



# ROBUST

Safety grid for rugged industrial environments



**Functional safety**

**Flexibility**

**Reliability**



## The features

### Safety

The new ROBUST is designed as an active opto-electronic type 2 (testing) or type 4 (self-monitoring) protective device in accordance with prEN 50100 Parts 1 and 2.

### Certificate

BG test certificate and/or Technical Control Association (TÜV) Hanover/Saxony Anhalt in accordance with prEN 50100 Parts 1 and 2.

### Flexibility

Robust and, nevertheless, variable; Leuze lumiflex offers both standard and customer-specific solutions.

ROBUST safety grids are available in the following makes:

- double-beam, with passive/active reflecting mirror
- triple-beam, with transmitter and receiver
- four-beam with passive reflecting mirror
- special purpose solutions on request

### Functional safety

- stable, torsion-free profile
- highest degree of protection (IP 67)
- absolute functional reliability provided by optical heating even under extreme ambient conditions



## The Advantages

### Easy connection

Clear and safe electrical connections are required in rugged industrial environments.

Various connection types are available:

- PG screw-type fitting with clear terminal connection area
- M 12 plug-in type connection (for type 2)
- DIN 43651 plug connection (as accessory for type 4)

### Easy mounting and adjustment

These light grids set standards at robust production sites as far as quality and functional safety are concerned:

- adjustable M6 sliding block for variable adjustment to local conditions and secure fastening;
- profile reflecting mirror are provided with parallel adjustment at the factory and are thus easy to align.

### Combination function upgrades

Type 2 light grids may be easily combined with external test monitoring units and muting controls. Thus several type 2 light grids may be serially connected.

Type 4 light grids may be easily supplemented with external safety interface modules from Leuze lumiflex.

## The functions

### Safety switching outputs

There is a PNP transistor output for type 2 devices. In contrast, type 4 light grids offer positively driven contact assemblies for integration into the safety circuit.

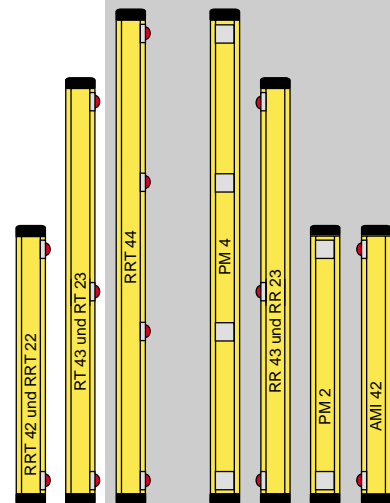
### Warning and fault messages

The functions may be clearly monitored in the receiver optics located next to the cable connection. LCD displays are integrated into each transmitter and receiver system of the type 2 versions.



## The various models

We have created a range of products which is aimed at satisfying the various fields of application required by our customers.



Make	Function	Range	Safety class	Beam distance
RRT 44	Transceiver	8 m	4	300 mm
PM 4-300	Passive reflecting mirror	8 m		300 mm
RT 43	Transmitter	60 m <sup>*1</sup>	4	400 mm
RR 43	Receiver	60 m <sup>*1</sup>	4	400 mm
RRT 42	Transceiver	60 m <sup>*2</sup>	4	500 mm
AMI 42	Active reflecting mirror	60 m <sup>*2</sup>	4	500 mm
RT 23	Transmitter	60 m <sup>*1</sup>	2	400 mm
RR 23	Receiver	60 m <sup>*1</sup>	2	400 mm
RRT 22	Transceiver	60 m <sup>*2</sup>	2	500 mm
PM 2	Passive reflecting mirror	8 m		500 mm

\*1 Range in relation to individual beam

\*2 Range with AMI 42 active reflecting mirror

