

Mr.Light LED

User Manual

Led-Operated Signalling Device

(Rev. 2.0 ENG)



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1 INSTALLATION WARNINGS

- Read carefully the present manual and conserve it
- The lamp has been designed and built in conformity with the security laws in force.
- Please use high quality wires wherever possible.
- The installation has to be carried on by skilled technicians.
- The illustrations in this manual may differ somewhat from the actual equipment design.
- In case of technical problems or faults please do not open the covers and contact the manufacturer.
- Axel Technology is at Yr. complete disposal for every requirements and troubleshooting. Please read carefully the manual and the electric layout before contacting our technical department.

2 INTRODUCTION AND ORDERING INFORMATION

Mr. Light LED is a compact and efficient signalling device, ideal for radio studios, recording suites, tv and radio control rooms, etc.

An internal high intensity LED array provides optimal visibility in any environmental light condition. As an option, Mr. Light LED is also available in the 'double sided' version, featuring two illuminated faces.

Warning texts (such as 'On Air', 'Silence', etc) are printed on transparent films and can be chosen from the standard range or customized for your application. The display can be constantly illuminated or blinking, and easily modified by replacing the film.

With the included bracket, Mr Light is easily mounted to the wall or to the ceiling. An optional, additional bracket is available to allow for easy 'flag' mounting.

For easier installation and operation, Mr Light LED just requires a simple DC supply of between 12 and 15 Volts.

The optional Mr Light's power supply can provide enough power to operate a maximum of three units, with any combination of constant or blinking operation. It also allows for easy control via TTL or clean contacts on photocouplers (separate for each lamp) and makes Mr. Light suitable for any audio console or control device.

Thanks to the separate installation of the power supply, You will avoid any long AC main cable runs across the walls or close to the studio's ceiling.

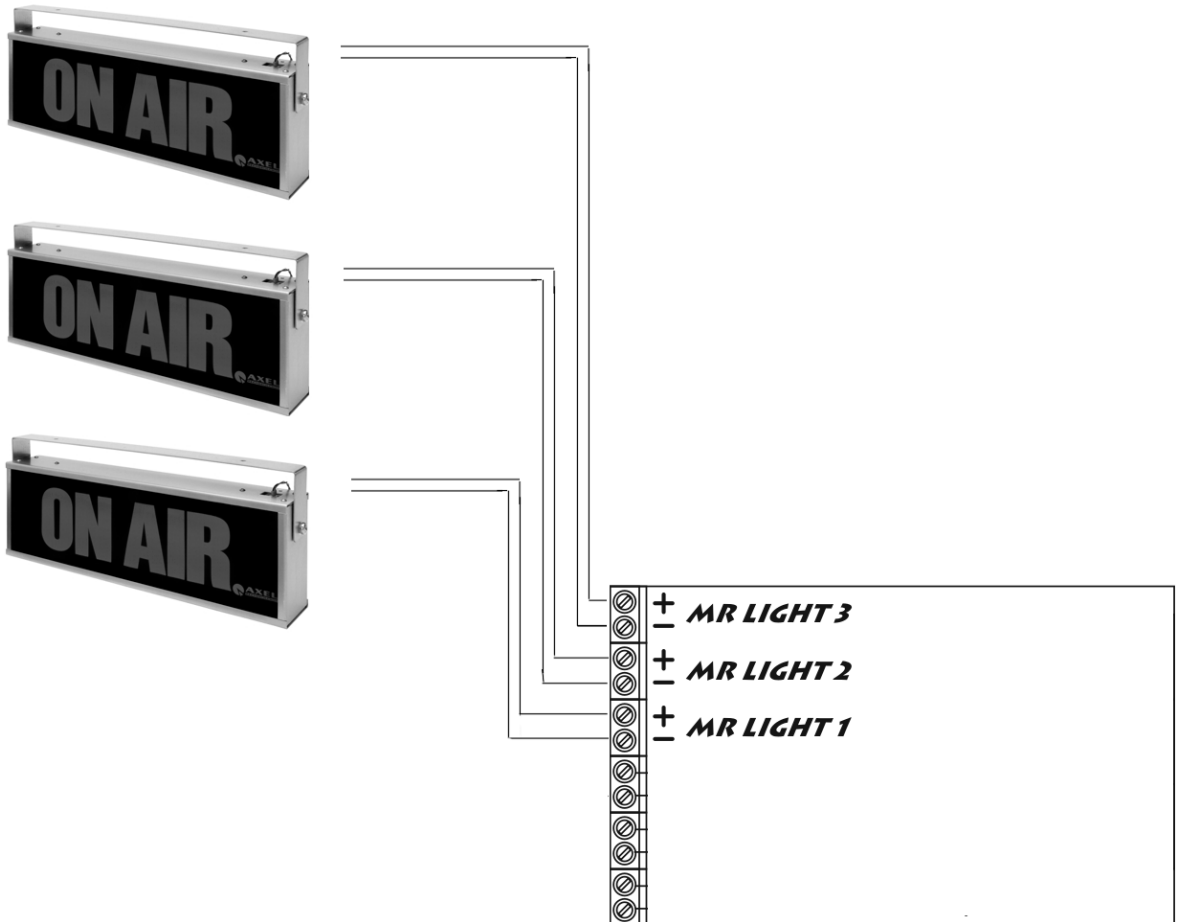
Alternatively to the dedicated power supply, Mr. Light LED lamps may also fed by any regular stabilized DC voltage.

CODE#	ARTICLE#	MODEL	DESCRIPTION
A120010010	MRLIGHT-L	MR LIGHT LED Lamp	On-Air (Led) lamp 12Vdc PSU not included
A120010011	MRLIGHT-LD	MR LIGHT LED Lamp Double face	Mr. Light LD, On-Air (Led) lamp double face 12Vdc, PSU not included
A120010015	MRLIGHT-LPWS	MR LIGHT LED Power Supply	Power supply powering up to 3 Lamps (Led) 110/220VAC for Mr. Light L/LD, separate light up and blinking feature management.
A120010301	MRLIGHT-PP	MR LIGHT LED Personalized Film	Customized lamp film (3 films) for Mr. Light series
A120010300	MRLIGHT-SB	MR LIGHT LED Wall Mount bracket	Wall mounting flag bracket

3 CONNECTIONS WHEN USING THE DEDICATED POWER SUPPLY

Mr. Light LED lamps can be powered by dedicated power supply unit (available as an option) or by any regular stabilized 12 V DC voltage. The optional Mr Light's power supply can provide enough power to operate a maximum of three units, with any combination of constant or blinking operation. It also allows for easy control via TTL or clean contacts on photocouplers (separate for each lamp) and makes Mr. Light suitable for any audio console or control device.

Connect up to three Mr LIGHT Lamps to the power supply via the supplied Terminal Blocks taking care of their DC powering polarity, as shown on the PWS and Lamp sticks.



3.1 AC MAIN VOLTAGE

Mr LIGHT Power supply comes from the factory set for 220 V or 110 V AC Main.

The actual Mains voltage is indicated on the label stuck on the closure.



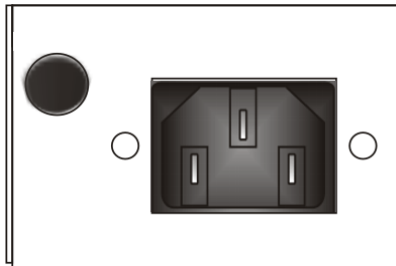
BE SURE THAT THE UNIT IS SET TO THE CORRECT MAINS/LINE VOLTAGE FOR YOUR COUNTRY BEFORE PLUGGING IT INTO THE WALL OUTLET !

If, for some reason, the unit is to be operated at a mains input voltage which is different to that as supplied, contact Axel Technology's technical department, as the AC operating voltage can NOT be altered from the user.

The power supply socket has an integral fuse drawer containing the AC power fuse.

Use a small blade screwdriver to access it.

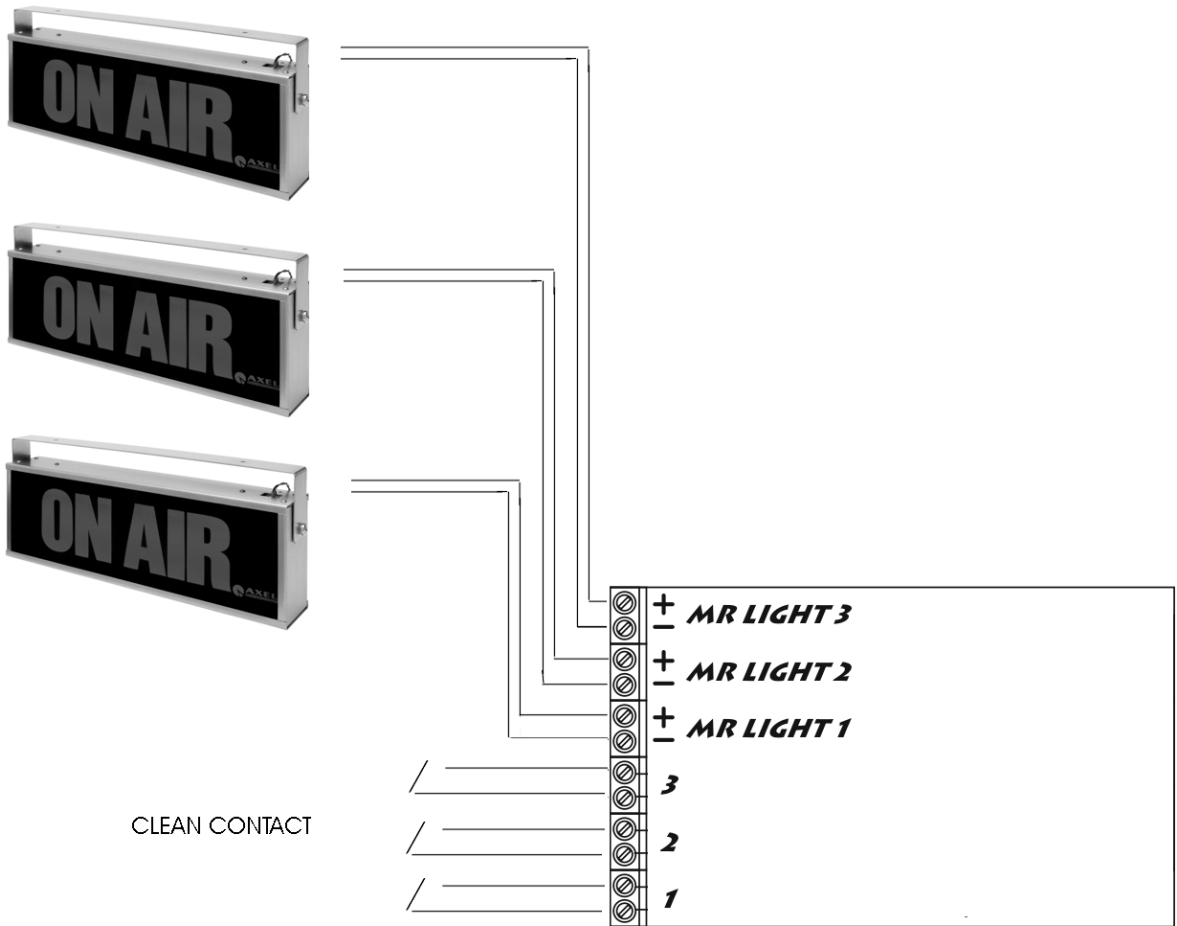
- for 230 V AC the fuse is rated at 250 mA T
- for 110/115 V AC the fuse is rated at 500 mA T



CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE THE POWER SUPPLY COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

3.2 STABLE / BLINKING MODE DRIVEN BY CLEAN CONTACT

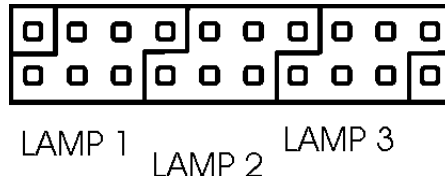
Mr Light LED can be driven by 'clean contacts' either in a 'stable' mode (i.e. it will be continuously on) or in a 'blinking' mode (i.e. light will flash). 'STABLE' operating mode is set as default. PWS control inputs are optocoupled.



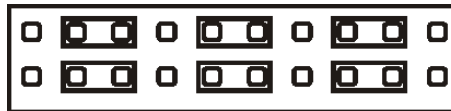
Operating mode selection can be altered by closing proper jumpers located on the PWS side panel.



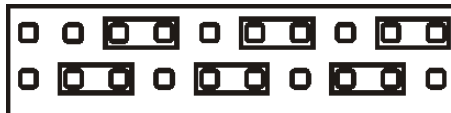
The following picture shows jumper area assignment to the three controlled lamps



For **STABLE** (i.e. not blinking) lamp lighting jumpers are set as in the picture:



For **BLINKING** lamp lighting jumpers are set as in the picture:



NOTE 1

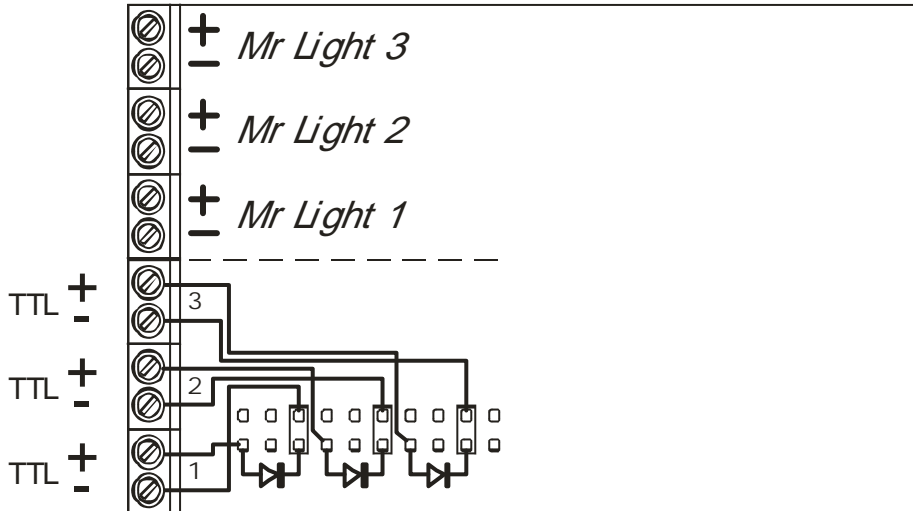
When 'blinking' mode is selected, the **blinking rate** can be adjusted from **3 flashes/sec to 1 flash/sec** via the recessed trimmer placed in the Power supply box (small hole close to Jumper bay).

NOTE 2

It is always possible to set three lamps in different operating modes (f.i. Lamp 1 lights in STABLE mode, while Lamp 2 and Lamp 3 light in BLINKING mode).

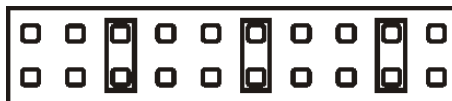
3.3 LAMPS DRIVEN BY TTL LOGIC

PWS control inputs from 1 to 3 can be driven directly with TTL logic.

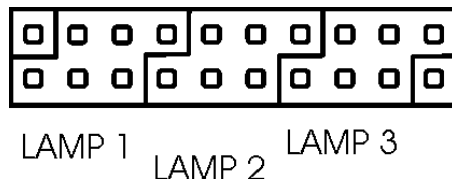


Mr Light LED lamps can be driven by external TTL tensions (+ 5 Volts) applied to terminal blocks from 1 to 3.

To enable TTL control, jumpers must be set as in the following picture:



where jumper area assignement is as follows:



External TTL tension will directly drive photocouplers associated to each input. **An internal 1K Ohm resistor is always inserted on the photodiode cathode for protection.**

NOTE 1:

Mr Light lamp will light always in a 'permanent' mode (i.e. it will light as long as TTL drive tension is applied).

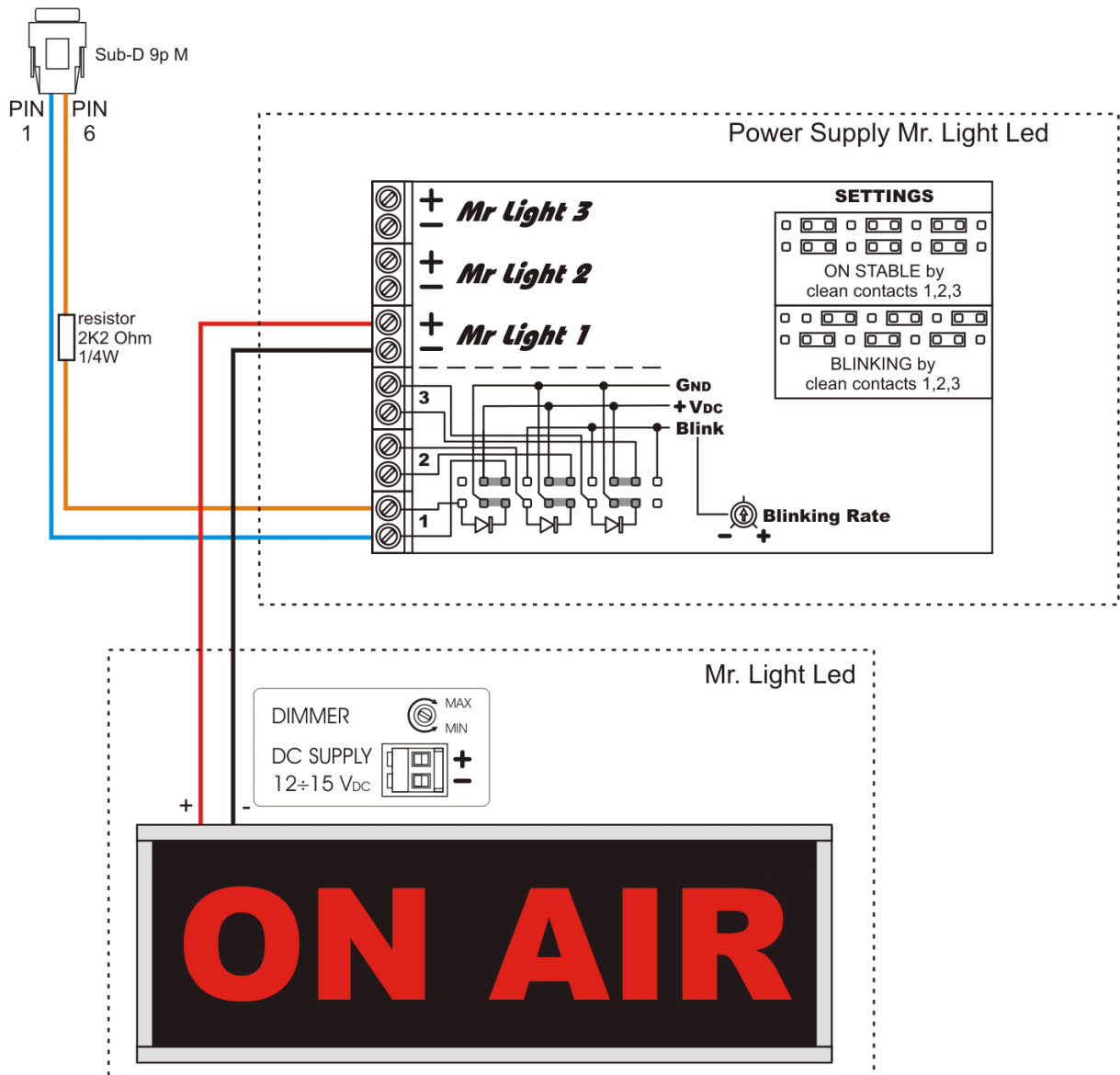
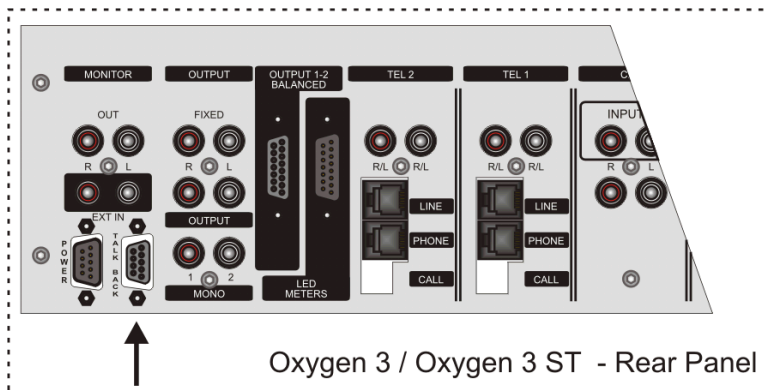
NOTE 2:

In the event a 12 Volt tension is available for control, please feed PWS input through a 1K Ohm carbon resistor.

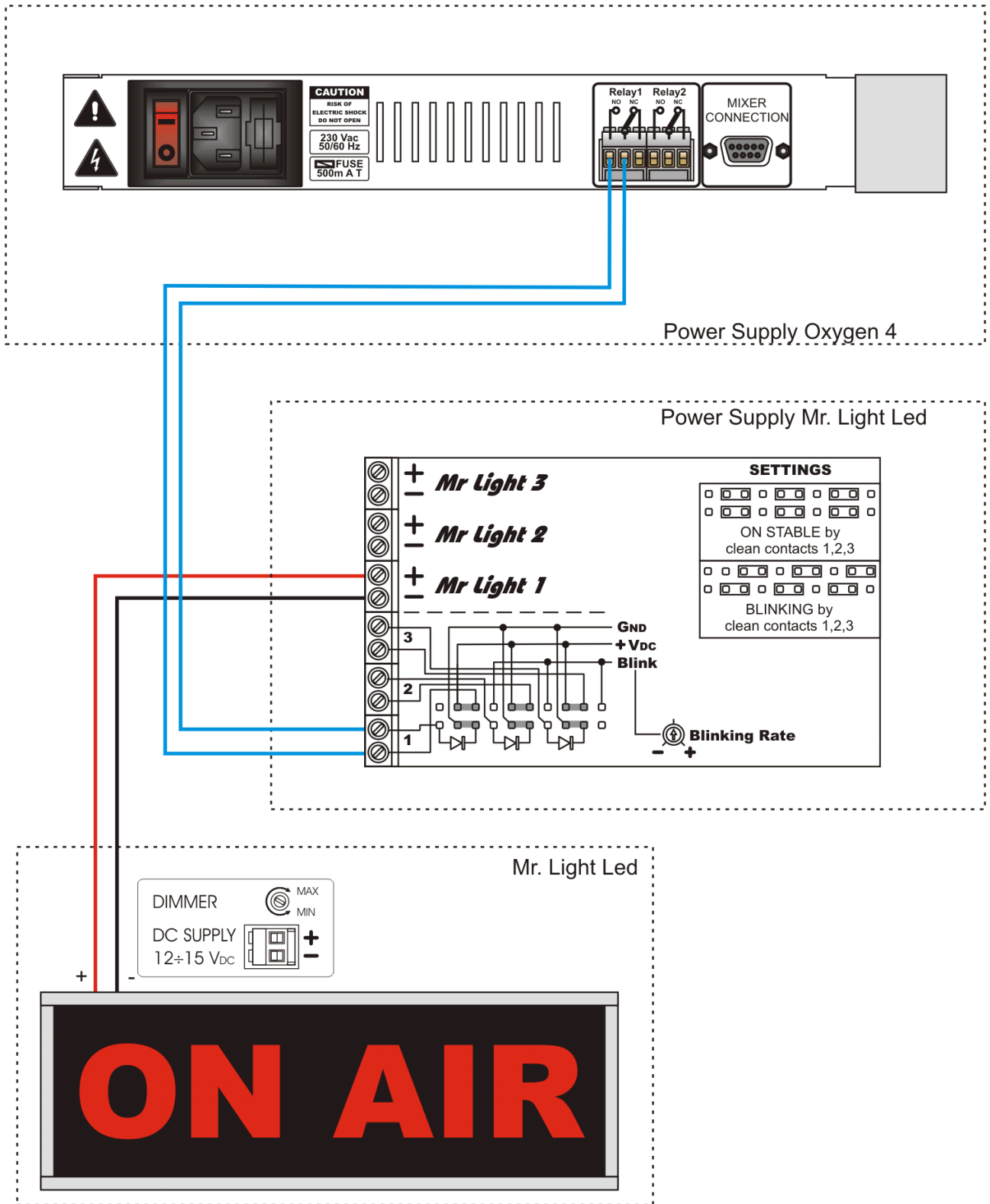
Max current allowed on photocouplers: 10 mA. Nominal: 5 mA.

4 EXAMPLES OF CONNECTIONS TO OXYGEN SERIES CONSOLES

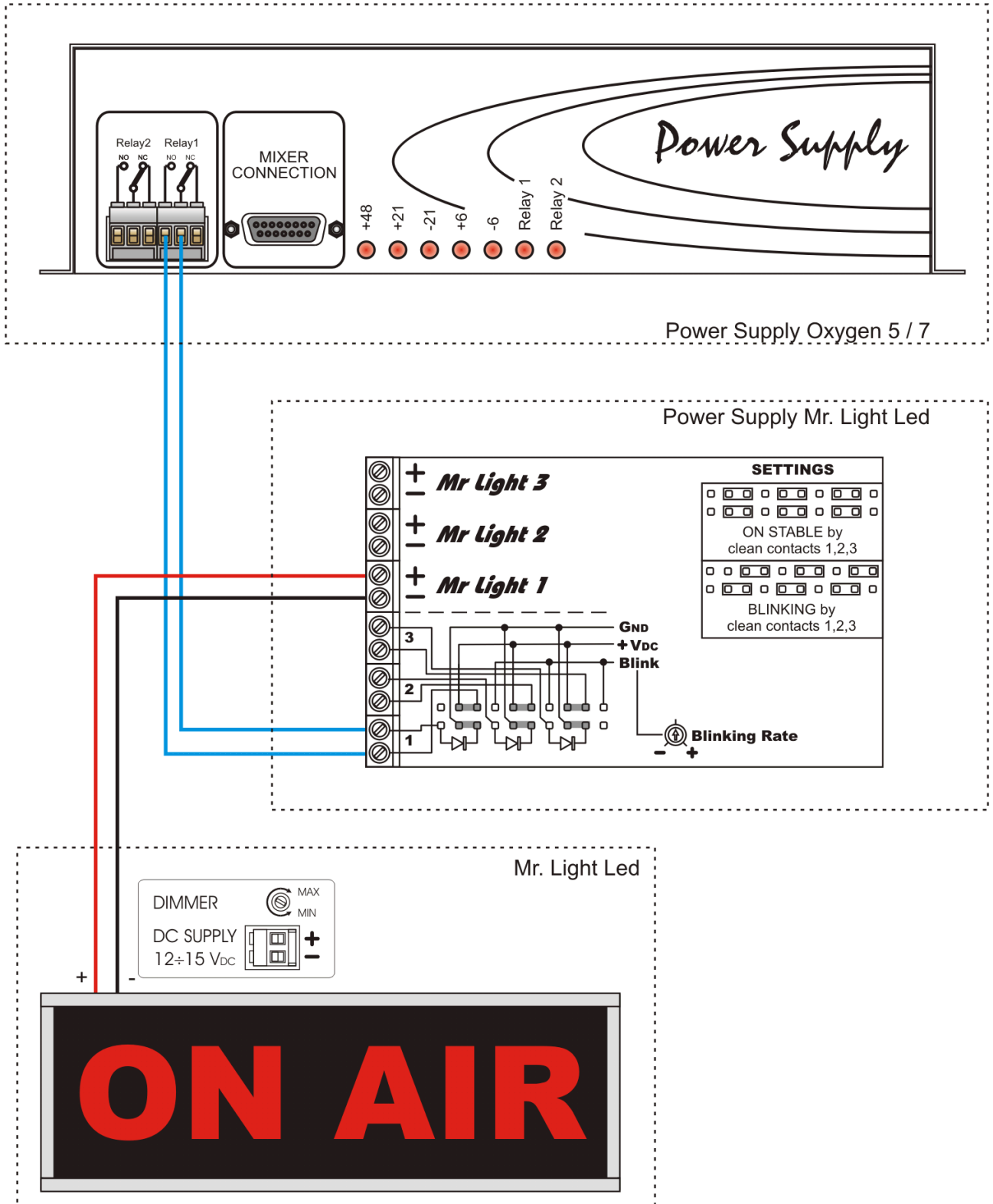
4.1 CONNECTION TO OXYGEN 3



4.2 CONNECTION TO OXYGEN 4



4.3 CONNECTION TO OXYGEN 5-7



5 WALL MOUNTING FLAG BRACKET

As an option, an additional bracket is available to allow for easy 'flag' mounting.

It is highly recommended for use with Mr Light 'double side' version.



To mount the flag bracket, remove the standard support, remove the four screws fixing the side panel and use them to fasten flag mounting plate to the lamp assembly.

6 TECHNICAL SPECIFICATIONS

LED LAMP

Operating Voltage	12 to 15 Vdc
Current	330 mA
Controls	Dimming, through recessed trimmer
Dimensions	351 x 124 x 58 mm (without bracket)
Case	Inox steel
Weight	Around 1.5 Kg

POWER SUPPLY

AC Mains Input	IEC, 110V or 230V 50 / 60 Hz, fused, 15W maximum
Dimensions	109 x 48 x 70 mm
DC outputs	3 x 12 Volt, blinking or permanent (jumper-settable for each lamp)
Controls	3 x TTL / 3 x Clean Contacts (photocoupled, jumper-settable for each lamp)
Control current supported by each port	10 mA max, 5 mA nominal. An internal 1Kohm protection resistor is fitted in series on each port.
Connections	Terminal blocks (supplied)
Controls	Blinking rate adjustment (recessed trimmer)
Blinking Rate	From 3 flashes/sec to 1 flash/sec
Main Features	Capable of powering up to three LED lamps at the same time Independent controls (blinking / stable and TTL / Clean contact) for each lamp

7 WEEE Directive – Informativa RAEE



In line with EU Directive 2002/96/EC for waste electrical and electronic equipment (WEEE), this electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product by returning it to the point of sale or to your local municipal collection point for recycling.

In Übereinstimmung mit der Richtlinie 2002/96/EG des Europäischen Parlaments und des Rates über Elektro- und Elektronik-Altgeräte (WEEE) darf dieses Elektrogerät nicht im normalen Hausmüll oder dem Gelben Sack entsorgt werden. Wenn Sie dieses Produkt entsorgen möchten, bringen Sie es bitte zur Verkaufsstelle zurück oder zum Recycling-Sammelpunkt Ihrer Gemeinde.

Conformément à la Directive 2002/96/EC sur les déchets d'équipements électriques et électroniques (DEEE), ce produit électrique ne doit en aucun cas être mis au rebut sous forme de déchet municipal non trié. Veuillez vous débarrasser de ce produit en le renvoyant à son point de vente ou au point de ramassage local dans votre municipalité, à des fins de recyclage.

In navolging van richtlijn 2002/96/EG van het Europees Parlement en de Raad betreffende afgedankte elektrische en elektronische apparatuur (AEEA) mag dit elektrische product niet als ongescheiden huisvuil worden weggedaan. Breng dit product terug naar de plaats van aankoop of naar het gemeentelijke afvalinzamelingspunt voor recycling.

In ottemperanza alla Direttiva UE 2002/96/EC sui rifiuti di apparecchiature elettriche ed elettroniche (RAEE), questo prodotto elettrico non deve essere smaltito come rifiuto municipale misto. Si prega di smaltire il prodotto riportandolo al punto vendita o al punto di raccolta municipale locale per un opportuno riciclaggio.

De conformidad con la Directiva 2002/96/CE de la UE sobre residuos de aparatos eléctricos y electrónicos (RAEE), este producto eléctrico no puede desecharse con el resto de residuos no clasificados. Deshágase de este producto devolviéndolo al punto de venta o a un punto de recogida municipal para su reciclaje.

I henhold til EU-direktiv 2002/96/EF om affald af elektrisk og elektronisk udstyr (WEEE) må dette udstyr ikke bortskaffes som usorteret husholdningsaffald. Bortskaf dette produkt ved at returnere det til salgsstedet eller til det lokale indsamlingssted, så det kan genbruges.

I linje med EU-direktiv 2002/96/EG om avfall som utgörs av eller innehåller elektriska eller elektroniska produkter (WEEE) får denna elektriska produkt inte bortskaffas som osorterat kommunalt avfall. Bortskaffa den i stället genom att lämna in den på försäljningsstället eller din lokala återvinningsstation.

EU:n sähkö- ja elektroniikkalaiteromudirektiivin (2002/96/EY) mukaisesti tätä elektroniikkalaitetta ei saa laittaa lajittelemattoman yhdyskuntajätteen sekaan. Hävitä laite palauttamalla se ostopaikkaan tai viemällä se elektroniikkaromun keräyspisteeseen.

De acordo com a Directiva Europeia 2002/96/EC sobre resíduos sólidos de equipamento eléctrico e electrónico (WEEE), este produto eléctrico não pode ser deitado fora juntamente com o lixo municipal indiferenciado. Por favor, no final da vida útil deste produto, devolva-o ao estabelecimento de aquisição, ou entregue no local de recolha apropriado para reciclagem designado pelo seu município.

V souladu se smrnici EU . 2002/96/ES o odpadních elektrických a elektronických zařízeních (OEEZ) se tento elektrický výrobek nesmí likvidovat jako netříděný komunální odpad. Při likvidaci tento výrobek vraťte prodejci nebo ho odevzdejte k recyklaci do komunálního sběrného zařízení.

Vastavalt EL direktiivile 2002/96/EÜ, mis käsitleb elektri- ja elektroonikaseadmete jäätmeid (WEEE), ei või antud toodet visata majapidamisjäätmete hulka. Palun tagastage antud toode taaskasutamise eesmärgil müügipunkti või kohaliku piirkonna jäätmekogumise punkti.

V súlade so smernicou 2002/96/ES o odpade z elektrických a elektronických zariadení (OEEZ) sa toto elektrické zariadenie nesmie odstranovať ako netriedený komunálny odpad. Výrobok odstráňte jeho vrátením v mieste nákupu alebo odovzdaním v miestnom zbernom zariadení na recyklovanie.

8 WARRANTY

The product is covered by a one year guarantee ex-works by the manufacturer. Do not open the device. The guarantee shall not be valid if the guarantee seals are broken. The manufacturer shall not be liable for damages of any type deriving from or in relation to the incorrect use of the product.

9 DECLARATION OF ROHS CONFORMITY

To minimize the environmental impact and take more responsibility to the earth we live, in accordance with European Union Directive 2002/95/EC, known commonly as RoHS (*Restriction of Hazardous Substances*),

We herewith declare,

Axel Technology srl
Via Caduti di Sabbiuno 6/F
40011 Anzola Emilia – Bologna - Italy

that the product listed below complies with the requirements of Directive 2002/95/EC, Article 4, paragraph 1 with reference to hazardous chemical substances:

Lead (Pb)
Hexavalent Chromium
(CrVI)
Mercury (Hg)
PBB (Flame Retardant)
PBDE (Flame Retardant)
Cadmium (Cd)

Product Description: **MR LIGHT LED**



Authorized Company Representative:

A handwritten signature in black ink, appearing to read 'Christian Sighinolfi'.

Title of Signatory:

Christian Sighinolfi –
Technical Manager

Date:

30 April 2012

10 AXEL TECHNOLOGY IN TOUCH



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