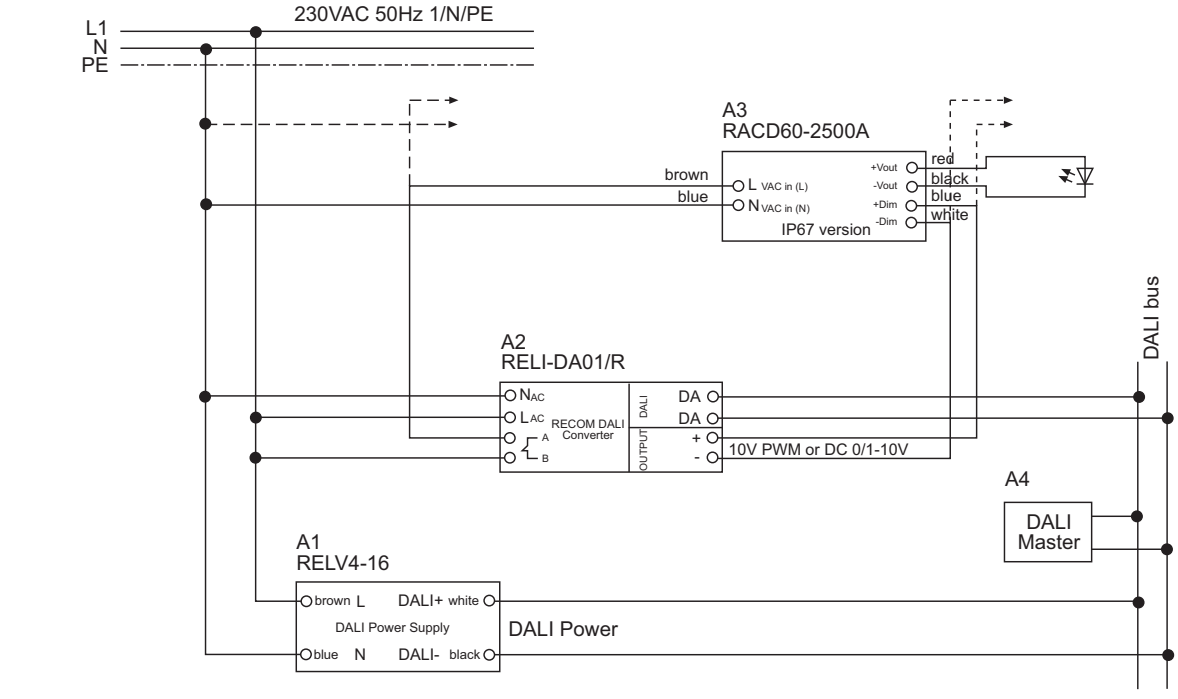
The indicated output load should not be exceeded.

If the interface is used for purposes other than originally intended or it is connected incorrectly, the manufacturer is not responsible for any possible damages.

Important information for the installation

Input Voltage:	90-290V~
Input frequency:	50/60Hz
Standby Power:	<0.45W
Output current (max):	+60mA source, -5mA sink.
Output Voltage:	1-10V (or 0-10V under software control)
Control Output:	Analog or PWM (switch selectable)
PWM Output:	500Hz, 0-10V, 60mA max.
Relay Contacts:	2A continuous, 70A peak, volt-free 300V~rated
Rated output power:	6W max.
Ambient temperature:	-20°C +40°C
Case temperature:	46°C max.
IP protection:	IP20
Primary Cable:	H03VVH2-F 2X0.75□ or SPT-2 18AWG
Secondary cable:	H03VVH2-F 2X0.75□ or SPT-2 18AWG
Dimensions:	150 x 40 x 28mm

DALI connection



Note: This power supply does not rely on an enclosure for protection against accidental contact with live parts.

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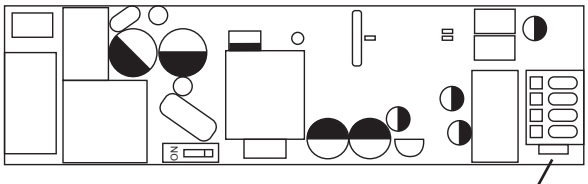
DALI Declaration of Factory variables (for IEC62386 Part 102)

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
„SCENE 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 of Factory variables (for IEC62386 Part 206)

VARIABLE	DEFAULT VALUE	RESET VALUE	RECEIVED COMMAND-230	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				

Output signal type selection



ON / OFF
PWM / DC
By internal switch

Indicator LED flashes with DALI signal

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

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

DALI Programming Instructions:

Linear Dimming
Send „DATA TRANSFER REGISTER” Command 257 = 1
Send „ENABLE DEVICE TYPE 5” Command 272 = 5
Send „SELECT DIMMING CURVE” Command 229 (max delay 50ms)
Send „SELECT DIMMING CURVE” Command 229 (max delay 50ms)

Logarithmic Dimming
Send „DATA TRANSFER REGISTER” Command 257 = 0
Send „ENABLE DEVICE TYPE 5” Command 272 = 5
Send „SELECT DIMMING CURVE” Command 229 (max delay 50ms)
Send „SELECT DIMMING CURVE” Command 229 (max delay 50ms)

0-10V Output Range
Send „ENABLE DEVICE TYPE 5” Command 272 = 5
Send „SET OUTPUT RANGE TO 0-10V” Command 225 (max delay 50ms)
Send „SET OUTPUT RANGE TO 0-10V” Command 225 (max delay 50ms)

1-10V Output Range
Send „ENABLE DEVICE TYPE 5” Command 272 = 5
Send „SET OUTPUT RANGE TO 1-10V” Command 224 (max delay 50ms)
Send „SET OUTPUT RANGE TO 1-10V” Command 224 (max delay 50ms)

Turn Relay OFF
Send „OFF” Command 0

Turn Relay ON
Send „RECALL MAX LEVEL” Command 5

Disable Relay Function (custom command)
Send „ENABLE DEVICE TYPE 200” Command 272 = 200
Send „OFF” Command 0 (max delay 50ms)
Send „OFF” Command 0 (max delay 50ms)

Enable Relay Function (custom command)
Send „ENABLE DEVICE TYPE 200” Command 272 = 200
Send „RECALL MAX LEVEL” Command 5 (max delay 50ms)
Send „RECALL MAX LEVEL” Command 5 (max delay 50ms)

Invert PWM-active low (custom command)
Send „ENABLE DEVICE TYPE 200” Command 272 = 200
Send „DOWN” Command 2 (max delay 50ms)
Send „DOWN” Command 2 (max delay 50ms)

PWM-active high (custom command)
Send „ENABLE DEVICE TYPE 200” Command 272 = 200
Send „UP” Command 1 (max delay 50ms)
Send „UP” Command 1 (max delay 50ms)