

**Power supply
PS154, PS 253 and PS254
with integrated splitbox**



Functional description

**Fabrication and Marketing
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Caution! Operate the device only after having read and **understood** operating instructions!

Power supplies PS154, PS254, PS 253

Power supplies with integrated DMX-splitbox for Licht-Technik color changer, dimmer shutter and motorized yokes.

The wide input range provides the possibility to work with different input voltages. Because of the safe electrical separation from the mains and the low operating voltage of 28V the system is very safe for the users.

Please make sure, that the input voltage is not **switching** or **rising** (e.g. 110V to 230V) when the device is powered. When using a generator, make sure that the device is switched off until power is **stable**.

The power supply is a **switching** regulator which guarantees a high reliability at a low heat. It is short circuit protected and overload proof.

The built in **DMX-Splitbox** has a DMX input which is automatically terminated and opto isolated. The splitbox supplies 6 DMX outputs.

Further splitboxes can be connected to the **5pin** outputs. Even if in power off state the OUT output supplies DMX signal. The OUT1 output supplies only a DMX signal when the device is in power on state (e.g. for star wiring).

For the Licht-Technik devices 4 **DataPower** outputs are available (OUT1..4).

Also useful as **DMX-Repeater** and signal refreshing.

The housing is made of 2mm **powder coated** aluminium.

The built in nearly noiseless fan is **temperature controlled** to provide a good heat dissipation also in a warm environment.

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Introduction

Dear customer,
thank you for buying this product. You got a product which is state of the art. It complies with national and european standards (electromagnetic compliance 2004/108/EG). The conformity was proven, the corresponding declaration and documents are deposited at the manufacturer. To sustain this status and ensure a safe operation, the user must observe this manual!

Appropriate use

The power supplies PS154, PS 253 and PS254 supply electrical power to our devices Color changer, dimmer-shutter and motoized yokes.

An outdoor use can take place only conditionally, because the housing is not waterproof. The contact of water must be avoided in any circumstances. For cleaning of the housing, a dry, lint-free cleaning rag can be used. The use of cleanser should be omitted. An other usage as described above can lead to damage and, in addition, the risk of short circuit, fire, injury and death exists. The whole product must not be modified and reconstructed. The housing must not be opened.

The safety and operating instructions must be observed in any circumstances.

Safety and operating instructions

Before opening the housing disconnect the device from the mains !!!

Don't try in any case to touch the electronic through the vents, also with any objects. This can cause an electrical accident that can lead to death!

Admissible **ambient temperature**: 0..+40 degree Celsius.

Do not **block** or **cover** the vents.

The power supply is not for use in outside area. Only applicable **indoor** in clean and dry environment.

The Power supply must be kept **dry**. In case of water condensation a waiting period of 2 hours is necessary until the state of being acclimatised is reached.

The device must not be mounted at the **hand grip** into a Rigg or similar systems. For this purpose a holding yoke is available which is mounted at the top of the device.

Observe **mains** voltage and **fuse**:

Type	Max. power	Max. current Sec.	Mains voltage 1	Primary fuse 1	Mains voltage 2	Primary fuse 1
PS154	360 W	15 A	85 – 132 VAC	6,3 A slow blow	187 – 264 VAC	6,3 A slow blow
PS254	600 W	25 A	85 – 132 VAC	10 A slow blow	187 – 264 VAC	6,3 A slow blow
PS253	600 W	25 A	85 – 132 VAC	10 A slow blow	187 – 264 VAC	6,3 A slow blow

Please note: The **switching** or rising/falling from one input voltage range to another during operation can lead to damage of the device!

When using a **generator**, first start the generator and wait for stable mains supply voltage! After that switch on the power supply

Distribute the load evenly over the four outputs!

Keep the DataPower cables to the devices as **short** as possible.

Observe the **maximum load**! The power consumption of every device is indicated on the type plate. The total power of all connected devices must not exceed the maximum power of the power supply!

When it has to be assumed that a safe operation is no longer possible, the equipment must be switched off immediately and be secured against unintended operation.

This is the case when

- the equipment shows visible damages;
- the equipment is no longer functional;
- parts of the equipment are loose or slackened;
- connecting lines show visible damages.

Prior to starting the equipment the user must check the usefulness of the device for its intended purpose. In particular, Licht-Technik shall decline any liability for damages of the equipment as well as for consequential damages resulting of the device being used inappropriately, of inexperienced installation, incorrect starting and use, and of non-compliance with the valid safety regulations.

Disposal

No longer required packaging and packaging aids are recyclable and should be given up to collecting points.

Used up batteries and accus are not for household garbage. These must be brought to recycling stations. Information about recycling stations are available at your responsible municipal administration.

Attention!

This product with all electrical and electronic components must not be disposed in the household garbage! For this kind of products a separate disposal system is defined by law!

Information for disposal by the user in the european union:

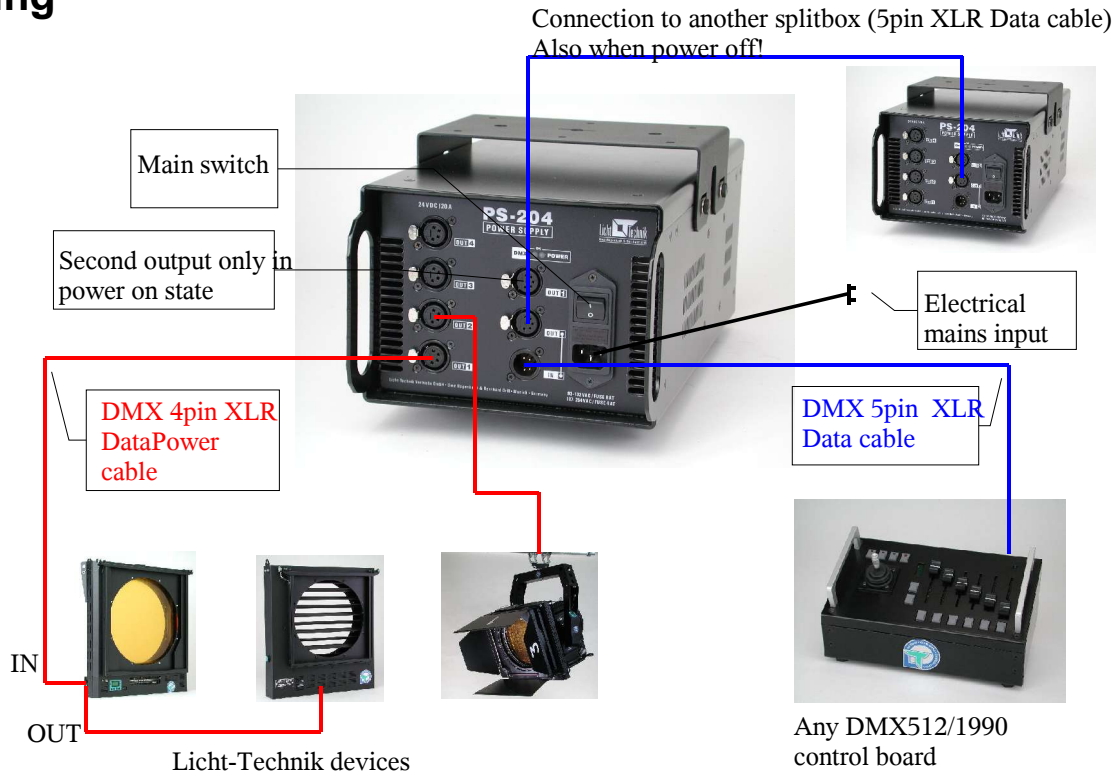
Used electrical and electronic devices must be disposed separately to ensure a environment friendly recycling. These products must be given up to responsible collecting points. The disposal is free of charge for the user. Please enquire at your local administration where you can give up this product for professional recycling. If your product is equipped with batteries or accus, please remove them before disposal and give them up separately (see above).

Information for disposal by the user outside the european union:

If you want to dispose this product, please contact your local responsible municipal administration for environment friendly recycling.

By giving up the product to responsible collecting points you support a professional recycling and make a significant contribution for protecting the environment and human health.

Cabling



The standardized DMX-Signal is based on industrie´s RS485 Interface. It is designed for maximum lengths up to 1200m. This length is under condition in theatre or studio normally not possible. As a result of internal tests we recommend a maximum length of 200m (**only DMX, 5PIN**). A maximum of 32 DMX receiver can be connected to one DMX transmitter. If more devices should be connected a splitbox must be used.

Connect the light mixer panel and the Splitbox PS154/PS254/PS253 with a 5PIN XLR-DMX-cable. The splitbox is provided with two DMX out jacks for connecting additional splitboxes. At each of the four DATA Power outputs the devices can be connected. Observe the maximum number of devices!

Distribute the load evenly over the 4 outputs.

Type	Max Current	Max PS154 (15 A)		Max PS254 (25 A)		Max PS253 (25 A)	
		total	per output	total	per output	total	per output
Color changer	1,2 A	12	4	20	5	20	5
Dimmer shutter	1,2 A	12	4	20	5	20	5
MagVader	2,5 A	6	2	10	3	10	3
Motoryoke	4,0 A	3	1	5	1	5	1

Observe the **maximum load!** The power consumption of every device is indicated on the type plate. The total power of all connected devices must not exceed the maximum power of the power supply!

Different types per power supply possible, observe maximum load!

The last device in a row should be **terminated** with a 470 Ohm resistor.

The maximum length of a datapower line (four pin) must not exceed 80 m because of the voltage drop.

Getting started

Caution! Check the mains voltage:

Type	Max. power	Max. current Sec.	Mains voltage 1	Primary fuse 1	Mains voltage 2	Primary fuse 1
PS154	360 W	15 A	85 – 132 VAC	6,3 A slow blow	187 – 264 VAC	6,3 A slow blow
PS254	600 W	25 A	85 – 132 VAC	10 A slow blow	187 – 264 VAC	6,3 A slow blow
PS253	600 W	25 A	85 – 132 VAC	10 A slow blow	187 – 264 VAC	6,3 A slow blow

- Main switch to off.
- Put power in cable into plug.
- Connect the DMX (5pin) cable to DMX in.
- Connect further DMX receiver or further splitboxes (PS154/PS254/PS253) to DMX out (5pin).
- At the 4pin outputs devices like color changer, shutter or motoryoke are connected
- Switch on the power supply at the main switch

Technical data

Dimensions and Weight:

Type	Width	Height	Depth	Weight
PS154	20,5 cm	16,5 cm	27 cm	3,8 kg
PS254 / PS253	20,5 cm	16,5 cm	37,5 cm	6,5 kg

Mains voltage:

Type	Max. power	Max. current Sec.	Mains voltage 1	Primary fuse 1	Mains voltage 2	Primary fuse 1
PS154	360 W	15 A	85 – 132 VAC	6,3 A slow blow	187 – 264 VAC	6,3 A slow blow
PS254	600 W	25 A	85 – 132 VAC	10 A slow blow	187 – 264 VAC	6,3 A slow blow
PS253	600 W	25 A	85 – 132 VAC	10 A slow blow	187 – 264 VAC	6,3 A slow blow

Admissible ambient temperature:	0..40 degree Celsius		
Maximum output power:	PS154: 360 W, 15 A PS254: 600 W, 25 A PS253: 600 W, 25 A		
Output voltage:	28 V DC		
Fusing:	PS154:	85V-132V:	6,3A slow blow
	PS154:	187V-264V:	6,3A slow blow
	PS254:	85V-132V:	10A slow blow
	PS254:	187V-264V:	6,3A slow blow
	PS253:	85V-132V:	10A slow blow
	PS253:	187V-264V:	6,3A slow blow

Pin assignment:

OUT1..4: 4pin XLR, gold contacts
PIN 1 0 V min. cross section 0,75mm²
PIN 2 Data – min. cross section 0,25mm²
PIN 3 Data + min. cross section 0,25mm²
PIN 4 +24 V DC min. cross section 0,75mm²
Housing: shield

DMX-IN/ OUT: 5pin. XLR, gold contacts
PIN 1 Shield min. cross section 0,25mm²
PIN 2 Data – min. cross section 0,25mm²
PIN 3 Data + min. cross section 0,25mm²
PIN 4 not connected min. cross section 0,25mm²
PIN 5 not connected min. cross section 0,25mm²

DataPower cable:

2 x 0,75mm² power supply (Pin 1 and 4)

2 x 0,25mm² twisted pair, 110 Ohm characteristic impedance (Pin 2 and 3), shielded.

Shielded

The built in power supply is **short circuit protected, overload proof** and very reliable in operation. In case of a defect no changable parts can be reached.

When the power is on and the DMX signal is connected the DMX LED must light. Otherwise the splitbox PCB-board is defect. This happens in case of short circuits from 24 V to data+ or data-.

Malfunctions

Caution! Before opening the housing disconnect the device from electrical mains

Caution! Change the fuse only in **disconnected** condition. If the fuse will blow again, the device has to be repaired at Licht-Technik

Caution! Replace a defect fuse only with a fuse of the right value

In the inside of the device are **no** parts which can be repaired by the user!!

Error	Possible reasons
DMX ok does not light	No DMX-signal on the input PS104/204 switched off DMX-panel switched off
DMX ok lights, but no signal at Output	Splitbox electronic defect because of short circuits in cable. Try another output.
No voltage at outputs	Mains voltage ok?

Warranty

The warranty for our products is 2 years. It comprises any repair of failures – free of charge – which can be proved to result from defects of fabrication.

Warranty expires when:

- the device was modified or attempted to be repaired
- damages were caused by the intervention of foreign persons
- damages are due to noncompliance with the operating instructions
- the device was connected to an incorrect voltage or incorrect type of current
- the device was incorrectly operated or when damages were caused by negligent handling or misuse

All maintenance and servicing works related to the product must be carried out by the company *Licht-Technik*. *Licht-Technik* shall not assume any liability for losses or damages of any kind being the results of inexpert servicing.

Further information

This document and the information contained therein are subject to copyright and neither the whole nor any part of it may, and this is also valid for the described product, be reproduced, copied or recorded in any form without the prior written authorization of *Licht-Technik Vertriebs GmbH*.

The products of *Licht-Technik GmbH* are subject to constant development. Therefore *Licht-Technik* reserves the right to modify components, motors and also technical specifications any time and without prior notice.

EC Declaration of Conformity PS-254V2

1. **Type of device/product** Power supply PS-254 V2
2. **Name and address of manufacturer** Licht-Technik Vertriebs GmbH
Kapellenstraße 8
85622 Feldkirchen
3. **The manufacturer is responsible for this declaration**
4. **Item of declaration** PS-254 V2

5. **The described item is conform to the following guidelines/regulations**

RICHTLINIE 2014/30/EU DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit

RICHTLINIE 2014/35/EU DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen auf dem Markt

6. **Applied and conform to harmonized standards in particular**

DIN EN 55015; VDE 0875-15-1:2016-04 - Grenzwerte und Messverfahren für Funkstörungen von elektrischen Beleuchtungseinrichtungen und ähnlichen Elektrogeräten (CISPR 15:2013 + IS1:2013 + IS2:2013 + A1:2015); Deutsche Fassung EN 55015:2013 + A1:2015

DIN EN 61547; VDE 0875-15-2:2010-03 Einrichtungen für allgemeine Beleuchtungszwecke – EMV-Störfestigkeitsanforderungen (IEC 61547:2009); Deutsche Fassung EN 61547:2009

DIN EN 60598-1; VDE 0711-1:2015-10 – Leuchten – Teil 1: Allgemeine Anforderungen und Prüfungen (IEC 60598-1:2014, modifiziert); Deutsche Fassung EN 60598-1:2015

7. **A test report is available from company Licht-Technik Vertriebs GmbH**

8. **This declaration is invalid if the device is changed technically and/or unintended use.**

Signed for


Licht-Technik Vertriebs GmbH

Place and date of description

München 6.9.2017



Uwe Hagenbach (Geschäftsführer)



Bernhard Grill (Geschäftsführer)

EC Declaration of Conformity PS-154 PS-253

1. **Type of device/product** Power supply PS-154, PS-253

2. **Name and address of manufacturer** Licht-Technik Vertriebs GmbH
Kapellenstraße 8
85622 Feldkirchen

3. **The manufacturer is responsible for this declaration**

4. **Item of declaration** PS-154, PS-253

5. **The described item is conform to the following guidelines/regulations**

RICHTLINIE 2014/30/EU DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit

RICHTLINIE 2014/35/EU DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen auf dem Markt

6. **Applied and conform to harmonized standards in particular**

DIN EN 55015; VDE 0875-15-1:2016-04 - Grenzwerte und Messverfahren für Funkstörungen von elektrischen Beleuchtungseinrichtungen und ähnlichen Elektrogeräten (CISPR 15:2013 + IS1:2013 + IS2:2013 + A1:2015); Deutsche Fassung EN 55015:2013 + A1:2015

DIN EN 61547; VDE 0875-15-2:2010-03 Einrichtungen für allgemeine Beleuchtungszwecke – EMV-Störfestigkeitsanforderungen (IEC 61547:2009); Deutsche Fassung EN 61547:2009

DIN EN 60598-1; VDE 0711-1:2015-10 – Leuchten – Teil 1: Allgemeine Anforderungen und Prüfungen (IEC 60598-1:2014, modifiziert); Deutsche Fassung EN 60598-1:2015

7. **Not applicable**

8. **This declaration is invalid if the device is changed technically and/or unintended use.**

Signed for


Licht-Technik Vertriebs GmbH

Place and date of description

München 6.9.2017



Uwe Hagenbach (Geschäftsführer)



Bernhard Grill (Geschäftsführer)