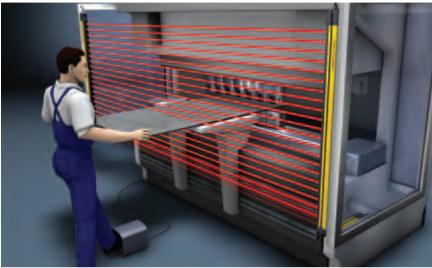
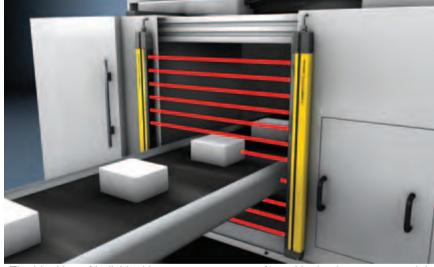
COMPACT plus-b



Safety Light Curtains with resolutions that can be reduced guarantee protection and tolerate work equipment in the protective field



The blanking of individual beams guarantees safety with simultaneous material flow

Typical areas of application

- Point of operation guarding with hand and finger protection, e.g. on hydraulic and mechanical presses or punching machines in the metals, leather and plastics industries
- Horizontal danger zone guarding, e.g. in robot entry areas

With special task requirements in material conveyance, the blanking of individual beams may be required in order to ensure an efficient, continuous process while simultaneously guaranteeing safety. The COMPACT plus-b type 4 Safety Light Curtains in accordance with IEC/EN 61496 have been designed with these requirements in mind. They provide blanking functions for blanking any amount of beams and beam areas of varying sizes. Work pieces, for example, consequently pass through the protective field without interruption. By setting a reduced resolution, thin plates or tubes can also move through the protective field.

COMPACT*plus*-b sensors can be cascaded with devices of the COMPACT series (for ordering information, see page 110). Here COMPACT*plus* acts as Host and COMPACT as Guest. The functions are given by COMPACT*plus* Host.

COMPACTplus Safety Light Curtains and Multiple Light Beam Safety Devices can be equipped with various functions to optimally perform specific tasks with regard to higher functionality, more flexible integraand easier operability. tion COMPACT plus series have a start/restart interlock, contactor monitoring and additional functions that can be easily activated with switches. External additional modules are therefore no longer required. Specific settings are made with the diagnostics and parametering software, SafetyLab. COMPACT plus can be connected to both conventional safety modules and to open safety bus systems via various interfaces (transistor/relay **AS-Interface** output, Safety at Work, PROFIsafe). These safety sensors can therefore be flexibly integrated into existing automation environments.



Important technical data, overview

| Type in accordance with IEC/EN 61496 | Type 4 | | | | |
|--|---|-------|-------|--|--|
| SIL in accordance with IEC 61508 and SILCL in accordance with IEC/EN 62061 | SIL 3 | | | | |
| Performance Level (PL) in accordance with EN ISO 13849-1 | PL e | | | | |
| Category in accordance with EN ISO 13849 | 4 | | | | |
| Resolution | 14 mm 30 mm 50 mm | | | | |
| Range | 06 m | 018 m | 018 m | | |
| Protective field height (type-dependent) | 150 3000 mm | | | | |
| Profile cross-section | 52 mm x 55 mm | | | | |
| Safety-related switching outputs (OSSDs) | 2 pnp transistor outputs, 2 relay outputs AS-i Safety Interface, PROFIsafe interface | | | | |
| Connection system | Cable gland Hirschmann plug MIN-style plug M12 plug | | | | |

| F | uı | nci | tion | IS |
|---|----|-----|------|----|
| _ | | | | - |

| Start/restart interlock (RES), selectable |
|--|
| Dynamic contactor monitoring (EDM), selectable |
| 2 transmission channels, selectable |
| Fixed blanking can be taught in |
| Floating blanking can be taught in |
| Single-beam or 2-beam reduced resolution |
| Additional 2-channel blanking circuit |

Functions extension with "SafetyLab" PC software (accessories)

Infrared interface for parametering and diagnostics

Teaching-in override function for floating blanking

Graphics-supported protective field editor

Reduced resolutions in protective field sub-areas

3-beam reduced resolution

Beam signals for position and height measuring

Special features

- Plug-in module with saved device parameters for fast device swap-out
- M12 local interface for connecting local sensors and signal devices

Features













Further information

Technical data

Accessories

information

Ordering information

Electrical connection

Dimensional drawings

Dimensional drawings:

Accessories ordering





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AS-Interface Safety at Work

Ordering information

COMPACT*plus-*b, consisting of transmitter and receiver. Included in delivery: 4 sliding blocks, 2 bracket sets BT-S, 1 SafetyKey, 1 connecting and operating instructions manual, 1 self-adhesive information plate

Functions: Start/restart interlock, contactor monitoring, 2 transmission channels, fixed blanking, floating blanking, reduced resolution

| | COMPACT <i>plus</i> -b | | | | COMPACT <i>plus</i> -b | | | |
|-----------------------|------------------------|-----------------|-------------|---|------------------------|-----------------|-------------|--|
| | Resolution | n: 14 mm | | | Resolution: 30 mm | | | |
| Protec- tive field | Range: 0 - | - 6 m | | | Range: 0 - | 18 m | | |
| height in mm | Art. no. | Article | Description | | Art. no. | Article | Description | |
| 150 | 68101000 | CPT14-150/T1 | Transmitter | 1 | 68301000 | CPT30-150/T1 | Transmitter | |
| | 68101420 | CPR14-150-b/T1 | Receiver | ı | 68301420 | CPR30-150-b/T1 | Receiver | |
| 225 | 68102000 | CPT14-225/T1 | Transmitter | t | 68302000 | CPT30-225/T1 | Transmitter | |
| | 68102420 | CPR14-225-b/T1 | Receiver | ı | 68302420 | CPR30-225-b/T1 | Receiver | |
| 300 | 68103000 | CPT14-300/T1 | Transmitter | 1 | 68303000 | CPT30-300/T1 | Transmitter | |
| | 68103420 | CPR14-300-b/T1 | Receiver | ı | 68303420 | CPR30-300-b/T1 | Receiver | |
| 450 | 68104000 | CPT14-450/T1 | Transmitter | Ī | 68304000 | CPT30-450/T1 | Transmitter | |
| | 68104420 | CPR14-450-b/T1 | Receiver | ı | 68304420 | CPR30-450-b/T1 | Receiver | |
| 600 | 68106000 | CPT14-600/T1 | Transmitter | | 68306000 | CPT30-600/T1 | Transmitter | |
| | 68106420 | CPR14-600-b/T1 | Receiver | | 68306420 | CPR30-600-b/T1 | Receiver | |
| 750 | 68107000 | CPT14-750/T1 | Transmitter | Ī | 68307000 | CPT30-750/T1 | Transmitter | |
| | 68107420 | CPR14-750-b/T1 | Receiver | | 68307420 | CPR30-750-b/T1 | Receiver | |
| 900 | 68109000 | CPT14-900/T1 | Transmitter | 1 | 68309000 | CPT30-900/T1 | Transmitter | |
| | 68109420 | CPR14-900-b/T1 | Receiver | | 68309420 | CPR30-900-b/T1 | Receiver | |
| 1050 | 68110000 | CPT14-1050/T1 | Transmitter | | 68310000 | CPT30-1050/T1 | Transmitter | |
| | 68110420 | CPR14-1050-b/T1 | Receiver | | 68310420 | CPR30-1050-b/T1 | Receiver | |
| 1200 | 68112000 | CPT14-1200/T1 | Transmitter | ı | 68312000 | CPT30-1200/T1 | Transmitter | |
| | 68112420 | CPR14-1200-b/T1 | Receiver | | 68312420 | CPR30-1200-b/T1 | Receiver | |
| 1350 | 68113000 | CPT14-1350/T1 | Transmitter | | 68313000 | CPT30-1350/T1 | Transmitter | |
| | 68113420 | CPR14-1350-b/T1 | Receiver | | 68313420 | CPR30-1350-b/T1 | Receiver | |
| 1500 | 68115000 | CPT14-1500/T1 | Transmitter | | 68315000 | CPT30-1500/T1 | Transmitter | |
| | 68115420 | CPR14-1500-b/T1 | Receiver | | 68315420 | CPR30-1500-b/T1 | Receiver | |
| 1650 | 68116000 | CPT14-1650/T1 | Transmitter | | 68316000 | CPT30-1650/T1 | Transmitter | |
| | 68116420 | CPR14-1650-b/T1 | Receiver | | 68316420 | CPR30-1650-b/T1 | Receiver | |
| 1800 | 68118000 | CPT14-1800/T1 | Transmitter | Ī | 68318000 | CPT30-1800/T1 | Transmitter | |
| | 68118420 | CPR14-1800-b/T1 | Receiver | | 68318420 | CPR30-1800-b/T1 | Receiver | |

Standard model /T1 with metric cable gland (M20).

Test rod included in scope of delivery

Standard model /T1 with metric cable gland (M20).

Test rod included in scope of delivery



Ordering information

COMPACT*plus-b*, consisting of transmitter and receiver. Included in delivery: 4 sliding blocks, 2 bracket sets BT-S, 1 SafetyKey, 1 connecting and operating instructions manual, 1 self-adhesive information plate

Functions: Start/restart interlock, contactor monitoring, 2 transmission channels, fixed blanking, floating blanking, reduced resolution

| | COMPACT | 'nlus-h | | | | | |
|-------------------------------|-------------------|-----------------|-------------|--|--|--|--|
| | Resolution: 50 mm | | | | | | |
| Protec- | Range: 0 - 18 m | | | | | | |
| tive field height in mm | Art. no. | Article | Description | | | | |
| 450 | 68504000 | CPT50-450/T1 | Transmitter | | | | |
| | 68504420 | CPR50-450-b/T1 | Receiver | | | | |
| 600 | 68506000 | CPT50-600/T1 | Transmitter | | | | |
| | 68506420 | CPR50-600-b/T1 | Receiver | | | | |
| 750 | 68507000 | CPT50-750/T1 | Transmitter | | | | |
| | 68507420 | CPR50-750-b/T1 | Receiver | | | | |
| 900 | 68509000 | CPT50-900/T1 | Transmitter | | | | |
| | 68509420 | CPR50-900-b/T1 | Receiver | | | | |
| 1050 | 68510000 | CPT50-1050/T1 | Transmitter | | | | |
| | 68510420 | CPR50-1050-b/T1 | Receiver | | | | |
| 1200 | 68512000 | CPT50-1200/T1 | Transmitter | | | | |
| | 68512420 | CPR50-1200-b/T1 | Receiver | | | | |
| 1350 | 68513000 | CPT50-1350/T1 | Transmitter | | | | |
| | 68513420 | CPR50-1350-b/T1 | Receiver | | | | |
| 1500 | 68515000 | CPT50-1500/T1 | Transmitter | | | | |
| | 68515420 | CPR50-1500-b/T1 | Receiver | | | | |
| 1650 | 68516000 | CPT50-1650/T1 | Transmitter | | | | |
| | 68516420 | CPR50-1650-b/T1 | Receiver | | | | |
| 1800 | 68518000 | CPT50-1800/T1 | Transmitter | | | | |
| | 68518420 | CPR50-1800-b/T1 | Receiver | | | | |
| 2100 | 68521000 | CPT50-2100/T1 | Transmitter | | | | |
| | 68521420 | CPR50-2100-b/T1 | Receiver | | | | |
| 2400 | 68524000 | CPT50-2400/T1 | Transmitter | | | | |
| | 68524420 | CPR50-2400-b/T1 | Receiver | | | | |
| 2700 | 68527000 | CPT50-2700/T1 | Transmitter | | | | |
| | 68527420 | CPR50-2700-b/T1 | Receiver | | | | |
| 3000 | 68530000 | CPT50-3000/T1 | Transmitter | | | | |
| | 68530420 | CPR50-3000-b/T1 | Receiver | | | | |

Standard model /T1 with metric cable gland (M20).

Ordering information

COMPACT Guest, consisting of transmitter and receiver. Included in delivery: 4 sliding blocks, 2 mounting sets BT-S

Functions: For cascading with COMPACT *plus*-b host, functions specified by host

| | COMPACT Guest Connection system: M12 plug | | | | | CT Guest ion system: M12 | plug | | | |
|-----------------------|--|----------------|-------------|--|----------|-----------------------------|-------------|--|--|--|
| | Resolution: 14 mm | | | | | Resolution: 30 mm | | | | |
| Protec- tive field | Range: 0 | Range: 0 - 6 m | | | | Range: 0 - 18 m | | | | |
| height in mm | Art. no. | Article | Description | | Art. no. | Article | Description | | | |
| 150 | 563101 | CT14-150S | Transmitter | | 563301 | CT30-150S | Transmitter | | | |
| | 566101 | CR14-150S | Receiver | | 566301 | CR30-150S | Receiver | | | |
| 225 | 563102 | CT14-225S | Transmitter | | 563302 | CT30-225S | Transmitter | | | |
| | 566102 | CR14-225S | Receiver | | 566302 | CR30-225S | Receiver | | | |
| 300 | 563103 | CT14-300S | Transmitter | | 563303 | CT30-300S | Transmitter | | | |
| | 566103 | CR14-300S | Receiver | | 566303 | CR30-300S | Receiver | | | |
| 450 | 563104 | CT14-450S | Transmitter | | 563304 | CT30-450S | Transmitter | | | |
| | 566104 | CR14-450S | Receiver | | 566304 | CR30-450S | Receiver | | | |
| 600 | 563106 | CT14-600S | Transmitter | | 563306 | CT30-600S | Transmitter | | | |
| | 566106 | CR14-600S | Receiver | | 566306 | CR30-600S | Receiver | | | |
| 750 | 563107 | CT14-750S | Transmitter | | 563307 | CT30-750S | Transmitter | | | |
| | 566107 | CR14-750S | Receiver | | 566307 | CR30-750S | Receiver | | | |
| 900 | 563109 | CT14-900S | Transmitter | | 563309 | CT30-900S | Transmitter | | | |
| | 566109 | CR14-900S | Receiver | | 566309 | CR30-900S | Receiver | | | |
| 1050 | 563110 | CT14-1050S | Transmitter | | 563310 | CT30-1050S | Transmitter | | | |
| | 566110 | CR14-1050S | Receiver | | 566310 | CR30-1050S | Receiver | | | |
| 1200 | 563112 | CT14-1200S | Transmitter | | 563312 | CT30-1200S | Transmitter | | | |
| | 566112 | CR14-1200S | Receiver | | 566312 | CR30-1200S | Receiver | | | |
| 1350 | 563113 | CT14-1350S | Transmitter | | 563313 | CT30-1350S | Transmitter | | | |
| | 566113 | CR14-1350S | Receiver | | 566313 | CR30-1350S | Receiver | | | |
| 1500 | 563115 | CT14-1500S | Transmitter | | 563315 | CT30-1500S | Transmitter | | | |
| | 566115 | CR14-1500S | Receiver | | 566315 | CR30-1500S | Receiver | | | |
| 1650 | 563116 | CT14-1650S | Transmitter | | 563316 | CT30-1650S | Transmitter | | | |
| | 566116 | CR14-1650S | Receiver | | 566316 | CR30-1650S | Receiver | | | |
| 1800 | 563118 | CT14-1800S | Transmitter | | 563318 | CT30-1800S | Transmitter | | | |
| | 566118 | CR14-1800S | Receiver | | 566318 | CR30-1800S | Receiver | | | |
| 2100 | 563121 | CT14-2100S | Transmitter | | 563321 | CT30-2100S | Transmitter | | | |
| | 566121 | CR14-2100S | Receiver | | 566321 | CR30-2100S | Receiver | | | |

Ordering information

COMPACT Guest, consisting of transmitter and receiver. Included in delivery: 4 sliding blocks, 2 mounting sets BT-S Functions: For cascading with COMPACT plus-b host, functions specified by host

| | COMPACT Guest Connection system: M12 plug | | | COMPACT Guest Connection system: M12 plug | | | | | | |
|------------------|--|-------------------|-------------|--|----------|-------------------|-------------|--|--|--|
| | Resoluti | Resolution: 50 mm | | | | Resolution: 90 mm | | | | |
| Protective field | Range: (| e: 0 - 18 m | | | Range: 0 |) - 18 m | | | | |
| height in mm | Art. no. | Article | Description | | Art. no. | Article | Description | | | |
| 450 | 563504 | CT50-450S | Transmitter | | | | | | | |
| | 566504 | CR50-450S | Receiver | | | | | | | |
| 600 | 563506 | CT50-600S | Transmitter | | | | | | | |
| | 566506 | CR50-600S | Receiver | | | | | | | |
| 750 | 563507 | CT50-750S | Transmitter | | 563907 | CT90-750S | Transmitter | | | |
| | 566507 | CR50-750S | Receiver | | 566907 | CR90-750S | Receiver | | | |
| 900 | 563509 | CT50-900S | Transmitter | | 563909 | CT90-900S | Transmitter | | | |
| | 566509 | CR50-900S | Receiver | | 566909 | CR90-900S | Receiver | | | |
| 1050 | 563510 | CT50-1050S | Transmitter | | 563910 | CT90-1050S | Transmitter | | | |
| | 566510 | CR50-1050S | Receiver | | 566910 | CR90-1050S | Receiver | | | |
| 1200 | 563512 | CT50-1200S | Transmitter | | 563912 | CT90-1200S | Transmitter | | | |
| | 566512 | CR50-1200S | Receiver | | 566912 | CR90-1200S | Receiver | | | |
| 1350 | 563513 | CT50-1350S | Transmitter | | 563913 | CT90-1350S | Transmitter | | | |
| | 566513 | CR50-1350S | Receiver | | 566913 | CR90-1350S | Receiver | | | |
| 1500 | 563515 | CT50-1500S | Transmitter | | 563915 | CT90-1500S | Transmitter | | | |
| | 566515 | CR50-1500S | Receiver | | 566915 | CR90-1500S | Receiver | | | |
| 1650 | 563516 | CT50-1650S | Transmitter | | 563916 | CT90-1650S | Transmitter | | | |
| | 566516 | CR50-1650S | Receiver | | 566916 | CR90-1650S | Receiver | | | |
| 1800 | 563518 | CT50-1800S | Transmitter | | 563918 | CT90-1800S | Transmitter | | | |
| | 566518 | CR50-1800S | Receiver | | 566918 | CR90-1800S | Receiver | | | |
| 2100 | 563521 | CT50-2100S | Transmitter | | 563921 | CT90-2100S | Transmitter | | | |
| | 566521 | CR50-2100S | Receiver | | 566921 | CR90-2100S | Receiver | | | |
| 2400 | 563524 | CT50-2400S | Transmitter | | 563924 | CT90-2400S | Transmitter | | | |
| | 566524 | CR50-2400S | Receiver | | 566924 | CR90-2400S | Receiver | | | |
| 2700 | 563527 | CT50-2700S | Transmitter | | 563927 | CT90-2700S | Transmitter | | | |
| | 566527 | CR50-2700S | Receiver | | 566927 | CR90-2700S | Receiver | | | |
| 3000 | 563530 | CT50-3000S | Transmitter | | 563930 | CT90-3000S | Transmitter | | | |
| | 566530 | CR50-3000S | Receiver | | 566930 | CR90-3000S | Receiver | | | |

COMPACT*plus*-b - model varieties

| Article | Description | Safety-related switching outputs (OSSD), connection system |
|----------------|-------------------------------------|--|
| CPT/ T1 | Transmitter | Cable gland (M20) |
| CPR/ T1 | Receiver | Transistor output, cable gland (M20) |
| CPR/R1 | Receiver | Relay output, cable gland (M25) |
| CPT/ T2 | Transmitter | Hirschmann plug, 12-pin |
| CPR/ T2 | Receiver | Transistor output, Hirschmann plug, 12-pin |
| CPR/ R2 | Receiver | Relay output, Hirschmann plug, 12-pin |
| CPT/ T3 | Transmitter | MIN-style plug, 3-pin |
| CPR/ T3 | Receiver | Transistor output, MIN-style plug, 7-pin |
| CPR/R3 | Receiver | Relay output, MIN-style plug, 12-pin |
| CPT/ T4 | Transmitter | M12 plug, 5-pin |
| CPR/ T4 | Receiver | Transistor output, M12 plug, 8-pin |
| CPT/ AP | Transmitter | Integrated AS-Interface, M12 plug, 5-pin |
| CPR/A1 | Receiver with AS-i Safety Interface | Integrated AS-Interface, M12 plug, 5-pin |
| CPR/ P1 | Receiver with PROFIsafe interface | Integrated PROFIBUS DP interface, M12 plug, 5 pin |
| CPT H/ | Transmitter, cascadable | All |
| CPR H | Receiver, cascadable | All |

Delivery time for devices with MIN-style plug: approx. 6 weeks

Article list for COMPACT plus-b

Type 4 Safety Light Curtains

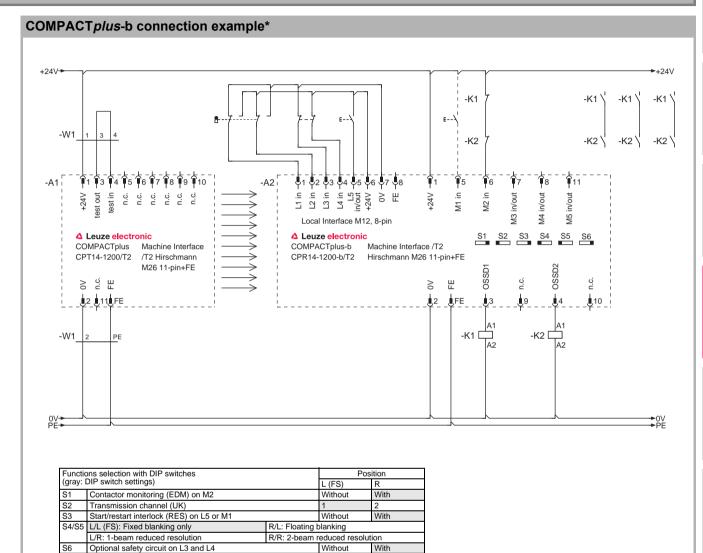
| Article | Description |
|------------------------|--|
| СР | COMPACT <i>plus</i> -b |
| | Davidas 4 |
| a | Device type Transmitter |
| T | |
| R | Receiver |
| rr | Resolution/range |
| 14 | 14 mm / range 0 - 6 m |
| 30 | 30 mm / range 0 - 18 m |
| 50 | 50 mm / range 0 - 18 m |
| hhhh | Protective field height |
| 150180 | 0 1501800 mm for 14 mm resolution |
| 150180 | 0 1501800 mm for 30 mm resolution |
| 450300 | 0 4503000 mm for 50 mm resolution |
| k | Cascading option |
| н | Host (from 225 mm protective field height) |
| f | Function package (receiver only) |
| b | Blanking |
| tt | Safety-related switching outputs (OSSD), connection system |
| T1 | Transistor output, cable gland |
| T2 | Transistor output, Hirschmann plug (DIN 43651) |
| T3 | Transistor output, MIN-style plug (MIN series) |
| T4 | Transistor output, M12 plug |
| R1 | Relay output, cable gland, receiver only |
| R2 | Relay output, Hirschmann plug (DIN 43651), receiver only |
| R3 | Relay output, MIN-style plug (MIN series), receiver only |
| A1 | Integrated AS-Interface, M12 plug, receiver only |
| P1 | Integrated PROFIBUS DP interface, M12 plug, receiver only |
| AP | M12 plug, transmitter only |
| CP a rr -hhhh k -f /tt | |

Article numbers structure for COMPACT plus-b

Type 4 Safety Light Curtains

| | Art. no. | Description | | |
|--------------|----------|------------------------|---------------|------------------------------|
| | 68 | COMPACT <i>plus</i> -b | | |
| | а | Resolution | | |
| _ | 1 | 14 mm | | |
| _ | 3 | 30 mm | | |
| _ | 5 | 50 mm | | |
| _ | bb | Protective field heigh | ght | |
| | 01 | 150 mm | 13 | 1350 mm |
| _ | 02 | 225 mm | 15 | 1500 mm |
| _ | 03 | 300 mm | 16 | 1650 mm |
| _ | 04 | 450 mm | 18 | 1800 mm |
| _ | 06 | 600 mm | 21 | 2100 mm |
| _ | 07 | 750 mm | 24 | 2400 mm |
| _ | 09 | 900 mm | 27 | 2700 mm |
| _ | 10 | 1050 mm | 30 | 3000 mm |
| _ | 12 | 1200 mm | | |
| _ | С | Device type | | |
| | 0 | Basic transmitter dev | vice | |
| _ | 1 | Transmitter Host (ca | scadable) | |
| _ | 4 | Basic receiver device | е | |
| _ | 6 | Receiver Host (casc | adable) | |
| | dd | Function package/s | safety-relate | ed switching outputs (OSSDs) |
| | Transmi | itter | | |
| | 00 | Transmitter /T1 | | |
| _ | 01 | Transmitter /T2 | | |
| _ | 02 | Transmitter /T3 | | |
| _ | 03 | Transmitter /T4 | | |
| _ | 50 | Transmitter /AP | | |
| _ | Receive | r | | |
| _ | 20 | Blanking /T1 | | |
| | 21 | Blanking /T2 | | |
| | 22 | Blanking /T3 | | |
| | 23 | Blanking /T4 | | |
| | 29 | Blanking /R1 | | |
| | 28 | Blanking /R2 | | |
| | 27 | Blanking /R3 | | |
| | 70 | Blanking /A1 | | |
| | 71 | Blanking /P1 | | |
| 68 a bb c do | i | | | |

Electrical connection



COMPACT plus-b connection system /T2 (Hirschmann plug)

Please observe the operating instructions of the components!

Machine Safety Services

Safety Engineering Software

> Safety Laser Scanners

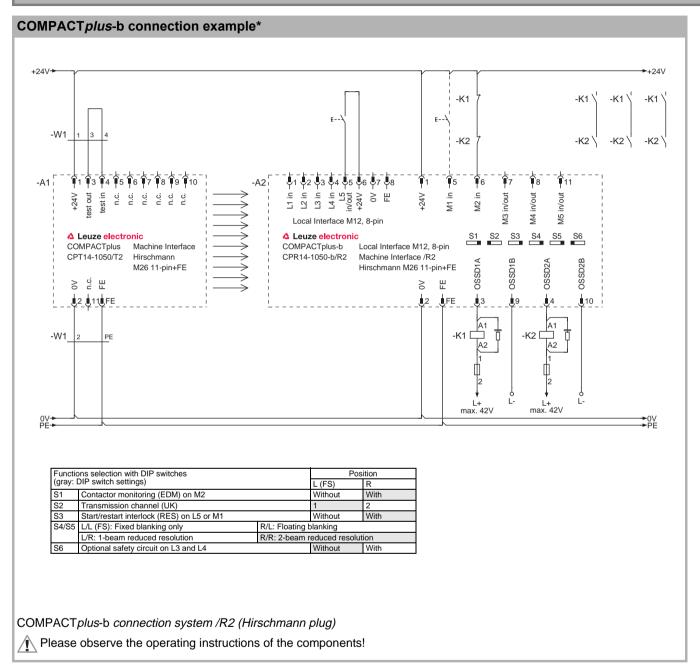
safety Light Surtains

Multiple Light Beam Safety Devices

> Safety Sensor Sets

^{*)} For further connection examples see chapter COMPACT*plus*-m, page 95 AS-Interface Safety at Work, page 318 PROFIBUS DP, page 348

Electrical connection



^{*)} For further connection examples see chapter COMPACT plus-m, page 95 AS-Interface Safety at Work, page 318 PROFIBUS DP, page 348

Technical data

| General system data | | | | | | |
|---|---|-------------------------------------|--------------|------------|--|--|
| Type in accordance with | n IEC/EN 61496 | Type 4 | | | | |
| SIL in accordance with accordance with IEC/EN | IEC 61508 and SILCL in N 62061 | SIL 3 | | | | |
| Performance Level (PL) EN ISO 13849-1 | in accordance with | PL e | | | | |
| 5 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | For protective heights up to 900 mm, all resolutions | 2.26 x 10 ⁻⁸ 1/h | | | | |
| Probability of a failure to danger per hour (PFH _d) | For protective heights up to 1800 mm, all resolutions | 2.67 x 10 ⁻⁸ 1/h | | | | |
| (i i i id) | For protective heights up to 3000 mm | On request | | | | |
| Service life (T _M) in acco | ordance with EN ISO 13849-1 | 20 years | | | | |
| | With DC1 (ohmic load) | On request | | | | |
| Number of cycles until | With AC1 (ohmic load) | On request | | | | |
| 10 % of the components have a failure to | With DC13 (inductive load) | 630,000 (5 A, 24 V) | | | | |
| danger (B _{10d})* | With AC15 (inductive load) | 1,480,000 (3 A, 230 V) | | | | |
| l lour | Low load (20% nominal load) | On request | | | | |
| Category in accordance | with EN ISO 13849 | 4 | | | | |
| Resolution | | 14 mm | 30 mm | 50 mm | | |
| Range | | 06 m | 018 m | 018 m | | |
| | Transistor output | 541 ms | 522 ms | 718 ms | | |
| Response time | Relay output | 2056 ms | 2037 ms | 2233 ms | | |
| Response une | AS-i Safety Interface | 1046 ms | 1027 ms | 1223 ms | | |
| | PROFIsafe interface | 2561 ms | 2542 ms | 2738 ms | | |
| Protective field height | | 1501800 mm | 1501800** mm | 4503000 mm | | |
| Supply voltage | | 24 V DC, ±20 % | | | | |
| Connection cable length | 1 | Max. 100 m with 1.0 mm ² | | | | |
| Safety class | | III and I (depending on model) | | | | |
| Protection rating | | IP 65*** | | | | |
| Ambient temperature, operation | | 0+50°C | | | | |
| Ambient temperature, storage | | -25+70°C | | | | |
| Relative humidity | | 1595 % | | | | |
| Profile cross-section | | 52 mm x 55 mm | | | | |
| Weight per device (leng | th-dependent) | 0.708.30 kg | | | | |

^{*)} For devices with relay output

**) Installation length up to 3000 mm on request

***) Without additional measures the devices are not suited for outdoor use.

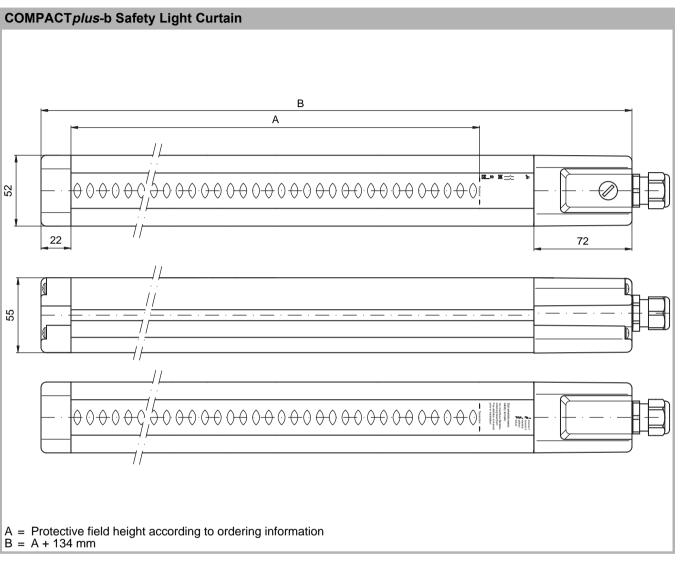
Technical data

| Transmitter | | | | |
|---|---|--|--|--|
| Transmitter diodes, class in accordance with EN 60825 | 1 | | | |
| Wavelength | 880 nm | | | |
| Current consumption | 75 mA | | | |
| Connection system | Cable gland (M20) Hirschmann plug (DIN 43651), 12-pin MIN-style plug (MIN series), 3-pin M12 plug, 5-pin | | | |
| Receiver | | | | |
| Current consumption | 160 mA without external load | | | |
| Safety-related switching outputs (OSSDs) | 2 pnp transistor outputs (short circuit-proof, cross-circuit monitored) 2 relay outputs (NO) AS-i Safety Interface PROFIsafe interface | | | |
| Switching voltage high active | Min. Uv -1.0 V | | | |
| Switching voltage low | Max. +2.5 V | | | |
| Switching current | Typical, 500 mA | | | |
| Connection system | Cable gland (T1: M20, R1: M25) Hirschmann plug (DIN 43651), T2: 12-pin, R2: 12-pin MIN-style plug (MIN series), T3: 7-pin, R3: 12-pin M12 plug (safety bus systems), 5-pin, T4: 8-pin | | | |

Please note the additional information in the COMPACT *plus*-b Connecting and Operating Instructions at www.leuze.com/compactplus-b.



Dimensional drawings



Dimensions in mm

Our 3D CAD models can be found under: www.leuze.com/3d-cad-models.

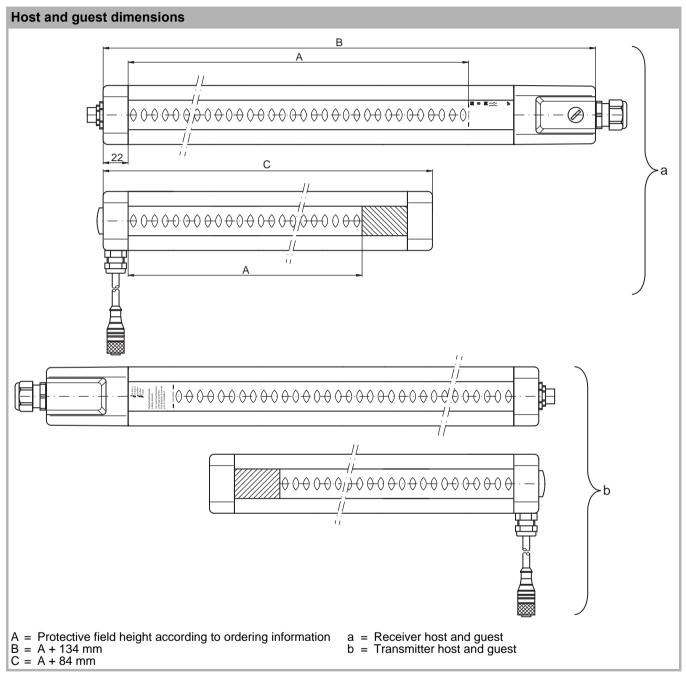
ngle Light sam Safety svices

Safety Sensor Sets

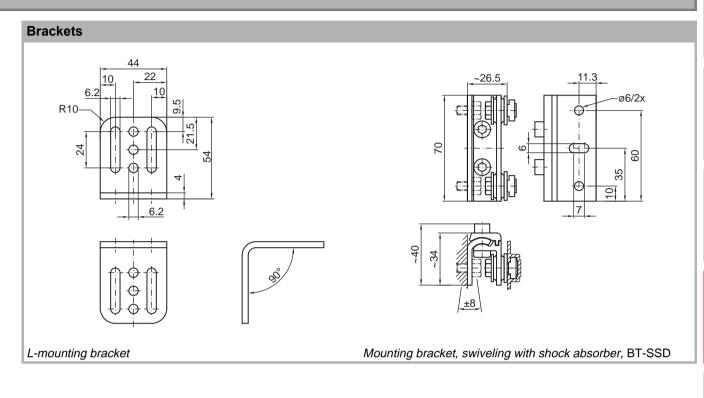
AS-Interface Safety at Work

Sensors

Dimensional drawings



Dimensions in mm



Accessories ordering information

| | | I | | |
|--|-----------------------|---|----------------|--|
| Art. no. | Article | Description | Length, design | |
| Installation accessories | | | | |
| 560300 | BT-SSD | Swiveling support with shock absorber incl. 2 screws and 2 sliding blocks | | |
| 560120 | BT-S | Mounting set consisting of 2 L-type brackets incl. 2 screws | | |
| 425720 | BT-NC | Sliding block | | |
| Laser Al | ignment Aids, see CON | IPACT <i>plus-</i> m ordering information, page 102 | | |
| SafetyKey | | | | |
| 520070 | AC-SK1 | SafetyKey for teaching in | | |
| Test rods | | | | |
| 430430 | AC-TRSET2 | Test rod set 14/19/24/29/33 mm | | |
| 430432 | AC-TRSET3 | Test rod set 14/30/38 mm | | |
| Parameterization software, see COMPACT <i>plus</i> -m ordering information, page 102 | | | | |
| COMPACT plus – Accessories for local and machine interfaces | | | | |
| 150704 | CB-M12-3000-8WM | Connecting cable for local interface with M12 x 8 plug | 3 m, angled | |
| 150699 | CB-M12-10000-8WM | Connecting cable for local interface with M12 x 8 plug | 10 m, angled | |
| 150677 | CB-M12-10000-5WM | Connecting cable for T1 Transmitter M12 x 5 plug, connection on receiver with sensor connection field | 10 m, angled | |
| 426046 | AC-LDH-12GF | Hirschmann cable socket, encoded for CP/T2 & R2, 12-pin, incl. crimp contacts | Straight | |
| 426045 | AC-LDH-12WF | Hirschmann cable socket, encoded for CP/T2 & R2, 12-pin, incl. crimp contacts | Angled | |
| 426042 | CB-LDH-10000-12GF | Connecting cable, machine interface /T2, /R2, Hirschmann cable socket | 10 m, straight | |
| 426044 | CB-LDH-25000-12GF | Connecting cable, machine interface /T2, /R2, Hirschmann cable socket | 25 m, straight | |
| 426043 | CB-LDH-50000-12GF | Connecting cable, machine interface /T2, /R2, Hirschmann cable socket | 50 m, straight | |
| Protective screens, see accessories, page 494 | | | | |

Accessories ordering information

| Art. no. | Article | Description | Length, design | |
|--|-------------------|--|-------------------------|--|
| Connection cables, 5-pin for COMPACT <i>plus</i> /T4 transmitter | | | | |
| 429071 | CB-M12-5000S-5GF | Connecting cable shielded with M12 coupling, 5-pin | 5 m, straight/open end | |
| 429072 | CB-M12-5000S-5WF | Connecting cable shielded with M12 coupling, 5-pin | 5 m, angled/open end | |
| 429073 | CB-M12-10000S-5GF | Connecting cable shielded with M12 coupling, 5-pin | 10 m, straight/open end | |
| 429074 | CB-M12-10000S-5WF | Connecting cable shielded with M12 coupling, 5-pin | 10 m, angled/open end | |
| 429075 | CB-M12-15000S-5GF | Connecting cable shielded with M12 coupling, 5-pin | 15 m, straight/open end | |
| 429076 | CB-M12-15000S-5WF | Connecting cable shielded with M12 coupling, 5-pin | 15 m, angled/open end | |
| 429171 | CB-M12-25000S-5GF | Connecting cable shielded with M12 coupling, 5-pin | 25 m, straight/open end | |
| 429172 | CB-M12-25000S-5WF | Connecting cable shielded with M12 coupling, 5-pin | 25 m, angled/open end | |
| Connection cables, 8-pin for COMPACT plus/T4 receiver | | | | |
| 429081 | CB-M12-5000S-8GF | Connecting cable shielded with M12 coupling, 8-pin | 5 m, straight/open end | |
| 429082 | CB-M12-5000S-8WF | Connecting cable shielded with M12 coupling, 8-pin | 5 m, angled/open end | |
| 429083 | CB-M12-10000S-8GF | Connecting cable shielded with M12 coupling, 8-pin | 10 m, straight/open end | |
| 429084 | CB-M12-10000S-8WF | Connecting cable shielded with M12 coupling, 8-pin | 10 m, angled/open end | |
| 429085 | CB-M12-15000S-8GF | Connecting cable shielded with M12 coupling, 8-pin | 15 m, straight/open end | |
| 429086 | CB-M12-15000S-8WF | Connecting cable shielded with M12 coupling, 8-pin | 15 m, angled/open end | |
| 429181 | CB-M12-25000S-8GF | Connecting cable shielded with M12 coupling, 8-pin | 25 m, straight/open end | |
| 429182 | CB-M12-25000S-8WF | Connecting cable shielded with M12 coupling, 8-pin | 25 m, angled/open end | |