

## COMPACT EX2

Safety light curtain and  
Multiple light beam  
safety devices



## About this installation and operating instructions manual

The general COMPACT Connecting and Operating Instructions are part of the scope of delivery and must be observed during commissioning, assembly, etc. The changes or additions that are relevant to use in explosion-hazard zones are essentially listed here.



All assembly, installation and commissioning work may only be done by specialist personnel qualified to do the job. It is imperative to observe the requirements of the COMPACT Connection and Operating Instructions as well as this addendum and, in particular, the installation standards EN 60079-14 for gases or EN 50281-1-2 for dust.

Notes regarding safety and warnings COMPACT EX2 are marked by this symbol .

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# 1 General




The provisions of the 1999/92 EC Directive additionally apply to operation of the COMPACT EX2 in explosive atmospheres. In the European member states, these have been formulated in corresponding national laws, for example the operating safety law ("BetrSichG") in the Federal Republic of Germany.

## 1.1 Use in accordance with the intended purpose

COMPACT EX2 was developed in conformity with the provisions of the EC Directive 94/9/EC (ATEX Directive). It corresponds to device group II, Category 3 and is intended for use in explosive atmospheres belonging to Zone 2 (gases) in accordance with EN50021 and Zone 22 (dust) in accordance with EN 50281-1-1. Not allowed is the use in case of "conductive dust". The technical data stated below, as indicated on the rating plate, applies.

## 1.2 Additional EX rating plate

The rating plate shown here contains the data for use in explosive atmospheres and is affixed in addition to the standard rating plate. The IP degree of protection IP54, which deviates from the standard rating plate, would still apply if the transmitter and/or receiver were to be damaged by an impact, according to the requirements of EN 50014.

Leuze electronic GmbH u. Co. KG Liebigstrasse 4 82256 Fuerstenfeldbruck / Germany	
Type COMPACT Cx - xxxx EX2, year of construction 2003	
 <b>CE II 3 G</b>	 <b>CE II 3 D</b>
<b>EEx nA II T4</b>	<b>T 135 °C</b>
$0^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$	
IP54	
 <b>Nicht unter Spannung öffnen!                  Do not open under tension!                  Ne pas ouvrir sous tension!</b>	

## 2 Assembly

Assemble only during a process break. That is to say, the transmitter and the receiver must have been assembled completely in conformity with the operating instructions before the process can restart. Note that the Safety-Interface is not permitted for operation in explosive atmospheres and so it must only ever be placed outside the explosive atmospheres.

The PG cable screw is intended for cables with an external diameter of 8 to 11 mm; other cables should not be used. The cables must be laid in such a way that they are not at risk of damage.

The PG cable screw of the transmitter and the receiver must be carefully tightened in such a way that the strain relief device can withstand the following test:

When subjected to stress with a value representing the diameter of the cable in mm multiplied by 10, at the very least 100 N, the cable must not be pulled out of the PG further than 6 mm at most in the course of 6 hours.



**Warning!**

*Do not open when the power is on.*

Opening transmitter or receiver under a live tension may produce **sparks** and may lead to explosion of gases or dust in the explosive atmospheres! Therefore, the housings may only ever be opened after the power supply tension has been disconnected outside the Ex-zone and safeguarded against reconnection. Wait for at least 60 seconds after switching off.

When the devices are fitted, the "Do not open under tension" warning must be easily legible on the transmitter and receiver.

**Warning:**

**Nichtspannungöffnen!**  
**Do not open under tension!**  
**Nepasovrisoustension!**

### 3 Maintenance

COMPACT EX2 safety light curtains do not require any maintenance. If necessary, the front plates may be cleaned, but only using a damp cloth. Otherwise the range of the device might be reduced, or excessively thick dust deposits arise.

**Warning:**



**Frontscheibe nur mit feuchtem Tuch reinigen!**  
**Clean screen with moist cloth only!**  
**Ne nettoyez la vitre qu'avec un chiffon humide!**

It is important to moisten cloths to prevent **electrostatic charging** of the front screens. This may cause explosive gases or dust to ignite!

When the device is assembled, the warning notice "Front plate should only be cleaned with a damp cloth" must be easily readable both on the transmitter and on the receiver.

## 4 Tests

You should regularly carry out a visual inspection of the connections and the cables, but without touching them.



### **Warning!**

*If in the course of the inspection you discover damage to the equipment or to the cables, do not touch the damaged components! Instead, all persons present should immediately leave the hazardous area, and the mains voltage should be switched off (outside the hazardous area), steps being taken to ensure that it cannot be switched on again. A break in process is needed before dismantling the equipment and investigating the fault outside the hazardous area, so that there is no danger of an explosion taking place.*

If necessary, contact our hotline.

**5 EC Declaration of Conformity**

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The manufacturer declares that the safety components of series **COMPACT EX2** in the form in which they are marketed by us conform with the relevant, basic safety and health requirements of the EC directives\*, and that the standards\* were used in their design and construction.

Owen, 01.02.2009



Dr. Harald Grübel  
General Manager

\* You can also download this EC Declaration of Conformity from the Internet under:  
<http://www.leuze.com/compact-ex2>



