



# lighting

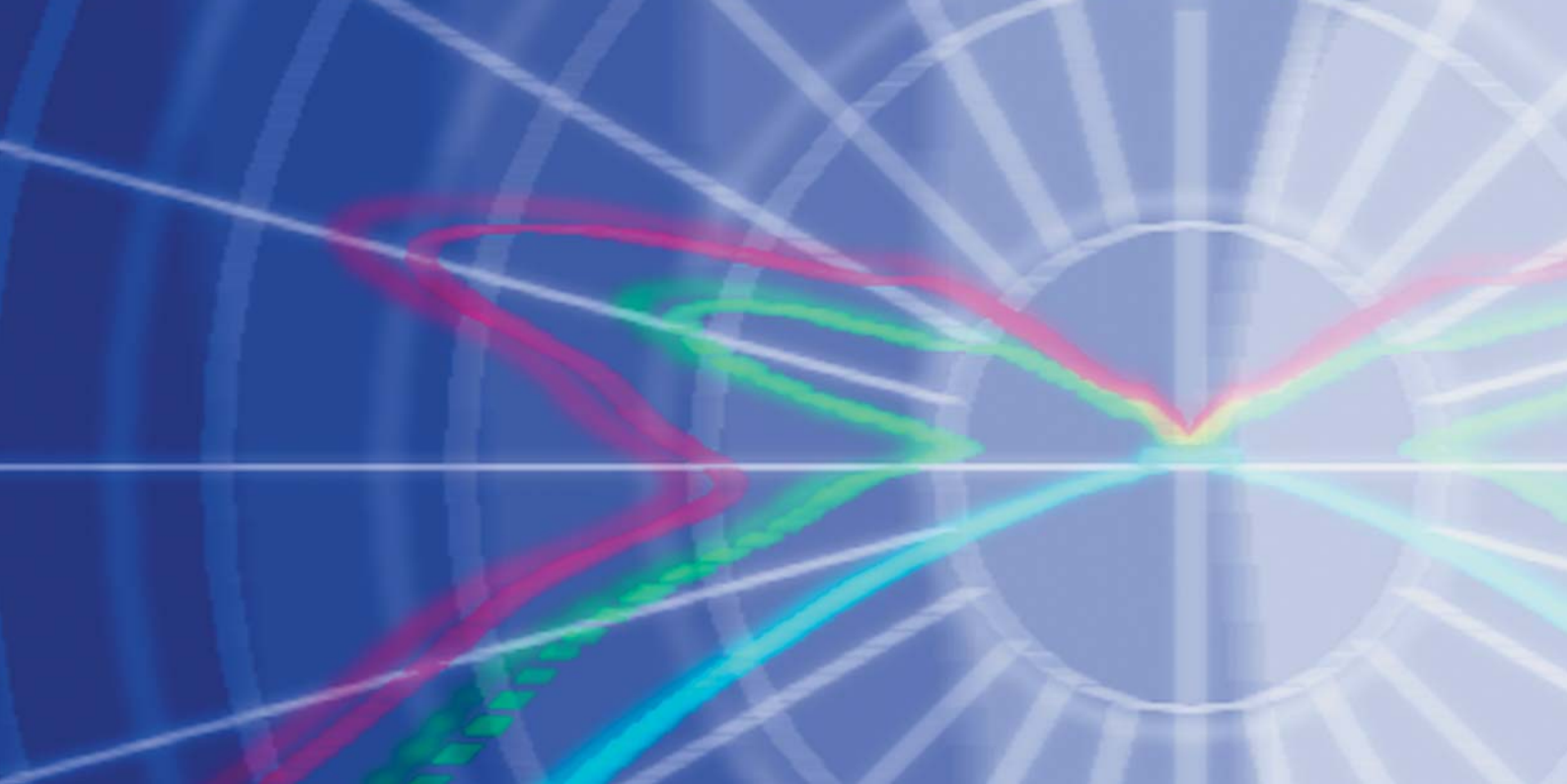




Weimar lighting factory

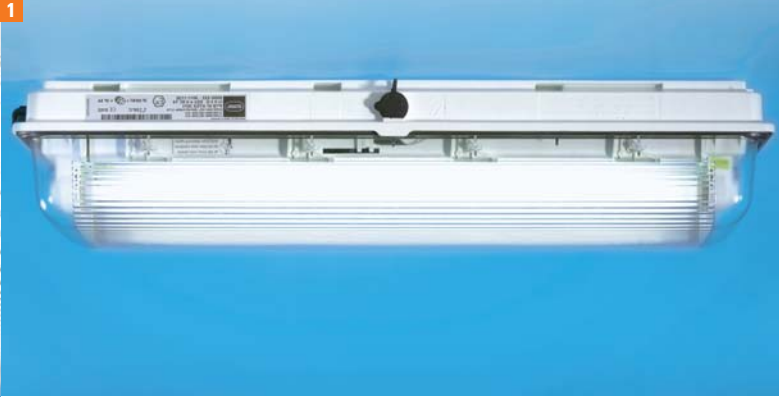
For almost 80 of its 125 year history, R. STAHL has led the way in everything to do with explosion protection. Safety standards are not problems for us; they're seen as challenges. We don't simply fulfil the bare minimum requirements of all relevant norms, rather, we help form the standards of tomorrow and set new milestones for today. The end result of this activity is that R. STAHL Schaltgeräte GmbH counts as one of the world's leaders in the explosion protection product market thus inspiring us to provide an extensive array of services dealing with »all things covering explosion protection«. Besides control+instrumentation devices and systems, we also manufacture a large assortment of lighting equipment designed for usage in hazardous areas.

In 1992, the opening of our new plant in Weimar enabled us to expand and optimise the production of explosion protected light fittings. This new factory boasts the most modern work stations and innovative computer-controlled manufacturing and warehousing technologies available today, and therefore ensures that all lights are constructed to meet today's stringent quality guidelines.



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# fluorescent lighting

exlux



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**1 EXLUX 6000/6400**  
Standard light fittings

**2 EXLUX 6008/6408**  
Emergency light fittings

Zone 1, Zone 2  
Zone 21, Zone 22

## Description

- > light fittings for 1 or 2 fluorescent lamps with a power output of 18 W, 36 W or 58 W
- > with electronic ballast
- > emergency light fittings from the EXLUX 6008/6408 series are outfitted with electronic ballasts and integrated emergency light electronics that include microprocessor-controlled monitoring and charging technology
- > compact, sturdy construction, impact-resistant, high degree of dust and water resistance
- > enclosure made of fibre-glass reinforced polyester resin
- > polycarbonate cover with prismatic structure
- > easy maintenance access due to central locking device
- > switch with safety lock
- > power is shut off when the light cover is opened

## Applications

- > as a standard lighting fixture
- > as group or central battery powered emergency light fittings

- > emergency light fittings from the EXLUX 6008/6408 series can be used as safety illumination
- > flexible mounting options due to an extensive selection of accessories

## Lighting technology

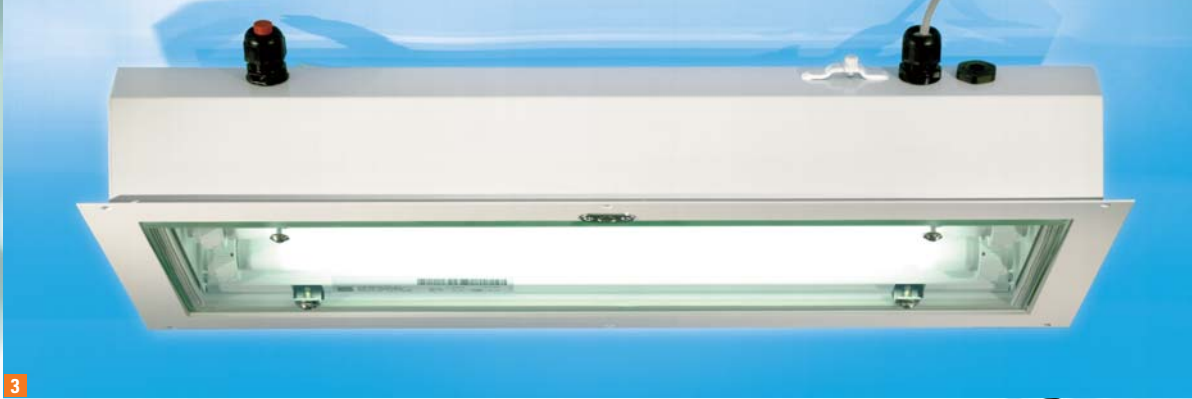
- > instant start-up with flicker-free operation
- > high luminous efficiency
- > optimal light distribution
- > light ray angle optimisation and anti-glare protection provided by prismatic design of cover

## Type of protection

- > IP 66/67 in accordance with EN 60598

<b>EN, IEC</b>	⊕ II 2 G; EEx ed (m) IIC T4, Zone 1
	⊕ II 3 G; EEx n A II T4, Zone 2
	⊕ II 2 D; IP 66 T <sub>0max</sub> *
<b>NEC</b>	Class I Zone 1 and 2, AEx de IIC T4, Div. 2, Groups A, B, C, D, T4
	Class II Div. 1 and Div. 2, Groups E, F, G
	Class III

\* Temperature class or maximum surface temperature depends on lamp selection



# fluorescent lighting

## exlux sheet steel versions

**3 EXLUX 6014/6414**  
Standard light fittings

**4 EXLUX 6012/6412**  
Inset light fittings

**EXLUX 6018/6418**  
Emergency light fittings

Zone 1, Zone 2

### Description

- > light fittings for 1 to 4 fluorescent lamps with a power output of 18W, 36W or 58W
- > with electronic ballast
- > compact, sturdy construction, impact-resistant, high degree of dust and water resistance
- > enclosure made of powder-coated sheet metal or stainless steel
- > safety glass-equipped, hinged cover
- > easy maintenance access due to central locking device
- > switch with safety lock shuts power off when the light cover is opened
- > emergency light fittings from the 6018/6418 series with electronic ballast and integrated emergency light electronics with microprocessor-controlled monitoring and charging technology

### Application

- > for lighting spray and enamelling lines
- > in pharmaceutical cleanrooms
- > installation as pendant, retrofit or inset recessed light fitting

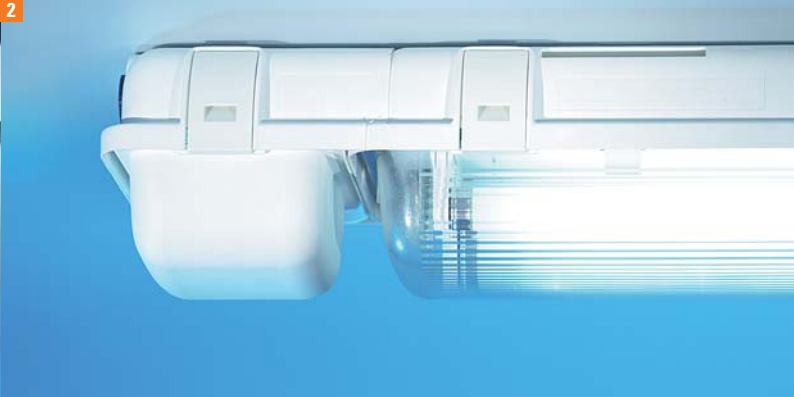
### Lighting technology

- > instant start-up with flicker-free operation
- > high luminous efficiency
- > optimal light distribution
- > reflector can fold outward

### Type of protection

- > IP 65 in accordance with EN 60598

**EN, IEC** ⚡ II 2 G; EEx ed (m) IIC T4, Zone 1  
⚡ II 3 G; EEx n A II T4, Zone 2



# fluorescent lighting

ecolux



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**1 ECOLUX 6600**  
Standard light fitting

**2 ECOLUX 6608**  
Emergency light fitting

Zone 2,  
Zone 21, Zone 22

## Description

- > light fittings for 1 or 2 fluorescent lamps with a power output of 18W, 36W or 58W
- > with electronic ballast
- > compact, sturdy construction,
- > high degree of dust and water resistance
- > enclosure made of fibre-glass reinforced polyester resin
- > polycarbonate cover with prismatic structure
- > optimal handling due to quick-action closures
- > emergency lights from the 6608 series with electronic ballast and integrated emergency light electronics with microprocessor-controlled monitoring and charging technology

## Applications

- > as a standard lighting fixture
- > as group or central battery powered emergency light fittings

- > emergency light fittings from the 6608 series can be used as safety light fittings
- > flexible mounting options due to an extensive selection of accessories

## Lighting technology

- > instant start-up with flicker-free operation
- > high luminous efficiency
- > optimal light distribution
- > light ray angle optimisation and anti-glare protection provided by prismatic design of cover

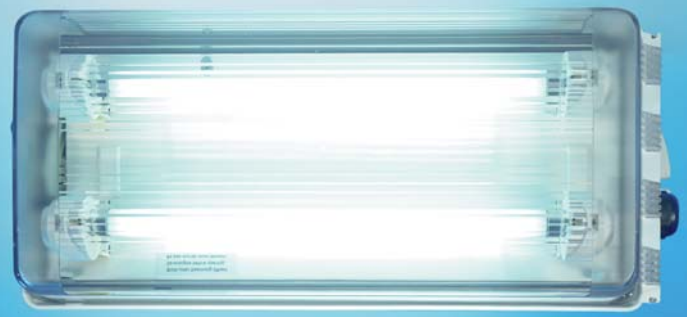
## Type of protection

- > IP 66 in accordance with EN 60598

**EN, IEC** II 3 G, EEx n A II T4  
 II 2 D, IP 66 T<sub>0max</sub>\*

**NEC** Class I Zone 2, Group IIC T5  
Div. 2, Groups A, B, C, D  
Class II Div. 1 and Div. 2, Groups E, F, G  
Class III

\* Temperature class or maximum surface temperature depends on lamp selection



# compact light fitting

## c-lux

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**3 C-LUX 6100/6500**  
Standard compact  
light fitting

**C-LUX 6108/6508**  
Compact emergency  
light fitting

Zone 1, Zone 2  
Zone 21, Zone 22

### Description

- > light fittings for 1 to 3 fluorescent lamps
- > power output of 8W up to 24W
- > compact, sturdy construction
- > high degree of dust and water resistance
- > enclosure made of fibre-glass reinforced polyester resin
- > polycarbonate cover with prismatic structure
- > easy maintenance access due to central locking device
- > emergency light fittings from the 6108/6508 series with electronic ballast and integrated emergency light electronics with microprocessor-controlled monitoring and charging technology

### Applications

- > as a standard lighting fixture
- > as rescue designation light with various pictograms available
- > as group or central battery powered emergency light fittings

- > emergency light fittings from the 6108/6508 series can be used as safety illumination
- > for wall and ceiling mounting

### Lighting technology

- > instant start-up with flicker-free operation
- > optimal light distribution
- > light ray angle optimisation and anti-glare protection provided by prismatic design of cover

### Type of protection

- > IP 66/67 in accordance with EN 60598

### EN, IEC

- ⊗ II 2 G, EEx ed (m) IIC T4
- ⊗ II 3 G, EEx n A II T4
- ⊗ II 2 D, IP 66 T<sub>0max</sub>\*

### NEC

- Class I Zone 2, Group IIC T4  
Div. 2, Groups A, B, C, D, T4
- Class II and Class III  
Div. 1 and Div. 2,  
Groups E, F, G, T5

\* Temperature class or maximum surface temperature depends on lamp selection



# pendant light fittings



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## 1 Pendant light fittings Series 6050 Zone 1, Zone 2 Zone 21, Zone 22

### Description

- > for self-ballasted mercury lamps and gas discharge lamps up to 160 W
- > pendant light fittings in a flameproof enclosure with integrated Ex e terminal chambers
- > housing is constructed of light metal with galvanised wire guard
- > safety glass cover made of temperature change resistant moulded glass
- > compensation optionally available in an additional housing

### Applications


- > as all-purpose lighting in high-mounting applications of open-air plants or manufacturing bays
- > appropriate for extreme low temperatures  
–25 °C bis +55 °C (6050/3)  
–40 °C bis +55 °C (6050/1)
- > approval for ATEX, IEC Ex and GOST-R

### Lighting technology

- > rotationally symmetrical light distribution
- > high luminous efficiency
- > long lamp service life
- > fitting can alternatively be fitted with self-ballasted mercury lamps, mercury vapour or high-pressure sodium lamps as well as compact lamps and halogen incandescent lamps

### Type of protection

- > IP 65/66 in accordance with EN 60598

**EN, IEC**  6050 II 2 G, EEx de IIC T\*  
II 2 D, IP 66 T<sub>0max</sub>\*

\* Temperature class or maximum surface temperature depends on lamp selection



**2 Pendant light fittings**  
**Series 6470/6480**  
 Zone 2  
 Zone 21, Zone 22

**Description**

- > for self-ballasted mercury lamps and gas discharge lamps up to 400 W
- > pendant light fittings in a flameproof enclosure with integrated Ex e terminal chambers
- > safety glass cover made of temperature change resistant moulded glass
- > housing is constructed of light metal with galvanised wire guard
- > compensation optionally available in an additional housing

**Applications**

- > as all-purpose lighting in high-mounting applications of open-air plants or manufacturing bays
- > appropriate for low surrounding temperatures –40 °C bis +55 °C
- > international approval ATEX, IEC Ex und UL

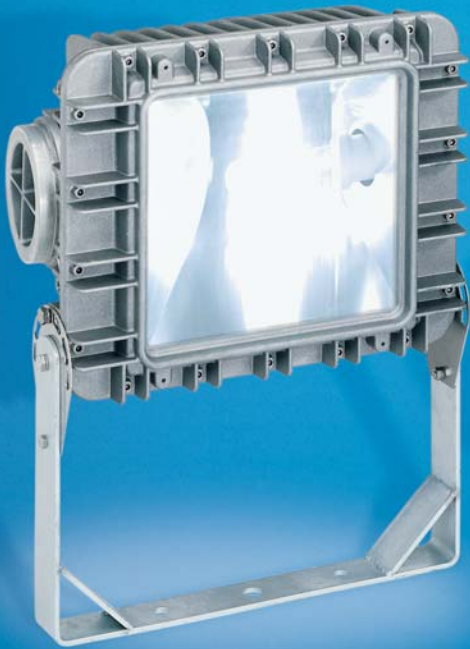
**Lighting technology**

- > very high luminous efficiency
- > rotationally symmetrical light distribution
- > long lamp service life
- > fitting can alternatively be fitted with self-ballasted mercury lamps, mercury vapour or high-pressure sodium lamps

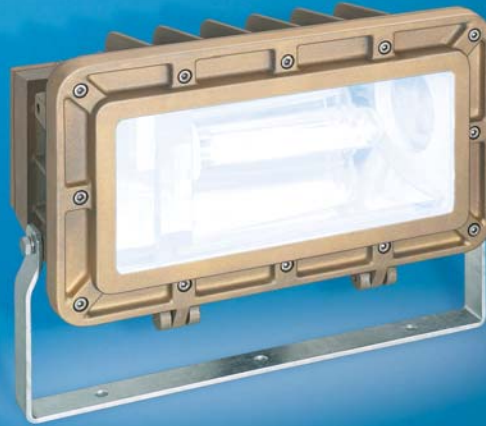
**Type of protection**

- > IP 66 in accordance with EN 60598

<b>EN, IEC</b>	<ul style="list-style-type: none"> <li>⊗ II 3 G, EEx nR T*</li> <li>⊗ II 2 D, IP 66 T<sub>0max</sub>*</li> <li>⊗ II 3 D, IP 66 T<sub>0max</sub>*</li> </ul>
<b>NEC</b>	<p>Class II Div. 2, Groups A, B, C, D, F          Zone 2</p> <p>Class III</p> <p><small>* depends on lamp selection T3/T4</small></p>



1



2



# floodlights

10

**1 Floodlight Series 6121/5**  
Zone 1, Zone 2  
Zone 21

**2 Series 6121/6**  
Zone 1, Zone 2

## Description

- > available in three sizes – for differing lamp power output – suitable for up to 1000 W
- > for halogen incandescent lamps of max. 1000 W, for high-pressure sodium lamps of max. 600 W, for halogen high-pressure iodide lamps of max. 400 W
- > floodlight in a flameproof enclosure with integrated Ex e terminal chambers
- > housing is constructed of light metal with galvanised wire guard
- > safety glass cover made of temperature change resistant moulded glass
- > compensation optionally available for gas discharge lamps

## Applications

- > high lightpoint level makes this light especially
- > effective for use as floodlight illumination
- > for strongly directed illumination
- > higher luminous efficiency available if needed

## Lighting technology

- > symmetrical light distribution
- > high luminous efficiency
- > strong, direct-where-you-need-it light beam
- > long lamp service life

## Type of protection

- > IP 65 in accordance with EN 60598

<b>EN, IEC</b>	6121/5	II 2 G, EEx de IIC T* II 2 D, IP 67 T <sub>0max</sub> *
	6121/6	II 2 G, EEx de IIB T*

\* depends on lamp selection T2...T4



3

**3 Floodlight Series 6521/3**  
Zone 2,  
Zone 21, Zone 22

**Description**

- > available in three sizes – for differing lamp power output – suitable for up to 1000 W
- > can be used as a standard floodlight or alternatively as a flat optics spotlight
- > for halogen incandescent lamps of max. 1000 W, for high-pressure sodium lamps of max. 600 W, for halogen high-pressure iodide lamps of max. 400 W
- > high quality stainless steel housing material
- > safety glass cover made of temperature change resistant moulded glass
- > compensation optionally available for gas discharge lamps
- > optional accessories: baffle screen, light visor, rotatable mounting bases, pole mounting attachment

**Applications**

- > use as floodlight illumination
- > achieves high lightpoint level

- > asymmetrical flat optics spotlight for illuminating extensive areas from a laterally mounted light position
- > strong, direct-where-you-need-it light beam
- > higher luminous efficiency available if needed

**Light technology**

- > symmetrical light distribution can be adjusted narrow or broad-beamed. Alternatively, an asymmetrical reflector can be inserted
- > high luminous efficiency with direct light
- > long lamp service life

**Type of protection**

- > IP 66 in accordance with EN 60598

**EN, IEC** II 3 G, EEx n R T\*, Zone 2  
 II 2 D, IP 66 T<sub>0max</sub>\*, Zone 21 and 22

\* Temperature class or maximum surface temperature depends on lamp selection



# hand lamps

## portable lamps

12

- 1 Portable lamps Series 6144**  
Zone 1, Zone 2
- 2 Portable lamps Series 6149**  
Zone 1, Zone 2  
Zone 21, Zone 22
- 3 Hand lamps Series 6140**  
Zone 0, Zone 1, Zone 2  
Zone 20, Zone 21,  
Zone 22
- 4 Hand lamps Series 6147**  
Zone 1, Zone 2  
Zone 21, Zone 22

### Description

- > designed for mobile use – even in hazardous areas
- > hand lamps/portable lamps with operational functions to match the task
- > sturdy, impact-resistant portable lights
- > high reliability and service life
- > light duration For up to 8 hours
- > rechargeable battery technology (6144)
- > microprocessor-controlled battery capacity indicator – five LEDs display current operation status and charging condition (6144)

### Lighting technology

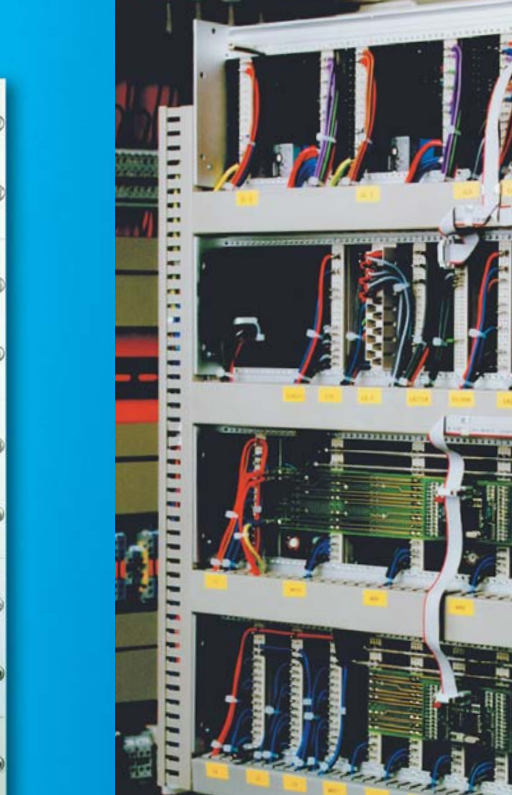
- > high luminous efficiency due to special reflector design
- > luminous intensity of up to 15,000 cd
- > continuous and blinking functions
- > equipped with an intensely bright Xenon lamp beam can be externally adjusted to a concentrated point or a wide angle area (6149)

### Applications

- > for maintenance and servicing tasks
- > for inspection and check patrols
- > use as an emergency light during power failures (6144)

EN, IEC	Symbol	Series	Specifications
	Ex	6147	II 2 G, EEx ed IIC T3/T4 II 2 D, IP 65 T 145°C
	Ex	6144	II 2 G, EEx ib IIC T4
	Ex	6149	II 2 G, EEx d IIC T* II 2 D, IP 66 T <sub>0max</sub> *
	Ex	6140	II 1 G, EEx ia IIC T4 II 1 D, IP 65 T 130°C

\* Temperature class or maximum surface temperature depends on lamp selection



# emergency light systems

## group and central battery systems

13

### Group battery system Series 6920

### Central battery system Series 6950

#### Description

- > group and central battery systems control, regulate and monitor the safety illumination system
- > if the mains power is interrupted, general lighting is switched over to safety illumination and battery backup
- > the functionality of the safety light system is automatically monitored and errors are identified
- > microprocessor-controlled rapid and maintenance-charge battery charging
- > special circuit monitoring function, alternatively each light can be individually monitored – even explosion-protected lights
- > documentation of all operation events in an electronic test logbook

#### Lighting technology

- > control of standard lights
- > use with rescue designation lights

- > an integrated address module makes monitoring of individual lights possible
- > various interfaces permit data transmission to external outputs

#### Applications

- > Safety illumination by means of these group or central battery systems meets DIN VDE 0108 and EN 50171 requirements. These systems are suitable for installation in the »non-Ex-area«, or as a power supply for safety illumination in the general industrial area and the hazardous area.

#### Type of protection

- > electronic apparatus cabinet IP 54
- > battery compartment IP 43

#### Standards

- > DIN VDE 0108
- > EN 50171



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# installation equipment

**1 Control equipment Series 8040**

**2 Plugs and sockets Series 8570**

**3 Junction boxes Series 8102/8118**

**4 Installation switch Series 8030/51**

**5 Safety distributor switch Series 8146**

**Terminal boxes Series 8146/8125**

Zone 1, Zone 2  
Zone 21, Zone 22

**Description**

- > installation switch series 8030 and control equipment series 8040 are designed for the switching of circuits
- > junction boxes 8102/8118 and terminal boxes of the 8146/8125 series enable safe distribution and connection
- > plugs and sockets in the 8575 series facilitate mobile power supply
- > safety distributor switches/automatic circuit breakers of the 8146 series serve to protect and safeguard electrical circuits – can be safely switched on/off in the hazardous area

**Applications**

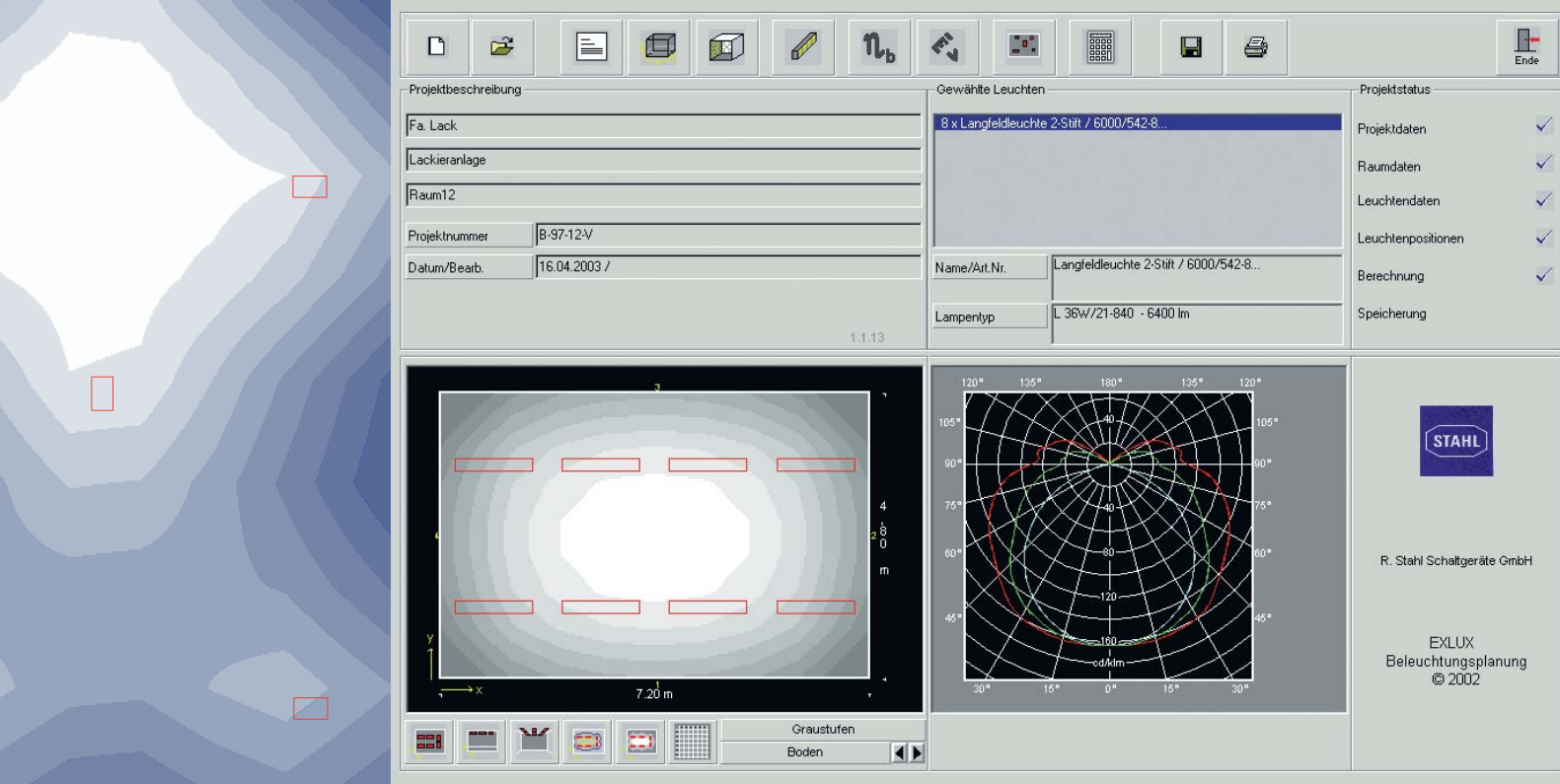
- > for switching, distributing and safeguarding of electrical circuits in hazardous areas
- > installation equipment and lighting all from the same reliable source – the complete solution advantage from R. STAHL!

**Type of protection**

- > IP 65 Series 8030/8040
- > IP 66/67 Series 8102/8118
- > IP 55/66 Series 8570
- > IP 65 Series 8146

EN, IEC	Symbol	Series	Protection
	⊕	8030/8040	II 2 G, EEx de IIC T6
	⊕	8102/8118/8146	II 2 G, EEx e II T6
	⊕	8570	II 2 G, EEx de IIC T6 II 2 D, IP 66 T 80°C
	⊕	8146	II 2 G, EEx de IIC T4
	⊕	all series	II 2 D, IP 65/66 T <sub>0max</sub> *

\* Temperature class or maximum surface temperature depends on lamp selection



# software

## for lighting calculation and planning

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**Software**  
EXLUX 3.1.10

**Lighting calculation  
and planning**  
Interior architecture  
Exterior areas  
Street planning

To facilitate planning and calculation of your lighting system, for both interior and exterior spaces, we offer a user-friendly and intuitive software. It's so easy, you can perform your own illumination planning in advance by yourself. Of course, your specific requirements will be checked by our engineers. Our planning specialists offer all their expertise to you, know the in-and-outs of the relevant specifications and standards, and can impart valuable tips to you as well. If you already have your own planning program, we will gladly provide you with the technical data of our lighting units. We already have a lighting calculation and planning software CD-ROM reserved for you, so please don't delay! And so you won't need to search, here's our telephone number and eMail address: +49 7942 943-0, [info.ex@stahl.de](mailto:info.ex@stahl.de)





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