

DRD150 up / DRD300 up

DALI Retrofit Universal Dimmer

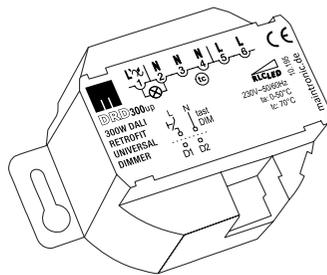
Installation guide

Valid from Version: (H=Hardware F=Firmware):

Product: 10.195 - DRD300 up H1b F3.1.0

10.196 - DRD150 up H2 F3.1.0

Document: 1019x_IN_A4_en_DRDxxxup_20200603



NOTE: Please also refer to the applicable documents for this product - www.maintronic.com.

Applicable Documents:

Manual

Datasheet



EN



1. Functions and features

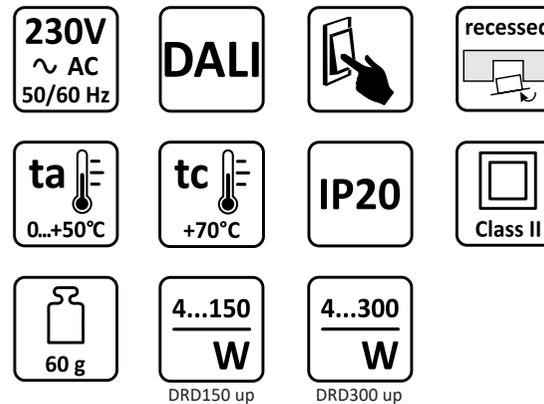


Fig. 1 - Icons functions

2. Product description

One-channel phase dimmer for brightness control of R,L,C including LED retrofit loads. Operates as a digital leading and trailing edge phase dimmer with automatic load detection. Control with DALI or a push button and installation in flush-mounted boxes.

3. DRD150 up / DRD300 up

3.1 Installation

Flush-mounted housing for installation in switch boxes or junction boxes. Attachment with two eyelets, these can be removed for installation.

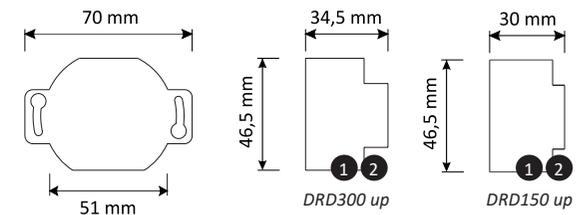


Abb. 2 - DRD150 up / DRD300 up Abmessungen

3.2 Operating elements and indicators

1	Device button	Commissioning; Programming
2	Status LED	Display Status of the device

4. Connection

4.1 Connection terminals

0,2 ... 1,5 mm² fine / single-wire 8 mm

L'	1	Load input	N	4	Neutralleiter
N	2	Neutral conductor	N	5	Neutralleiter
N	3	Neutral conductor	L	6	Input Voltage 230V AC
DA	7	DALI Data (alt. tastDIM *)	DA	8	DALI Data (alt. tastDIM *)

4.2 Connection diagram

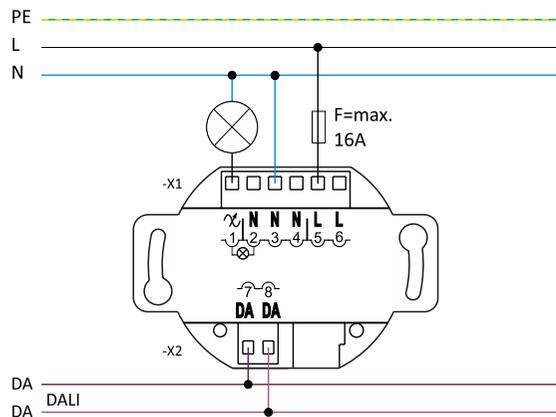


Fig. 3 - Connection diagram with DALI

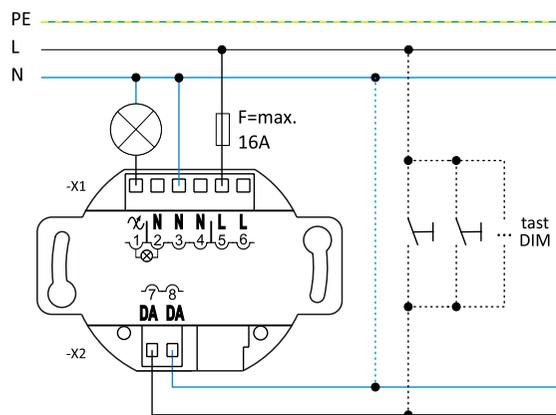


Fig. 4 - Connection diagram with 230 VAC push button (tastDIM)

5. Commissioning

5.1 Measuring procedure (AdaptivDIM)

When starting up for the first time (voltage is applied to the device for the first time after installation), the dimmer will start a measuring procedure and calibrate accordingly to the connected load. For minor calibration, the dimmer decides which cutting method (leading or trailing edge) is used and adjusts itself to load type 3 or 4.

NOTE - During calibration, the connected lights may flicker. This is system-conditioned and not a defect of the device. The calibration must be completed and can not be interrupted by switching off the device.

Should a new calibration be required by changing the light source or to set a different load type, the device must be re-calibrated, for a new calibration see manual.

5.2 Power rating of retrofit dimmers

Load type	cutting method	Power output in percent	Calculated power load	
			DRD150up	DRD300up
Ohmic	trailing edge	approx. 100% of the rated power	150 VA	300 VA
LED	trailing edge	approx. 70% of the rated power	105 VA	210 VA
LED	leading edge	approx. 20% of the rated power	30 VA	60 VA

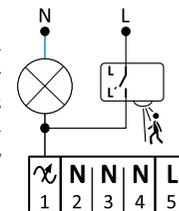
As a rule:
 Example 28x 4W (rated power LED) + 20% power factor = 135 VA power to be processed. Specifications depend on the light source used and may vary upwards and downwards.

5.3 Operating notes

<p>Derating: In the event of over temperature, an automatic derating occurs (status derating is indicated by the LED), which means that the dimmer's power is reduced and the load dimmed down.</p>
<p>Short circuit: Automatic shutdown in the event of a short circuit. Every 30 sec. it is tested whether the short circuit is still present. As soon as the short circuit is eliminated, an automatic restart takes place. If the error is still present after 5 min, the device is switched off completely. Turn off the power and remove the error.</p>
<p>Noise emission: It may occur that the dimmers cause acoustic noise when they are not used under unfavourable conditions or with certain consumers. Make sure the phases are evenly balanced.</p>
<p>Flickering: The dimmer requires a faultless mains, flickering may occur in case of mains supply fluctuations or ripple control signals as well as during calibration. This circumstance is system related and not a defect of the device.</p>

5.4 Bypass switch function

To switch the dimmer during DALI operation manually to 100%, a motion detector can be connected between L' and L. As soon as the motion detector is deactivated, the dimmer returns to the previously set DALI brightness value.



6. Operation via buttons

6.1 Device button ①

Operation via the device button is always possible and has a higher priority than a DALI telegram.



6.1.1. tastDIM * 230V push button input

As an alternative, the DALI input can also be used as a push button input. A conventional push button with 230V is connected against N to the DALI inputs of the device (not SELV)!



NOTE - When using the DALI input as tastDIM, no other DALI control gear may be connected in the same circuit, because 230V are present!

6.2 Functions button operation

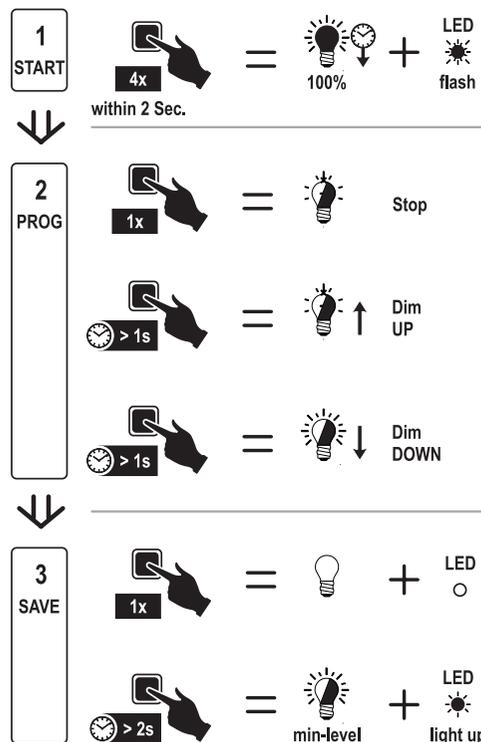
		⌚			
		1x	On / Off		
		> 1s	Dimmen up / down		
		2x	Max-Level 100%		
		2x	Show load type / load number	n x	
		3x	Show DALI short address	n x	
		4x	Set min-level with push button		

6.3 Set min-level with push button

In case of a flickering load or if the load remains too bright, the in-level (the lowest dimming value) can be adjusted via a push button connected to the push button input.



Perform the configuration with the following steps:



7. Operation via DALI

A DALI short address is assigned to the module using the DALI device search. Please refer to the operating manual of your DALI controller or gateway.

5.1 DALI Commands

DALI parameters	Value range	Default setting
Power On Level	0 – 100 % (0 – 254)	100 %
	Brightness value after power-on (DALI Wert 255 = MASK)	
System Failure Level	0 – 100 % (0 – 254)	100 %
	Brightness value for DALI signal error (DALI Wert 255 = MASK)	
Min Level	0 – 100 % (0 – 254)	0,1 %
	Lowest possible brightness level	
Max Level	0 – 100 % (0 – 254)	100 %
	Maximum achievable brightness value	
Fade Time	von 0 – 90,5 Sekunden	< 0,7 S
	Fading speed when changing the brightness value	
Fade Rate	from 1 – 72 Steps/s	45 Steps/s
	Steps when changing the brightness value with DALI commands „darker“ and „brighter“	

5.2 DALI information

Because the DALI signal is not SELV (safety extra-low voltage), the installation regulations for mains voltage apply. The maximum cable length of a DALI control line cannot exceed 300m (with 1.5mm² cable diameter) or 2V voltage drop.

8. Programming

Please refer to the applicable documents for programming instructions. Download the manual for this product on our website.

9. Return consignment

You can find a return form on our homepage in the service section. Please fill out the return form with a detailed error description and attach the purchase receipt. Our product must be returned well packed in a package.

10. Contact maintronic support

You can find downloads, manuals, onlinehelp as well as frequently asked questions (FAQ) on our Website www.maintronic.de. Please contact us if you have any problems or questions about your device.

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