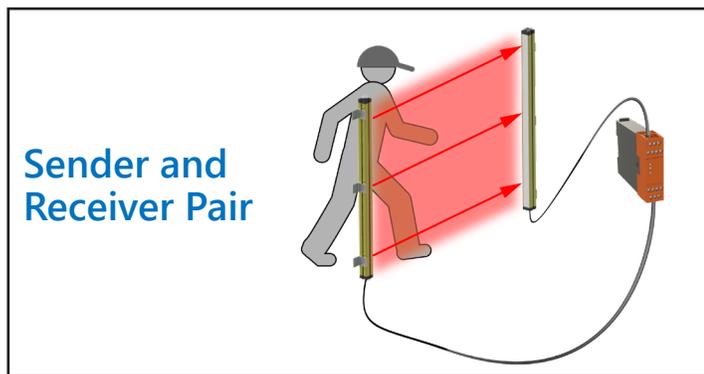# ReeR Safegate Light Curtains – Body Protection

ReeR non-muting Safegate light curtains are a great choice for applications where a simple light curtain is needed. These light curtains feature built-in, selectable manual/automatic start/restart with an LED status display on the face of each device. Passive retro-reflective elements are also available. All mounting hardware is included to simplify installation.
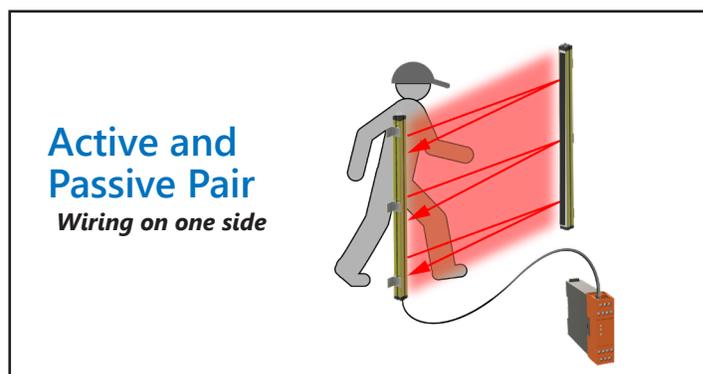
Non-Muting Light Curtain

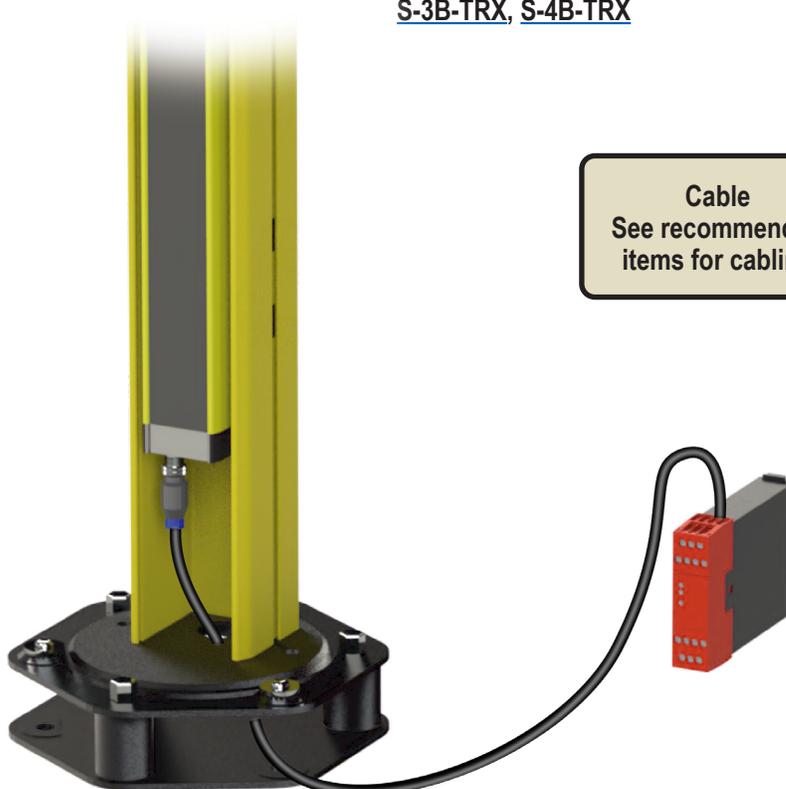**S-3B**, **S-4B**, **S-3B-TRX**, **S-4B-TRX**

Sender and Receiver Pair

S-3B, **S-4B**

Active and Passive Pair
Wiring on one side

S-3B-TRX, **S-4B-TRX**

Light Curtains:
S-3B
S-4B
S-3B-TRX
S-4B-TRX

Cable
See recommended items for cabling

Protective Columns (optional)
FMC-SGB3 (for S-3B
or **S-3B-TRX)**
FMC-SGB4 (for S-4B
or **S-4B-TRX)**

Protective Column Base:
(Required with Protective Column)
FMC-CB (shown)
or
FMC-CBL (not shown)

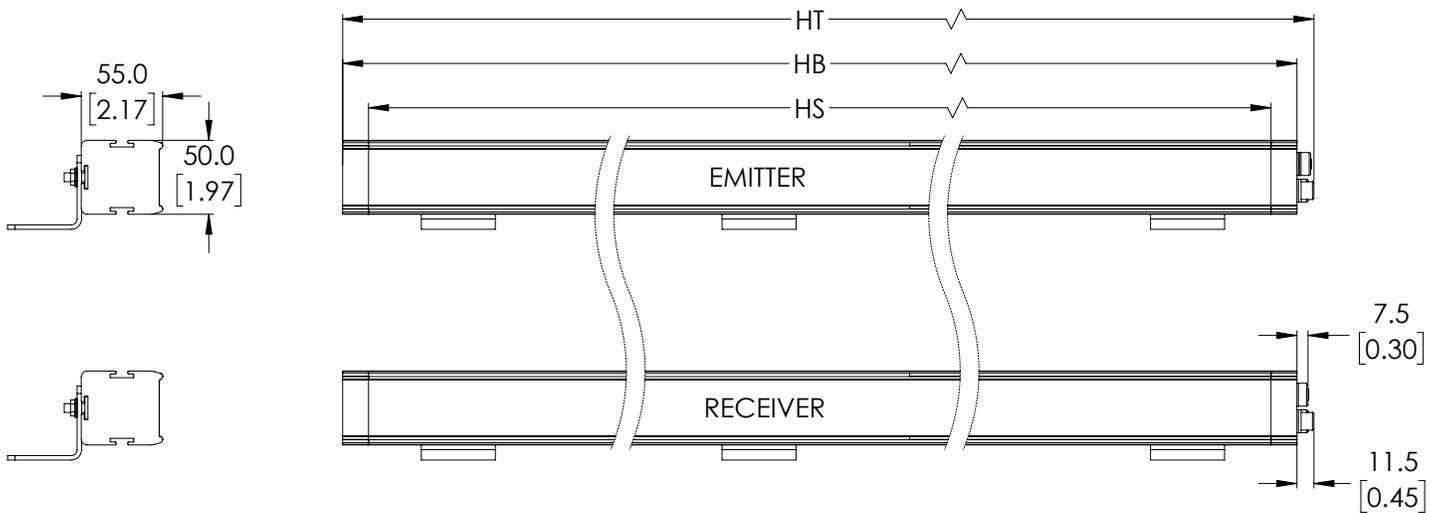# ReeR Safegate Light Curtains – Body Protection

Features

- LED status display on face of device
- Built-in, selectable manual/automatic Start/Restart
- Dual safety PNP static outputs, auto-controlled
- M12 quick-disconnect (order cable separately)
- Type 4 and Category 4 PLe
- Instruction manual and mounting hardware included
- Passive retro-reflective elements available (TRX)

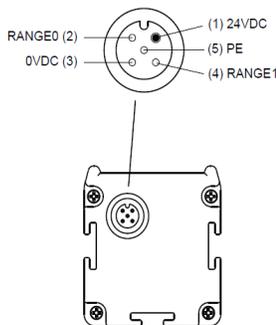| Part Number	Price	Protective Height HS mm [in]	Housing Height HB mm [in]	Total Height HT mm [in]	Number of Beams	PFHd	Response Time [ms]	MTTF$_d$ [years]	DC$_{avg}$	Weight kg [lb]	Resolution mm [in]	Dimensional Drawing
ReeR Safegate Light Curtains – Body Protection Without Muting Functions – Selection Chart												
Sender and Receiver Pair												
S-3B	$980.00	810 [31.89]	974 [38.33]	984 [38.74]	3	9.63E-09	5.5	262.4	98.5%	4.16 [9.15]	400 [15.75]	PDF
S-4B	$1,105.00	910 [35.83]	1074 [42.26]	1084 [42.68]	4	1.03E-08	5.5	253.3	98.4%	4.60 [10.15]	300 [11.81]	PDF
Active and Passive Pair												
S-3B-TRX	$945.00	810 [31.89]	935 [36.79]	945 [37.20]	3	7.58E-09	5.5	401.0	98.2%	4.22 [9.30]	400 [15.75]	PDF
S-4B-TRX	$1,010.00	910 [35.83]	1035 [40.73]	1045 [41.14]	4	7.68E-09	5.5	399.4	99.2%	4.62 [10.20]	300 [11.81]	PDF

Dimensions (see table above)

ReeR Safegate Light Curtains – Body Protection

ReeR Safegate Light Curtains – Body Protection Without Muting Functions Specifications for S-3B and S-4B		
Supply Voltage	24VDC ±20%	
Safety Outputs (OSSDs)	2 PNP – 400mA @ 24VDC	
Operating Temperature	-30°C to 55°C [-22°F to 131°F]	
Safety Category	Type 4	EN 61496-1:2013 IEC 61496-2:2013
	SIL3	IEC 61508-1: (ed.2) IEC 61508-2: (ed.2) IEC 61508-3: (ed.2) IEC 61508-4: (ed.2)
	PLe	EN ISO 13849-1:2015
	CAT4	EN ISO 13849-1:2015
CCF	80%	
Degree of Protection	IP65 and IP67	
Working Range	0-4 m [0-13.12 ft] low 0-12 m [0-39.37 ft] high (See Range/Test Selection Chart on next page)	
Power Consumption	Transmitter: 1W; Receiver: 2W	
Connections	Power on TX: M12 5-pin male Power on RX: M12 8-pin male	
EDM Input	Available on RX, selectable	
Restart Auto/Manual	Available on RX, selectable	
Test Input	Available on TX, selectable	
Conductor requirements	20AWG if length is less than 50m [164.04 ft] 17AWG if length is between 50m [164.04 ft] and 100m [328.1 ft]	
Max Connection Length	100m [328.1 ft]	

Pin outs for S-3B and S-4B

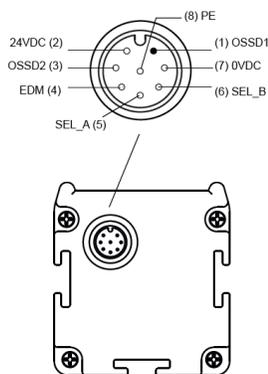### Emitter Connections

RANGE0 (2)
0VDC (3)
(1) 24VDC
(5) PE
(4) RANGE1

EMITTER M12 5 PIN MALE CONNECTOR				
Pin	Color	Signal	In/Out	Description
1	Brown	24VDC	-	24VDC power supply
2	White	RANGE0	Input	Range/Test selection (see table at right)
3	Blue	0VDC	-	0VDC power supply
4	Black	RANGE1	Input	Range/Test selection (see table at right)
5	Gray	PE	-	Ground connection

RANGE / TEST SELECTION

Pin 2	Pin 4	Function
24DC	0VDC	LOW range
0VDC	24DC	HIGH range
0VDC	0VDC	SAFEGATE in TEST mode
24VDC	24DC	Not allowed

OPERATING MODE CONFIGURATION

Function	Pin 4	Pin 5	Pin 6
Auto no EDM	0VDC	OSSD1 (1)	OSSD2 (3)
Auto with EDM	EDM signal	OSSD2 (3)	OSSD1 (1)
Manual no EDM	0VDC	24VDC	Reset PB
Manual with EDM	EDM signal	Reset PB	24VDC

Receiver Connections

(8) PE
24VDC (2)
OSSD2 (3)
EDM (4)
(1) OSSD1
(7) 0VDC
(6) SEL_B
SEL_A (5)

RECEIVER M12 8-PIN MALE CONNECTOR						
Pin	Reer Cable	292 Cable	295 Cable	Signal	In/Out	Description
1	White	White	Brown	OSSD1	Output	Static Safety Outputs
2	Brown	Brown	White	24VDC	–	Power Supply 24VDC
3	Green	Green	Blue	OSSD2	Output	Static Safety Outputs
4	Yellow	Yellow	Black	EDM	Input	K1/K2 Feedback
5	Gray	Gray	Gray	SEL_A	Input	Operating Mode Configuration
6	Pink	Pink	Pink	SEL_B	Input	Operating Mode Configuration
7	Blue	Blue	Violet	0VDC	–	Power Supply 0VDC
8	Red	Red	Orange	PE	–	Ground Connection

AutomationDirect sells M12 8-pole cables with two different color patterns (7000-170x1-292xxxx and 7000-170x1-295xxxx). We recommend the "292" series on our website, which matches the ReeR cable's color code. However, to help avoid confusion, please refer to the table above comparing the color codes.

ReeR Safegate Light Curtain Accessories

Safegate Light Curtains Accessories Overview				
Part Number	Price	Description	Use With	Dimensional Drawing
Protective Columns*				
FMC-SGB3	$191.00	ReeR protective column, 1200mm housing.	SMO-3B SMPO-3B SMO-3B-TRX SMPO-3B-TRX S-3B S-3B-TRX	PDF
FMC-SGB4	$203.00	ReeR protective column, 1330mm housing.	SMO-4B SMPO-4B SMO-4B-TRX SMPO-4B-TRX S-4B S-4B-TRX	PDF
Mirror Columns*				
FMC-S3	$226.00	ReeR single mirror column, 1200mm housing, 1198mm mirror(s).	SMO-3B SMPO-3B SMO-3B-TRX SMPO-3B-TRX S-3B S-3B-TRX	PDF
FMC-S4	$245.00	ReeR single mirror column, 1330mm housing, 1328mm mirror(s).	SMO-4B SMPO-4B SMO-4B-TRX SMPO-4B-TRX S-4B S-4B-TRX	PDF
FMC-SB3	$456.00	ReeR three mirror column, 1200mm housing, (3) 150mm mirror(s).	SMO-3B SMPO-3B SMO-3B-TRX SMPO-3B-TRX S-3B S-3B-TRX	PDF
FMC-SB4	$525.00	ReeR four mirror column, 1330mm housing, (4) 150mm mirror(s).	SMO-4B SMPO-4B SMO-4B-TRX SMPO-4B-TRX S-4B S-4B-TRX	PDF
Column Base				
FMC-CB	$141.00	ReeR column base, 202 x 224 x 55 mm housing. Mounting hardware included.	FMC-Sx	PDF
FMC-CBL	$57.00	ReeR column base, 202 x 224 x 37 mm housing. Mounting hardware included.	FMC-Sx	PDF

* Column base must be purchased separately

FMC-SGB3 / FMC-SGB4

FMC-S3 / FMC-S4

FMC-SB3 / FMC-SB4

FMC-CB

FMC-CBL

Safety Products

Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.