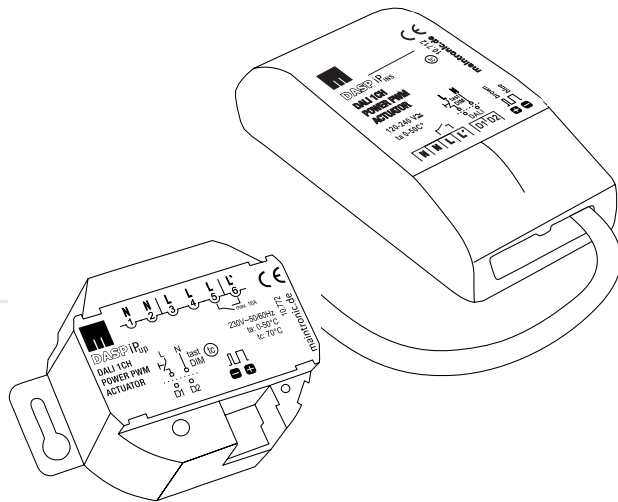


# Power PWM Actuator 1CH DASPip INS

## Quick guide



Gültig für folgende Versionen:  
(H=Hardware F=Firmware)

10.712 - DASPip INS H 2 F 1.5.0  
10.772 - DASPip UP H 1 F 1.5.0

DASPip\_10712\_10772\_Manual\_EN  
Dokument Datum: 10.07.2018



## 1. Safety instructions

For your own safety, read all instructions and information in this manual carefully before initial operation.

Keep this manual for future reference.

- The instructions are an integral part of the product and must be handed to the end customer.
- All information and instructions in this manual must be observed completely and in detail. The manufacturer is not responsible for any direct or consequential damage that results from disregarding any information in this manual.
- Electrical equipment may only be installed by a qualified electrician in compliance with the country-specific standards, guidelines and regulations.
- Risk of electric shock. Do not operate the device without a cover. Even when switched off, voltage may be present at the outputs. When working on the device or connected loads, always disconnect the upstream fuse from the power supply.
- Install the device only on places with a good ventilation and without humidity or high temperatures. Do Not expose the unit to rain or snow. Do not operate the unit near heat sources, e.g. radiators.
- Make sure the applied mains voltage matches to the specified operating voltage before operating the device.

The device may only be used

- as a dimmer for switching and dimming lights
- firmly in a dry and clean environment
- only approved for indoor use
- that access is only possible with tools
- only operate on 1 phase with 230 V AC
- with a backup fuse of max. 16A

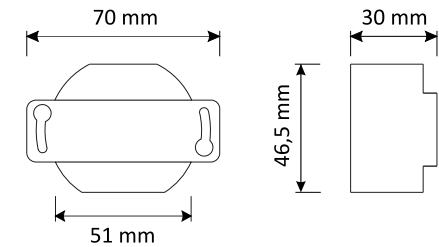
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## 2. Functions / Features

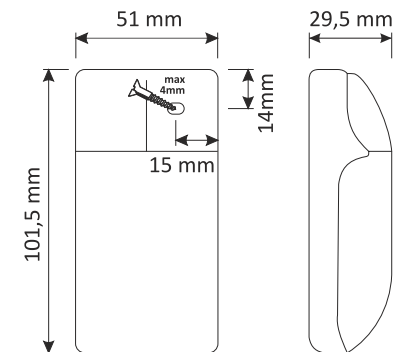
- DALI 1CH Power PWM Actuator for LED
- energy saving design through feedforwards relay
- control with DALI or tastDIM (230V touch dimming) (1)
- DALI interface (D1/D2) / own DALI-short adress
- EEG frequency shift compliant
- Protection circuits for safe operation

Dimming or switching commands are operated by DALI parameters or by pressing a button (tastDIM).

### 2.1 Installation



DASPip UP - flush mounting



DASPip INS - Installation housing for indoor use, for ceiling or luminaire installation, in floor ducts or for wall mounting.

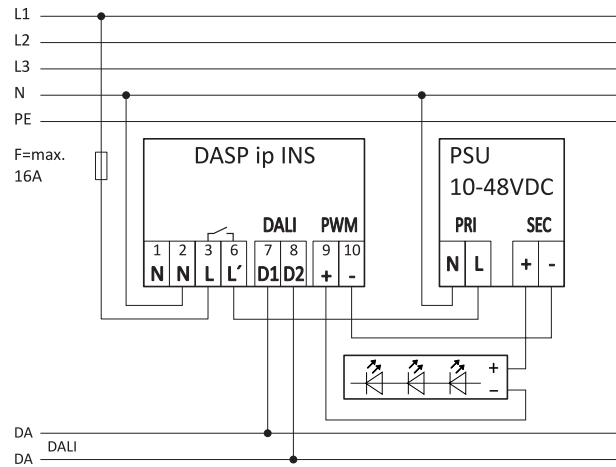
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## 2.2 Operating mode 1 „Power PWM“ LED Dimmer

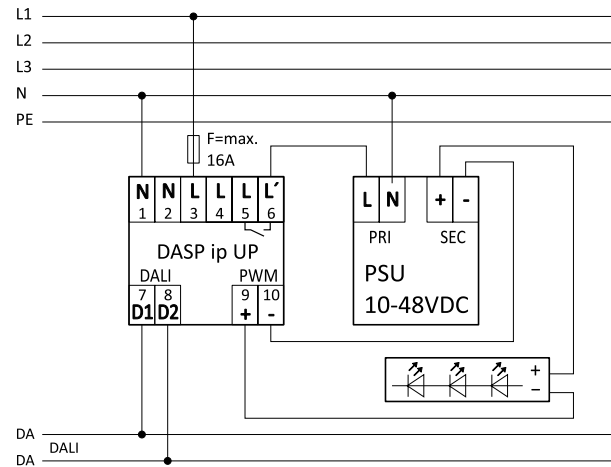
- LEDs on constant voltage power supplies +10...48V DC
- power consumption max. 3 A
- Dimming range (0; 0,1-100%)

DASP ip INS (Installation housing)



Connection with Constant Voltage power supply

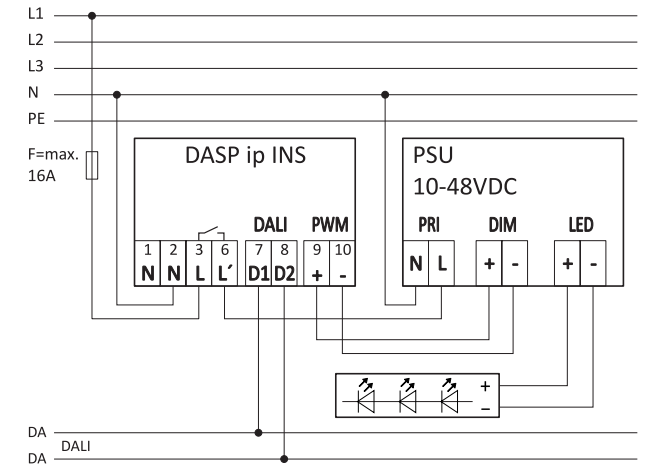
DASP ip UP (flush mounted)



Connection with Constant Voltage power supply

## 2.3 Operating mode 2 „Signal PWM“ Control power supplies with an integrated PWM input

- Converts the brightness values from DALI to PWM.
- For all power supplies with „3-in-2-input“ (0-10V, Poti, PWM)
- Output cascadable (1 DASP, several power supplies)
- Dimming range dependent on power supply (...10-100% | off)

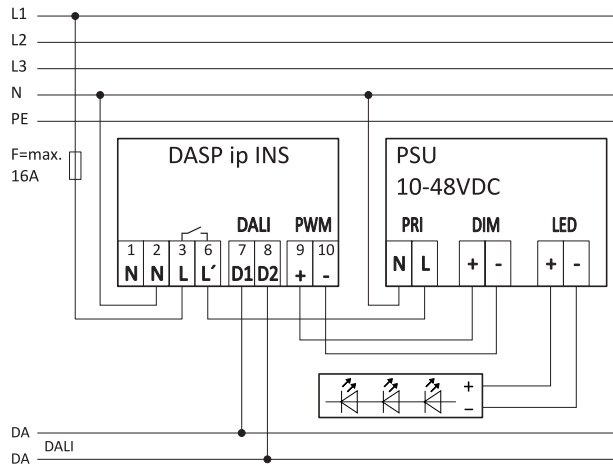


Connection to dimmer with PWM input

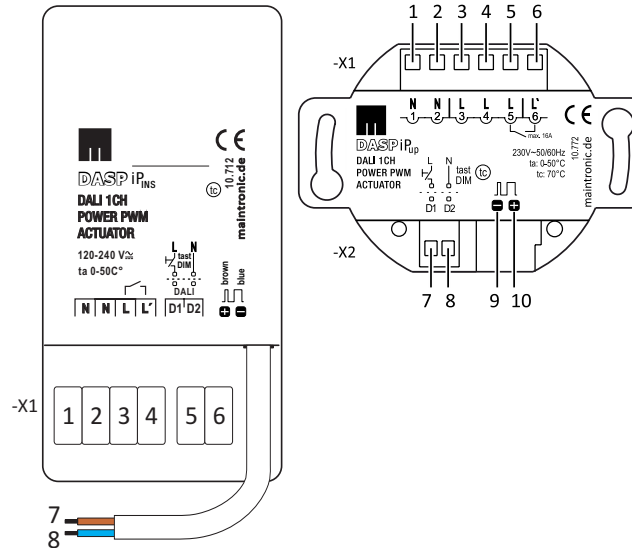
### 3. Connections

Screw terminal for 0.2 ... 2.5 mm<sup>2</sup> stranded wire  
or 0.2 ... 4 mm<sup>2</sup> single wire

DASip INS		DASip UP
N - Neutral conductor	1	N - Neutral conductor
N - Neutral conductor	2	N - Neutral conductor
L - Mains 230V AC	3	L - Mains 230V AC
L' - Load output (switched phase L')	4	L - Mains 230V AC
D1 - DALI data (alt. tastDIM)	5	L - Mains 230V AC
D2 - DALI data (alt. tastDIM)	6	L' - Load output (switched phase L')
DIMM PWM + (brown wire)	7	D1 - DALI data (alt. tastDIM)
DIMM PWM - (blue wire)	8	D2 - DALI data (alt. tastDIM)
	9	DIMM PWM -
	10	DIMM PWM +



Connection to dimmer with PWM input



### 4. DALI general

DALI (Digital Addressable Lighting Interface) is a standardized digital communication interface in the field of building automation.

#### 4.1 DALI note

The DALI signal is not SELV (safety extra-low voltage), the installation instructions for mains voltage apply.

The maximum cable length of the DALI control cable must not exceed 300m (with 1.5mm<sup>2</sup> cable cross-section) or 2V voltage drop.

#### 4.2 Groups and Scenes

In each DALI circle 16 groups can be formed, with each 16 scenes. A scene includes the brightness value of a short address.

#### 4.3 DALI device-specific

The device search assigns a DALI short address to the DASPip INS. Please note the operating instructions for your DALI controller or gateway.

The module works accordingly to the following regulations:  
IEC 62386-101, General requirements; System  
IEC 62386-102, General requirements; Control gear  
IEC 62386-207, Particular requirements for control gear - LED-modules (device type 6)

#### 4.4 DALI-Commands

DALI parameter	Value range	Factory setting
Power On Level	0 – 100 % (0 – 254)	100 %
	Brightness value after switching on (DALI Wert 255 = MASK)	
System Failure Level	0 – 100 % (0 – 254)	100 %
	Brightness value when DALI-Signal Failure (DALI Wert 255 = MASK)	
Min Level	0 – 100 % (0 – 254)	0,8 %
	smallest possible brightness value	
Max Level	0 – 100 % (0 – 254)	100 %
	maximum achievable brightness value	
Fade Time	von 0 – 90,5 Sekunden	< 0,7 S
	Speed when changing the brightness value	
Fade Rate	von 1 – 72 Schritten/s	45 Schritte/s
	Steps for changes to the brightness value via DALI command darker and brighter	

#### 4.5 smartGX (=smart Gear Xtensions) \*

(\*) Extended functions for DALI operating devices.

- **Output characteristic**   - **output calibration**
- **PWM-invert**               - **Power-On delay**
- **Power-Off delay**         - **Reverse relay switching state ...**

The smartGX functions can be adjusted with the maintronic DALI Device Manager software. This also requires a DALI USB controller (DALI mouse).

#### 5. button operation

The module can be operated via tastDIM with 230V at the DALI input (see tastDIM 230V).

Tastendruck	
short press	On- / Off
	Dim the last memory level brightness
long press	Dimming
	Dimming up and down (start at min level)
2x short press	Switch to Max Level
Press for 10 seconds	Synchronization of the connected devices (see 5.2)
Press for 30 seconds	Factory Reset (see 6.7)
4x short press	Programming Min-Level (see 5.3)

#### 5.1 tastDIM \*\* 230V-Pushbutton input

Alternatively, the DALI input can also be used with tastDIM. tastDIM is a direct 230V AC pushbutton input with long press function. For this purpose, a voltage of 230V AC is connected to the DALI contact.

A mixed operation of DALI and tastDIM is not permitted.

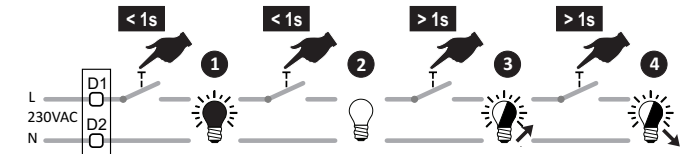
(\*\*) Button 230V against N at the DALI input (not SELV)!

Several push buttons can be connected parallel.

Several tastDIM-capable devices can be connected to a push-button line.



**IMPORTANT - When using the DALI input as tastDIM, no further DALI operating device or DALI controller may be connected in the same circuit since there is 230V input on the DALI input!**

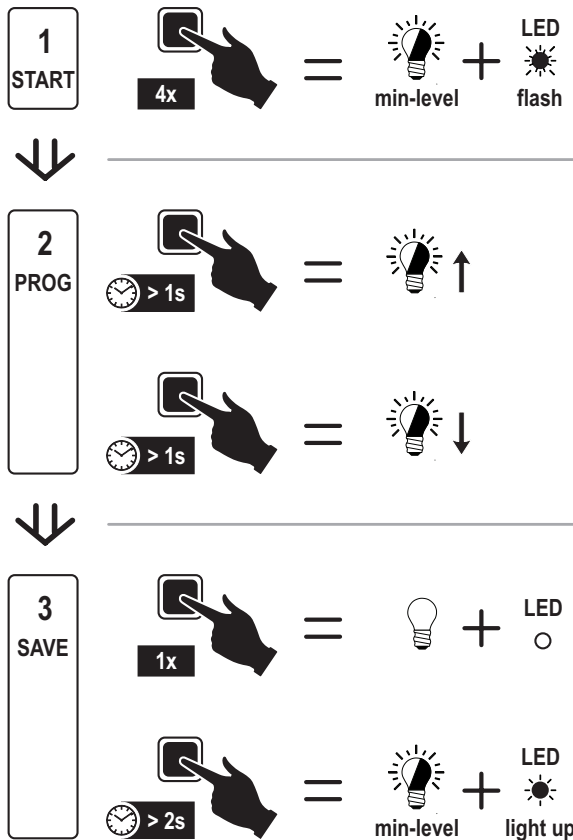


#### 5.2 Synchronize several devices on one tastDIM(Pushbutton input):

If the button has been pressed for at least 10 seconds, all outputs are reset, the connected dimmers go to 50% for signaling.

### 5.3 Adjust Min-Level

In some situations it is necessary to readjust the min level. If no DALI is available, the Min level can also be set via a 230V Push-button connected to the tastDIM \*. Perform programming with the following steps within 15 minutes after power-on:



### 7. Protection functions

#### Short-circuit shutdown

When a short circuit occurs, device automatic switch-off. Every 30 seconds is tested whether the short circuit is still present. When short circuit is eliminated, device restart automatically. If the error is still present after 5 minutes, device switch off completely.

#### Power limitation at overtemperature

In the event of overtemperature, an automatic derating occurs, which means that the dimmer's power is throttled and the load is dimming down.

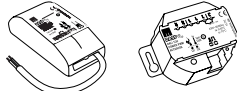
#### Important!

The connected load is reduced depending on the type of installation:

- Installation in hollow or wooden walls by 15% as well
- 10% for each 5 ° C exceeds the ambient temperature of 25 ° C

### 8. Attachment

#### 8.1 Excerpt from the technical data

<b>DASP ip INS / DASP ip UP</b>	
PWM output	1 channel - diming range 0...100 % 125 Hz
Max. output current	3A
Ballast-relay	switch, not potential-free, switched phase 1 x 16 A/ 230 V AC
Switched phase L'	✓
Power supply	220V-240V AC 50 / 60Hz
Housing mode	Ceiling / installation housing (DASPip INS) Licensed under DM/053379 of Tridonic flush mounted (DASPip UP)
Dimensions	DASPip INS: L=101,5 x B=51 x H=29,5 mm DASPip UP: L=46,5 x B=70 x H=30 mm
IP Code according to DIN EN 60529	IP20 10mm/5KV
Protection class	II
Temperature (environment) ta	0° – 50° Celsius

Detailed technical data can be found in the data sheet.

## 8.2 Return

A return form can be found on our homepage. The maintronic return form is to be completed step by step and with exact error description. The purchase receipt must be attached here. Our product must be returned packed carefully in a carton..

## 8.3 Disposal regulations for EU countries

According to European Directive 2002/96 / EC, obsolete electrical appliances and defective or used batteries (European Directive 2006/66 / EC) must be collected separately and disposed of by environmentally sound recycling.

Please do not dispose of the product in your household waste!!

## 8.4 Contacting maintronic

On our website [www.maintronic.de](http://www.maintronic.de) you will find downloads, instructions, online help and answers to frequently asked questions (FAQ) for the products. Contact us if problems or questions arise about your device.

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