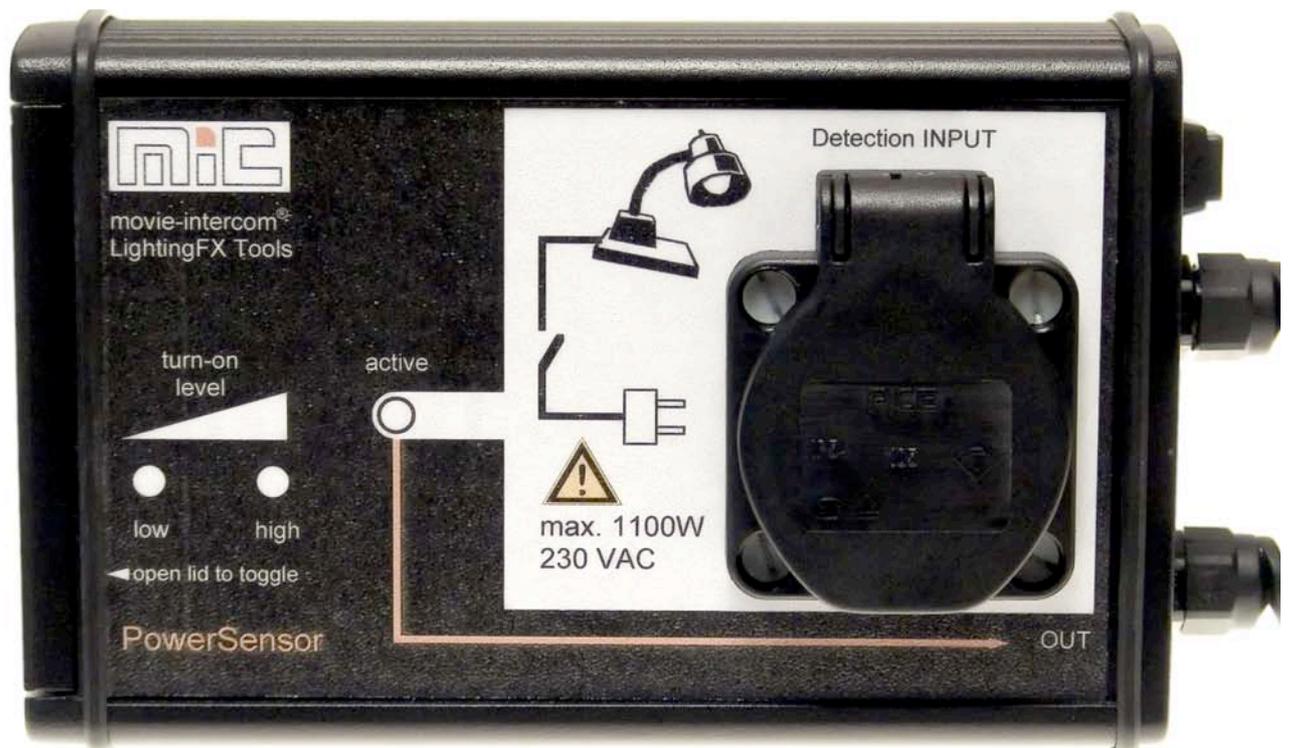


# User manual

# PowerSensor



LightingFX Tools  
for professional filmmakers

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The newest version of this user manual is available under  
<http://www.movie-inter.com/en/support/downloads/index.html>

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This user manual is also available in german language  
<http://www.movie-inter.com/de/support/downloads/index.html>



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## symbols in this handbook

### Safe time and read this manual!

Create much more efficiently and faster lighting effects with the LightingSensor.



CAUTION! please read this!



basic knowledge



application example

**Please read the safety regulations first!**

## included in delivery

- PowerSensor
- user manual

## Serial number

Each PowerSensor of movie-intercom has a serial number.  
The version number can be found on the label on the bottom of the unit.

## 1. safety first

**please read me first**

Please read this user manual **before** the first operation !

The PowerSensor ...

...only may be used at 220-240 volts alternating current power networks with 50 Hz for the versions for Europe or...



...only may be used at 115 volts alternating current power networks with 60 Hz for the US version

...is a precise electrical measurement unit and should be handled with care.

...requires an LFXHub®

...can automatically synchronize practicals (220...240VAC/50 Hz for the European version or 115VAC/60Hz for the US version) with a maximum power consumption of up to 1100 watts (european) or 500 watts (US version) with the film lighting.

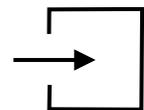
...provides plug & play functionality. Simply plug in the practical in the built-in main socket of the PowerSensor and connect the control cable to an LFXHub®

...can change its turn-on threshold to detect the state of a TV set or computer monitor as well. Thus TV lighting effects with the LFXHub can be automatised.



...must not be operated in extremely warm and wet environments!

...is for indoor use only.

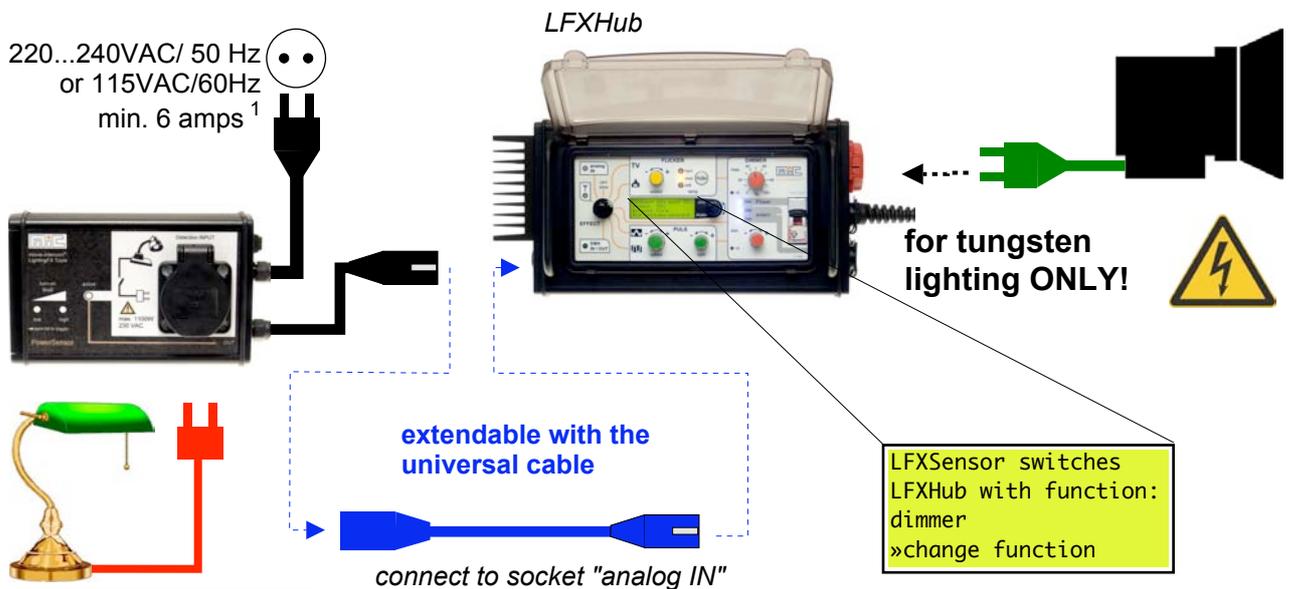


Protect the PowerSensor against dirt and humidity otherwise there might occur a malfunction.

## 2. quick start

1.

connect the PowerSensor to LFXHub



**ATTENTION**  
Do not exceed the maximum load at the detection input

@ 220-240VAC  
**max. 1100 watts**  
(European versions)

@ 115VAC  
**max. 500 watts**  
(US version)



1. turn "EFFECT" to position "analog IN"
2. choose function in the menu using the JOG

3.

setting up the automatically switched circuit

1. plug in practical or TV set in the PowerSensors' main socket.
2. set turn-on level to "high" if the sensor remains active with an inactive load

<sup>1</sup> label with operation voltage is located at the bottom of the unit. Please only use the voltage noted on the label.

### 3. function overview

The PowerSensor automatically synchronizes film lighting by measuring the power consumption in the power cord of a practical - plug & play.

The change of this electrical load - e.g. the practical is switched off with its original switch - is detected and so changes the output signal of the PowerSensor from inactive to active.

The control signal of the PowerSensor sends an "ON" or "OFF" command to a connected LFXHub and so turns on or off the connected film lighting.



Because of this measurement feature there is no need to modify the wiring of a practical, TV set or computer monitor.

#### Advantage for the actors and lighting technicians

The actress simply uses the original switch of the practical to turn it on or off. So the film lighting is automatically synchronized with the alternating lighting situation of the scene. Nobody has to care about the right moment of synchronization of film lighting and the lighting effect of the practical; the cast can keep its concentration on acting.

With the PowerSensor you can...

- ...automatically synchronise a lighting effect of a practical with the film lighting. This new technology means that scenes with alternating lighting situations can be accomplished in a single shot.
- ...automatically turn on or off any lighting effect generated by the LFXHub.

application examples:

- An actor turns on a practical on the sideboard with the original switch. The PowerSensor detects the load and so synchronises the film lighting connected at a PowerSwitch or LFXHub.
- An actress turns off a TV set with the original remote control. This signals the PowerSensor attached to the TV power cord to deactivate the flicker feature film effect of the LFXHub.



HINT 1:

Always start setting up an automatically switched lighting circuit with turn-on level "low" (standard). Not until this turn-on level does not work set the turn-on level to "high".



HINT 2:

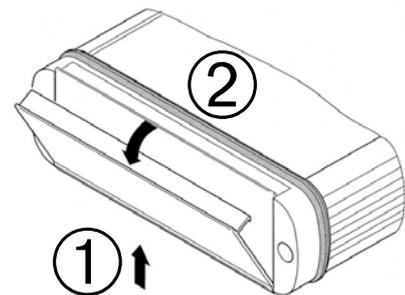
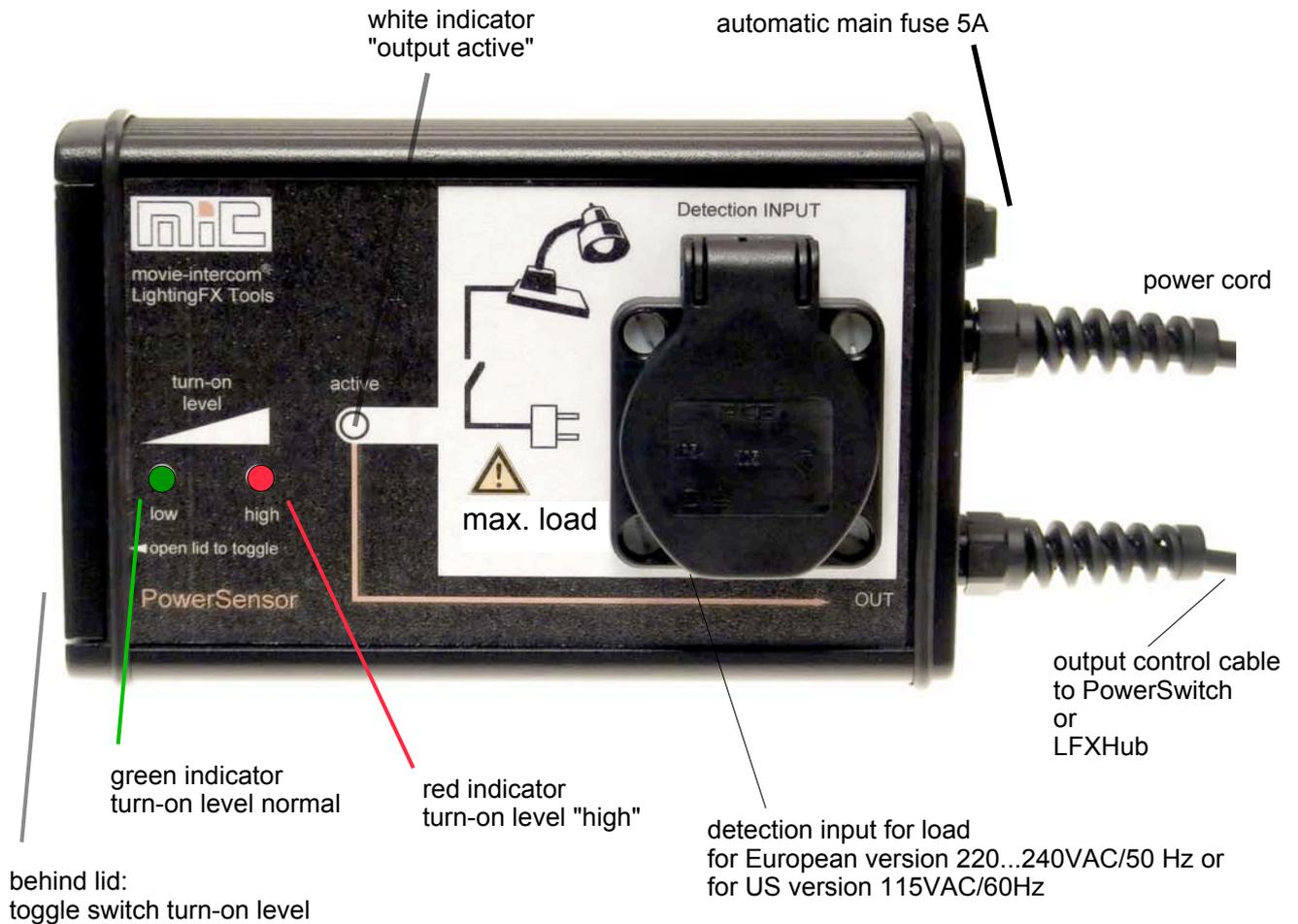
Sometimes practicals with low voltage halogen lamps use a switch in the secondary coil of the transformer. Eventually the turn-on level has to be set to "high" for reliable function.

HINT 3:

A practical used with the PowerSensor can be dimmed by an LFXHub. Plug in the mains plug of the LFXHub in the detection input of the PowerSensor. At the LFXHub turn "EFFECT" to position "dimmer", plug in the practical to the power output of the LFXHub and set the desired brightness with "dimmer max". Now the practical turns on or off with reduced brightness and the film lighting is synchronised with an additional LFXHub or a PowerSwitch via the control output of the PowerSensor.



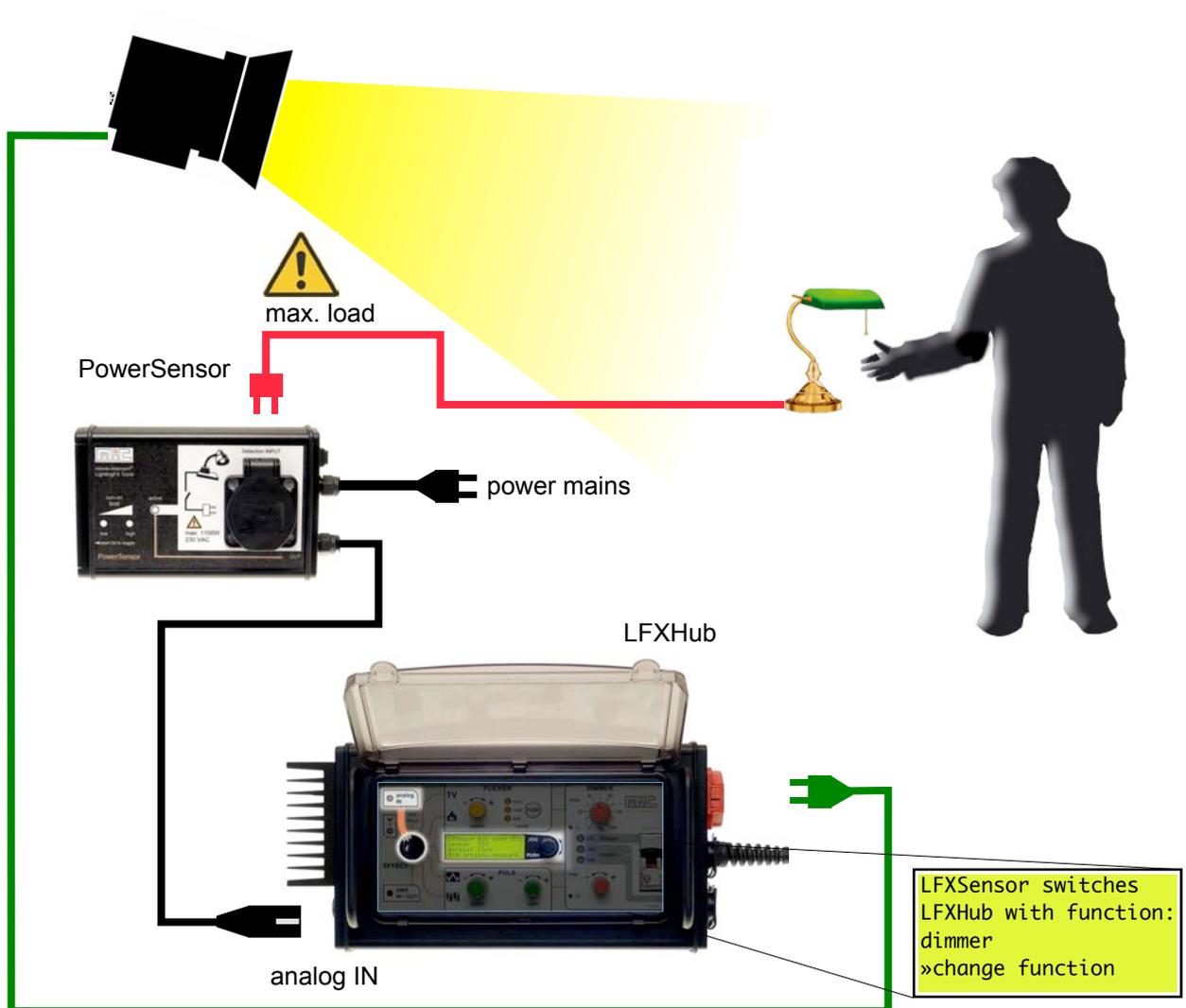
## 4. controls, indicators and interfaces of the PowerSensor



How to open the lid without a tool  
① push in direction upwards  
② then turn lid to open.

toggle switch turn-on level (sensivity)

## 5. Synchronisation setup of the PowerSensor with practicals



### setting up an automatically switched lighting circuit

1. Connect the PowerSensor control cable to the socket "analog IN" of an LFXHub.
2. Plug in the practical into the detection input of the PowerSensor. Turn off the practical. If the white indicator "active" is now off the circuit is already set-up.
3. Turn on the practical. The white indicator "active" comes on, the film lighting connected at an LFXhub turns on.
- (4.) If the white LED "active" is on when the practical is off > change the turn-on level to "high" using the toggle switch behind the lid.

All connected film lighting can be dimmed additionally using the dimmer max knob. The default function is "dimmer" > internal or any external dimmer pack will be switched on or off.

## 6. Changing the turn-on threshold

The turn-on level defines the value when the PowerSensor starts to activate the control output.

*for European and US versions:*

The minimum load is 25 watts (resistive load with turn-on level "low"). Loads smaller than 25 watts are not detected.

For most of the lamps without transformers (inductive load) the turn-on level "low" works fine.

The turn-on level is indicated with the LEDs "low" (green indicator) or "high" (red indicator).

European version:

If the turn-on level is toggled to "high" the minimum load is about 40 watts @ 230VAC.

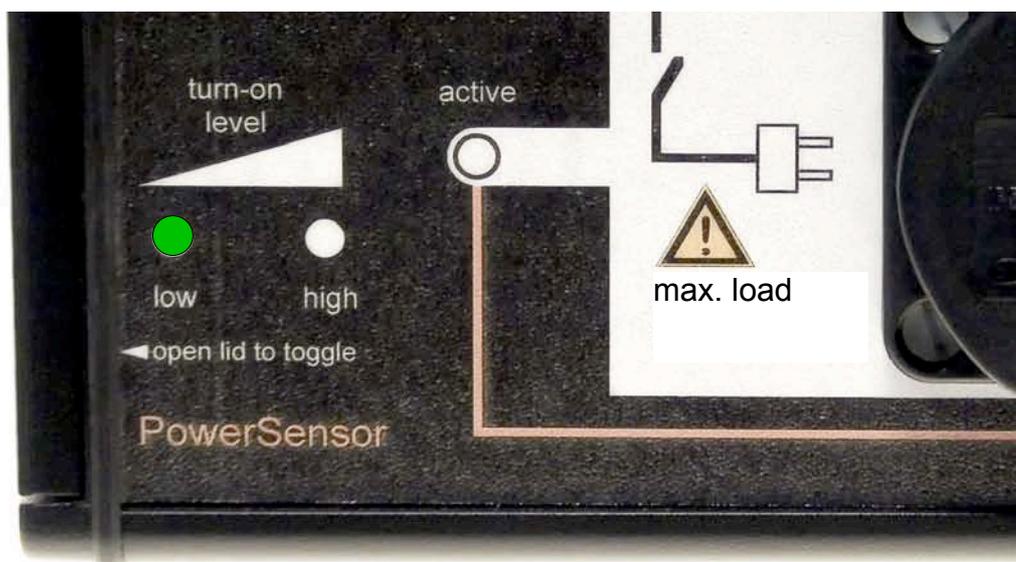
US version:

If the turn-on level is toggled to "high" the minimum load is about 60 watts @ 115VAC.

Use this turn-on level if the PowerSensor remains active" with an "inactive" load.

The stand-by power consumption of this load exceeds the minimum load.

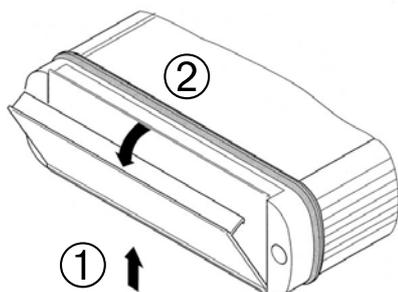
E.g. this will take effect using halogen lamps with transformer, a TV set or a computer monitor.



Use the toggle switch behind the lid to change the turn-on level (threshold).

How to open the lid without a tool

- ① push in direction upwards
- ② then turn lid to open.

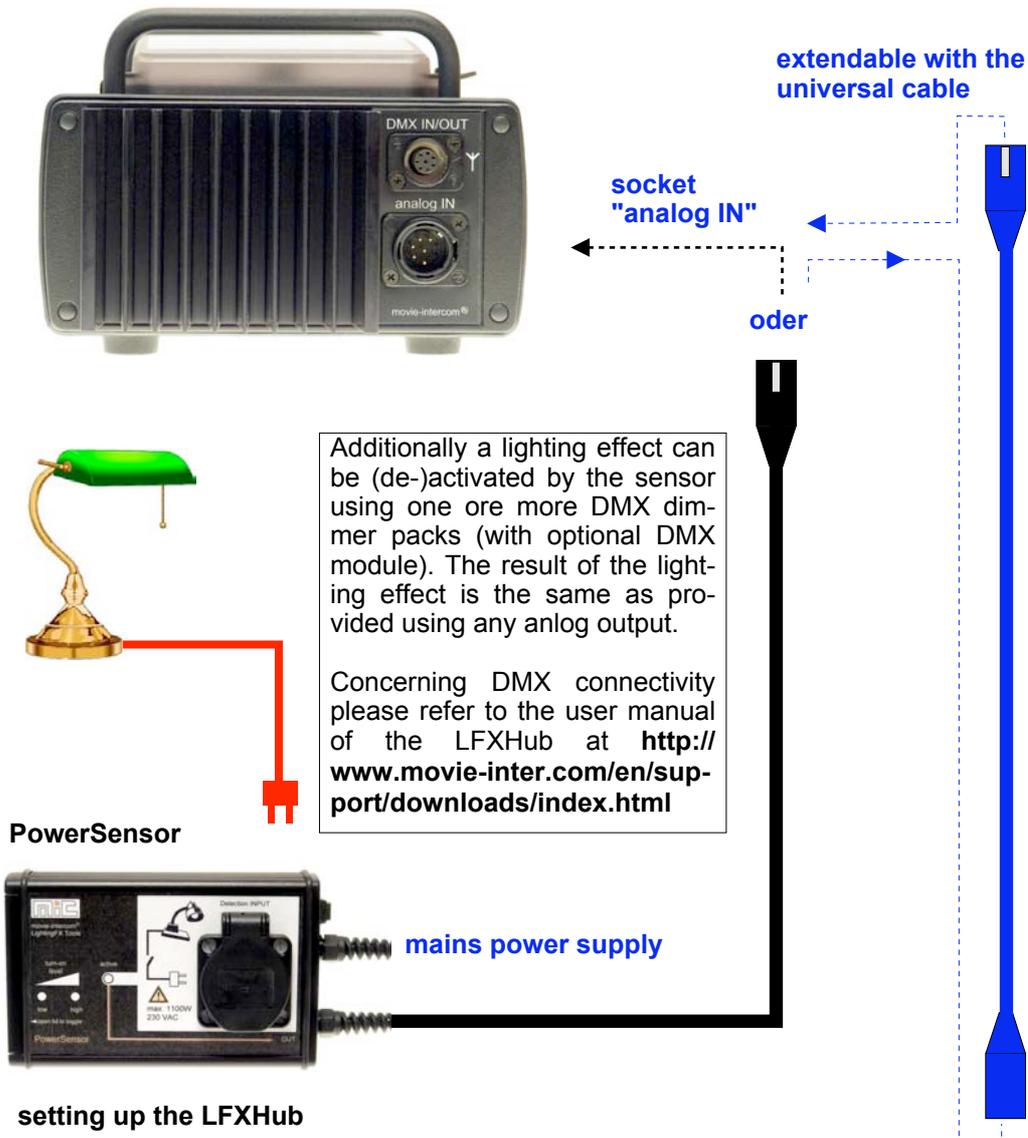


## 7. Connection to the LFXHub / settings at the LFXHub

For the operation of the PowerSensor with an LFXHub plug in the connector of the Sensor to the "analog IN" of the LFXHub.  
**The settings at the LFXHub are described on the next page.**



### connection of LFX Tools to "analog IN"



### setting up the LFXHub



- turn "EFFECT" to position "analog IN"
- If there is no LFX tool connected "analog IN", the orange LED is flashing
- Each movie-intercom LFX tool connected at "analog IN" is automatically recognized by the LFXHub. Depending on the connected module suitable functions are initialised in the LFXHub.

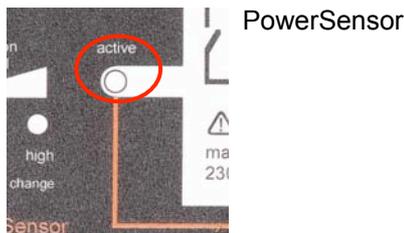
Please connect LFX tool to "analog IN" on your left hand side!

Plug in the control cable of the PowerSensor to the socket "analog IN" of the LFXHub.

## 7. Connection to the LFXHub / settings at the LFXHub (contd.)

**The LFXHub can (de-)activate any lighting effect of the LFXHub.**

- With an active control signal of a sensor (the white LED "active" is on at the sensor) the LFXHub activates any function as before selected in the menu.
- With an inactive control signal of a sensor (the white LED "active" is off at the sensor) all lamps connected at the LFXHub are off.



The function "DIMMER" simply turns on/off the internal (and all external) dimmer packs.  
Accomplish dimmed switched circuits without turn on/off delay.

The rotary switch "EFFECT" is in position "analog IN".

If a LightingSensor is connected at "analog IN" the menu looks like this:

```

LFXSensor switches
LFXHub with function:
flicker TV
»change function
    »change function:
    flicker •TV    fire
    dimmer        »help
    puls  ^/^     ←
```

**The most easy way to set-up a special lighting effect is:**

1. select a category TV, fire, triangle, rectangle) with the rotary switch "EFFECT" and set-up the desired lighting effect within this category.
2. turn back the rotary switch "EFFECT" to position "analog IN"
3. select within the menu of "analog IN" the category which shall be (de-)activated as shown above



result

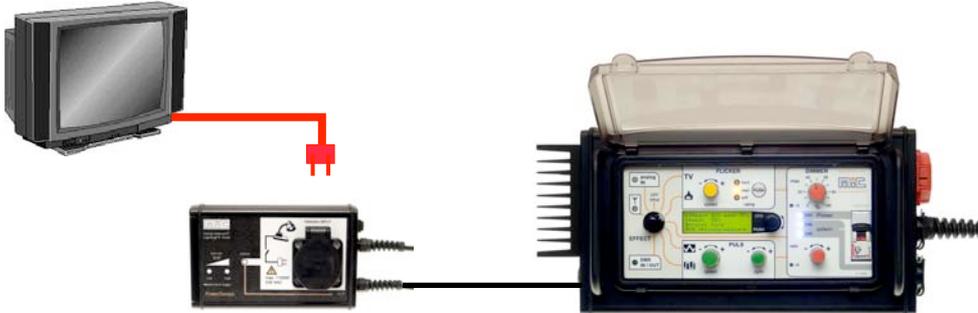
The Sensor now (de-)activates the lighting effect which has been set-up before in the desired category.

**The sensor always activates the recently used setting of the selected flicker-, puls- or stand-alone dimmer module.**

## 8. special applications of the PowerSensor with the LFXHub

### application example 1:

An actor turns off a TV set with the original remote control. This signals the PowerSensor attached to the TV power cord to deactivate the flicker feature film effect of the LFXHub.



that's the way it works:

- connect the TV set to the detection input of the PowerSensor, eventually set the turn-on level to position "high".
- turn "EFFECT" to position "Flicker TV"
- choose desired TV effect, preset or any other setting
- turn back "EFFECT" to "analog IN"
- choose desired module (in this example here "Flicker TV" with Preset "News")
- turn off TV set with original remote control > TV effect of the LFXHub is deactivated

Alternatively the setting of "speed", "sym", "DIMMER max.", "DIMMER min" and "ramp" can also be changed when the sensor sends an active signal. Extended settings in the menu of a module must be set before the rotary switch "EFFECT" will be turned back to position "analog IN".

### application example 2:

Connect a bulb to the detection input. Destroy the bulb of this practical with a hammer. Connected film lighting at the LFXHub will turn off synchronously.



### application example 3:

Screw in a practical's bulb in a socket. The temporarily intermittent electrical contact during the insertion of the bulb is synchronised with the connected film lighting.



## 9. Trouble shooting / maintenance

Possible problems using the LFXHub might be solved here.

### Basic conditions for operation

1. The operating voltage at the PowerSensors, the LFXHub is 220...240 VAC /50 Hz (Europe) or 115 VAC for the US version
2. Do not fall below a minimum load of 25 watts at the detection input of the PowerSensor.
3. Do not exceed the maximum load of 1100 watts at the detection input of the PowerSensor.
4. All connected lamps are operative and switched on.

symptom	possible source	solution
a connected lamp does not light	power plug of LFXHub or PowerSwitch is connected to a mains socket without power	use other mains socket
	automatic fuse has been triggered. Is there a white ring visible?	remove load at detection input, reset fuse by pushing in.
	The switch of the connected lamp is off	turn it on
	the connected lamp is inoperative	swap lamp
	the value of "dimmer max." at the LFXHub is too low	increase value of "dimmer max."
	the rotary switch "EFFECT" at the LFXHub is not on position "analog IN"	turn "EFFECT" to position "analog IN"
connected load does not deactivate the output	stand-by power consumption of load is too high	toggle the turn-on level to "high"

If you have a problem which can not be solved by this manual, please disconnect the LFXHub from the mains and contact movie-intercom.

### cleaning the unit

ONLY clean the unit when it is completely disconnected!

Use a clean slightly wet cloth. After that basic cleaning use a cloth dipped in spirit for the housing to clean.

### disposal

In order to avoid any possible effects resulting from the disposal of electrical and electronic equipment containing substances damaging the environment and human health, the European Parliament and Council directives

2002/96/EC on waste electrical and electronic equipment (WEEE) and

2002/95/EC on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) have been transferred into national law in all EU member states.

The product you have purchased was developed in line with the current state of the art in an environmen-



## 10. Specifications

### PowerSensor

general			
	Euro version order code: poses schuko connectors	UK version order code: poseb BS1363 connectors	US version order code: poseu NEMA 15-5P connectors
operation voltage	220...240VAC / 50 Hz		115VAC / 60 Hz
temperature range	0°C ...70°C		
dimensions (l x w x h without cable)	168 x 108 x 59 mm		
weight	480 g		
detection circuit			
max. load	1100 watts		500 watts
min. load (low mode)	25 watts		
min. load (high mode)	40 watts		60 watts
max. turn on delay	13 ms		

## 11. Address / Support

If there are any questions we are looking forward to answer your inquiry!

postal address	movie-intercom Urbanstr. 171B 10961 Berlin Germany	
phone 24h / 7 Tage	+49 (0)30 22 32 05 75	
fax	+49 (0)30 22 32 05 71	
e-mail	support@movie-inter.com	
web	<a href="http://www.movie-inter.com">http://www.movie-inter.com</a>	

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