

# ReeR Safegate Light Curtains – Body Protection

Safegate Type 4 access control barriers provide the ideal solution for protection in a wide range of high-risk industrial applications, in particular those requiring a high level of integration of the muting functions. Safegate greatly simplifies seamless integration of muting sensors with light curtain access control barriers

Hardware configuration  
with integrated status and muting lamp

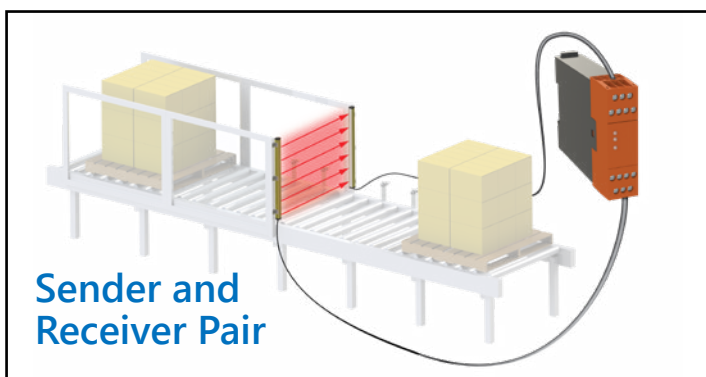


SMO-3B, SMO-4B, SMO-3B-TRX, SMO-4B-TRX

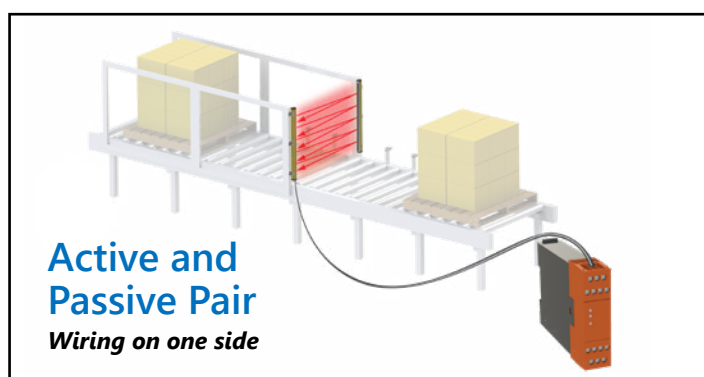
Hardware or software configuration with  
integrated status and muting lamp



SMPO-3B, SMPO-4B, SMPO-3B-TRX, SMPO-4B-TRX

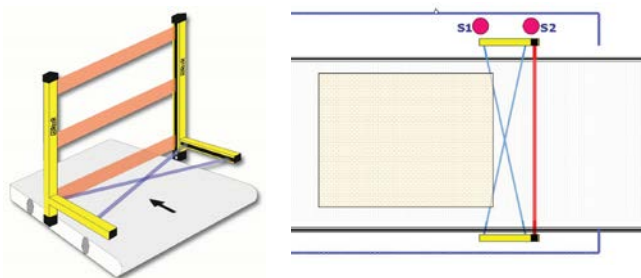


SMO-3B, SMO-4B, SMPO-3B, SMPO-4B



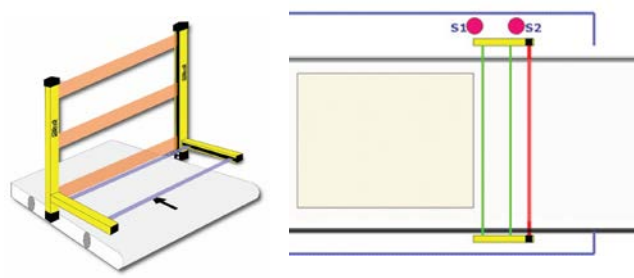
SMO-3B-TRX, SMO-4B-TRX, SMPO-3B-TRX, SMPO-4B-TRX

One way (2 sensor) crossed



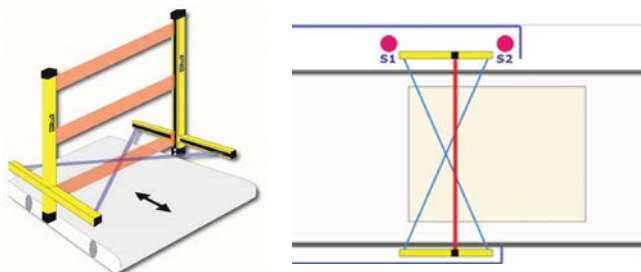
MA-L2X, MZ-L2XP, MZ-L2XP-TRX

One way (2 sensor) parallel



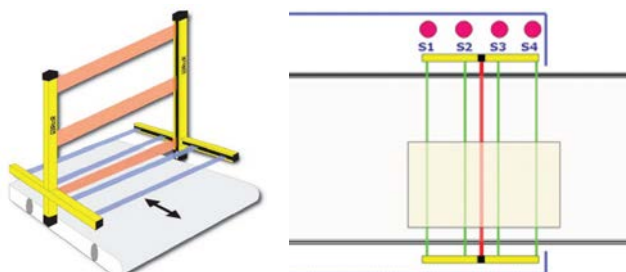
MA-L2P-TRX, MZ-L2XP, MZ-L2XP-TRX

Two way (2 sensor) crossed



MA-T2X, MZ-T2X, MZ-T2X-TRX

Two way (4 sensor) parallel



MA-T4P-TRX, MZ-T4P, MZ-T4P-TRX

# ReeR Safegate Light Curtains – Body Protection

## With Muting Arm/Brackets

### Muting Arms:

MA-L2X  
MA-T2X  
MA-L2P-TRX  
MA-T4P-TRX

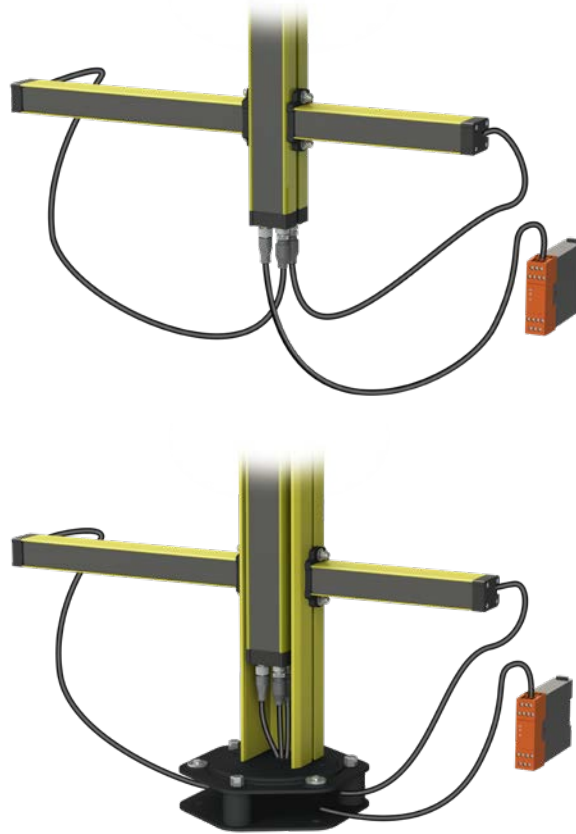
or

### Muting Brackets:

MZ-L2XP  
MZ-T2X  
MZ-T4P  
MZ-L2XP-TRX  
MZ-T2X-TRX  
MZ-T4P-TRX

### Cable

**M12 12-pin cable**  
 (See recommended items for cabling)



### Light Curtains:

SMO-3B  
SMO-4B  
SMPO-3B  
SMPO-4B  
SMO-3B-TRX  
SMO-4B-TRX  
SMPO-3B-TRX  
SMPO-4B-TRX

*If a TRX light curtain is selected, then the muting arms/brackets part number should end in TRX as well.*

### Protective Columns (optional)

FMC-SGB3 (for SMxO-3B  
 or SMxO-3B-TRX)  
FMC-SGB4 (for SMxO-4B  
 or SMxO-4B-TRX)

### Protective Column Base:

(Required with Protective Column)

FMC-CB (shown)

or

FMC-CBL (not shown)

## With Muting Photocells

### Photo Cells

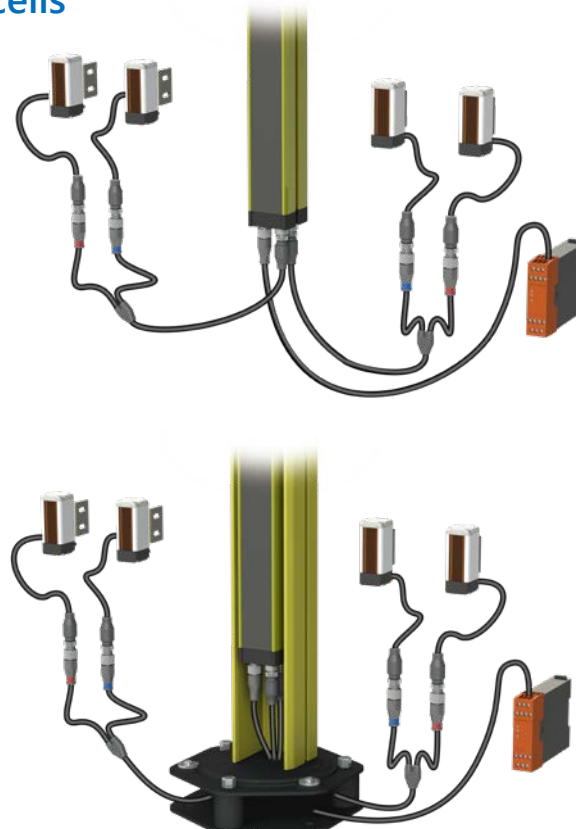
M5-A  
M5-B  
M-TRX-A  
M-TRX-B

### Y-Splitters

CSY12TX  
CSY12RX

### Cable

**M12 12-pin cable**  
 (See recommended items for cabling)



### Light Curtain:

SMO-3B  
SMO-4B  
SMPO-3B  
SMPO-4B  
SMO-3B-TRX  
SMO-4B-TRX  
SMPO-3B-TRX  
SMPO-4B-TRX

*If a TRX light curtain is selected, then the muting arms/brackets part number should end in TRX as well.*

### Protective Columns (optional)

FMC-SGB3 (for SMxO-3B  
 or SMxO-3B-TRX)  
FMC-SGB4 (for SMxO-4B  
 or SMxO-4B-TRX)

### Protective Column Base:

(Required with Protective Column)

FMC-CB (shown)

or

FMC-CBL (not shown)

# ReeR Muting and Automation Photocells

## ReeR Muting and Automation Photocells – Selection Chart

| Part Number                      | Price     | Number of Beams | Sensing Range              | Coding | Dimensional Drawing |
|----------------------------------|-----------|-----------------|----------------------------|--------|---------------------|
| <b>Emitter/Receiver Versions</b> |           |                 |                            |        |                     |
| <b>M5-A</b>                      | \$04oqa:  | 5               | 0 to 3.5 m [0 to 11.48 ft] | A      | <a href="#">PDF</a> |
| <b>M5-B</b>                      | \$04oqb:  | 5               | 0 to 3.5 m [0 to 11.48 ft] | B      | <a href="#">PDF</a> |
| <b>Reflector Versions</b>        |           |                 |                            |        |                     |
| <b>M-TRX-A</b>                   | \$04oqc:  | 1               | 0 to 5 m [0 to 16.40 ft]*  | A      | <a href="#">PDF</a> |
| <b>M-TRX-B</b>                   | \$-04oqj: | 1               | 0 to 5 m [0 to 16.40 ft]*  | B      | <a href="#">PDF</a> |

\* Dependent on type of reflector used (see specifications below)

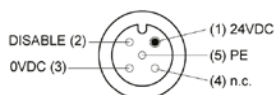


**M5-A / M5-B**

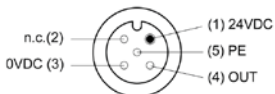
## ReeR Muting and Automation Photocells – Specifications

| Model                             | Micron M5 Emitter                                     | Micron M5 Receiver                                    | M-TRX-A / M-TRX-B                                                                                                                              |
|-----------------------------------|-------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Power Supply</b>               | 24VDC ± 20%                                           |                                                       |                                                                                                                                                |
| <b>Power Consumption at 24VDC</b> | 1W                                                    |                                                       | 0.2 W                                                                                                                                          |
| <b>Number of Beams</b>            | 5                                                     |                                                       | 1                                                                                                                                              |
| <b>Working Range</b>              | 0-3.5 m [0 to 11.48 ft]                               |                                                       | 0 to 2.5 m [0 to 8.20 ft] with C3F10 reflector<br>0 to 3.5 m [0 to 11.48 ft] with C3F8 reflector<br>0 to 3 m [0 to 9.84 ft] with CD8 reflector |
| <b>Beams Pitch</b>                | 10mm [0.39 in]                                        |                                                       | NA                                                                                                                                             |
| <b>Immunity to Ambient Light</b>  | >10,000 lx (solar)                                    |                                                       | NA                                                                                                                                             |
| <b>Emission Angle</b>             | ±5°                                                   | ±5°                                                   | ±5°                                                                                                                                            |
| <b>Emission Wavelength</b>        | 940nm (modulated infrared)                            | –                                                     | 660nm (modulated red)                                                                                                                          |
| <b>Response Time</b>              | <10ms                                                 | <10ms                                                 | 65ms                                                                                                                                           |
| <b>Output</b>                     | –                                                     | PNP 100mA max / dark-on                               | PNP 100mA max / dark-on                                                                                                                        |
| <b>Connections</b>                | Pigtail 90cm [2.95 ft]<br>with M12 5 pin connector    | Pigtail 90cm [2.95 ft]<br>with M12 5 pin connector    | Pigtail 90cm [2.95 ft]<br>with M12 5 pin connector                                                                                             |
| <b>MTTF<sub>d</sub></b>           | 414.02 years                                          | 414.02 years                                          | 1759.31 years                                                                                                                                  |
| <b>Operating Temperature</b>      | -30 to +55°C [-22 to 131°F]<br>(with no condensation) | -30 to +55°C [-22 to 131°F]<br>(with no condensation) | -30 to +55°C [-22 to 131°F]<br>(with no condensation)                                                                                          |
| <b>Protection Degree</b>          | IP65                                                  |                                                       | IP65                                                                                                                                           |
| <b>Dimensions</b>                 | Width                                                 | 28mm [1.10 in]                                        | 28mm [1.10 in]                                                                                                                                 |
|                                   | Depth                                                 | 30mm [1.18 in]                                        | 30mm [1.18 in]                                                                                                                                 |
|                                   | Height                                                | 70mm [2.76 in]                                        | 70mm [2.76 in]                                                                                                                                 |

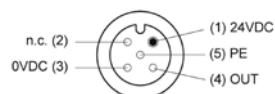
### Emitter



### Receiver



### TRX



### M5 Emitter

| Pin | Color | Signal  | Description                 |
|-----|-------|---------|-----------------------------|
| 1   | Brown | 24VDC   | 24VDC power supply          |
| 2   | White | DISABLE | 0VDC=ENABLE   24VDC=DISABLE |
| 3   | Blue  | 0VDC    | 0VDC power supply           |
| 4   | Black | NA      | Not connected               |
| 5   | Gray  | PE      | Ground connection           |

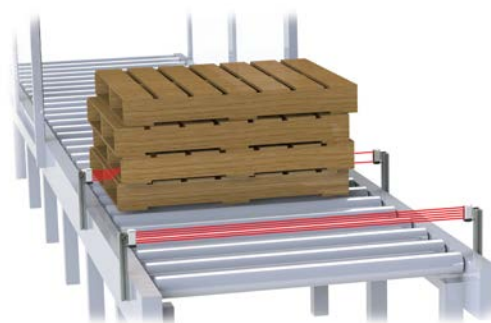
### M5 Receiver

| Pin | Color | Signal | Description                            |
|-----|-------|--------|----------------------------------------|
| 1   | Brown | 24VDC  | 24VDC power supply                     |
| 2   | White | NA     | Not connected                          |
| 3   | Blue  | 0VDC   | 0VDC power supply                      |
| 4   | Black | OUT    | 0VDC=Area Free   24VDC=Area Obstructed |
| 5   | Gray  | PE     | Ground connection                      |

### M TRX

| Pin | Color | Signal | Description                            |
|-----|-------|--------|----------------------------------------|
| 1   | Brown | 24VDC  | 24VDC power supply                     |
| 2   | White | NA     | Not connected                          |
| 3   | Blue  | 0VDC   | 0VDC power supply                      |
| 4   | Black | OUT    | 0VDC=Area Free   24VDC=Area Obstructed |
| 5   | Gray  | PE     | Ground connection                      |

### Emitter/Receiver Application



M5 photocells have five beams that are sent out by the emitter. If any one of the five beams is blocked, then the receiver's status signal will change to signify that there is an object in front of the photocell. This is particularly useful when there is a need to detect irregularly shaped items.

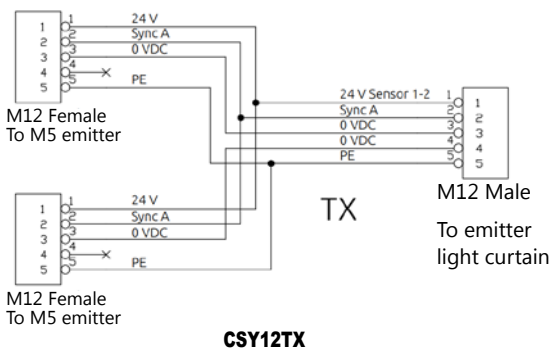
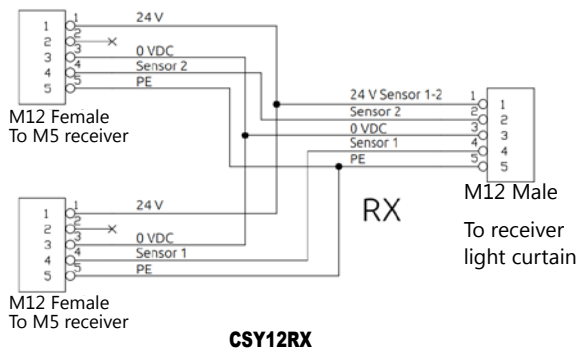
# ReeR Safegate Light Curtain Accessories

| Safegate Light Curtains Accessories Overview |          |                                                                                                                                                                  |                                                                  |                            |
|----------------------------------------------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------|
| Part Number                                  | Price    | Description                                                                                                                                                      | Use With                                                         | Dimensional Drawing        |
| <b>Reflectors</b>                            |          |                                                                                                                                                                  |                                                                  |                            |
| <a href="#"><u>C3F10</u></a>                 | \$4oql:  | ReeR reflector, rectangular, 30 x 116 mm [1.18 x 4.57 in].                                                                                                       | <a href="#"><u>M-TRX-A</u></a> or <a href="#"><u>M-TRX-B</u></a> | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>C3F8</u></a>                  | \$4oqn:  | ReeR reflector, rectangular, 30 x 78 mm, [1.18 x 3.07 in] with bracket.                                                                                          | <a href="#"><u>M-TRX-A</u></a> or <a href="#"><u>M-TRX-B</u></a> | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>CD8</u></a>                   | \$4oqo:  | ReeR reflector, round, 84mm [3.31 in].                                                                                                                           | <a href="#"><u>M-TRX-A</u></a> or <a href="#"><u>M-TRX-B</u></a> | <a href="#"><u>PDF</u></a> |
| <b>Mounting Brackets</b>                     |          |                                                                                                                                                                  |                                                                  |                            |
| <a href="#"><u>SFB-4SG</u></a>               | \$;4oqt: | ReeR mounting bracket, replacement, standard, zinc plated steel. Package of 4. Mounting hardware included.                                                       | ReeR Safegate Light Curtains                                     | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>SFB-6SG</u></a>               | \$4oqu:  | ReeR mounting bracket, replacement, standard, zinc plated steel. Package of 6. Mounting hardware included.                                                       | ReeR Safegate Light Curtains                                     | <a href="#"><u>PDF</u></a> |
| <b>Cables</b>                                |          |                                                                                                                                                                  |                                                                  |                            |
| <a href="#"><u>CS12USB</u></a>               | \$4oqp:  | ReeR programming cable, USB Type A male to 5-pin M12 quick-disconnect, 5-pole, PVC jacket, black, 6.5 ft [2m] cable length.                                      | SMPO models                                                      | NA                         |
| <a href="#"><u>CSY12RX</u></a>               | \$4oqv:  | ReeR muting receiver cable, 5-pin M12 quick-disconnect to (2) 5-pin M12 quick-disconnects, 5-pole, 24 VDC, PVC jacket, black, 1.3 ft [400mm] cable length, IP67. | ReeR Safegate Light Curtains                                     | NA                         |
| <a href="#"><u>CSY12TX</u></a>               | \$4oqx:  | ReeR muting emitter cable, 5-pin M12 quick-disconnect to (2) 5-pin M12 quick-disconnects, 5-pole, 24 VDC, PVC jacket, black, 1.3ft [400mm] cable length, IP67.   | ReeR Safegate Light Curtains                                     | NA                         |

**C3F10****SFB-4SG / SFB-6SG****C3F8****CD8****CS12USB****CSY12TX / CSY12RX**

When four M5 muting sensors are installed with a ReeR Safegate light curtain, **CSY12TX** and **CSY12RX** Y-splitters will be required.

## Pinouts

**CSY12TX****CSY12RX**