

Safety detection solutions

Safety light curtains, type 4

XUSL range

Master/slave. Standard sensing distance



XUSL4E.....NS1

Slave 1 transmitter-receiver pairs ^{(1) (2)}						
Protected height	Total height	Light beams Number/spacing	Response time (3)	PFH _D IEC 61508	Reference	Weight
mm	mm					kg
For finger detection						
Resolution 14 mm. Sensing distance 0...3 or 1...6 m, selectable by wiring						
310	363	30	5.5	1.27 x 10 ⁻⁸	XUSL4E14F031NS1	0.720
460	513	45	7.5	1.52 x 10 ⁻⁸	XUSL4E14F046NS1	1.020
610	663	60	9	1.75 x 10 ⁻⁸	XUSL4E14F061NS1	1.220
760	813	75	11	2.00 x 10 ⁻⁸	XUSL4E14F076NS1	1.520
For hand detection						
Resolution 30 mm. Sensing distance 0...4 or 0...12 m, selectable by wiring						
460	513	23	7.5	9.47 x 10 ⁻⁹	XUSL4E30H046NS1	1.020
610	663	31	9	1.06 x 10 ⁻⁸	XUSL4E30H061NS1	1.220
760	813	38	10.5	1.19 x 10 ⁻⁸	XUSL4E30H076NS1	1.520
910	963	46	12.5	1.30 x 10 ⁻⁸	XUSL4E30H091NS1	1.720
1,060	1,113	53	14	1.43 x 10 ⁻⁸	XUSL4E30H106NS1	2.020
For body detection						
2, 3, or 4 beams. Sensing distance 0...4 or 0...12 m, selectable by wiring						
510	653	2 / 500 mm	2.5	6.89 x 10 ⁻⁹	XUSL4E2BB051NS1	1.100
810	953	3 / 400 mm	3	7.55 x 10 ⁻⁹	XUSL4E3BB081NS1	1.600
910	1,053	4 / 300 mm	3	8.21 x 10 ⁻⁹	XUSL4E4BB091NS1	1.700

(1) The safety light curtains are supplied with mounting brackets and screws.

(2) Connection cables and test rods must be ordered separately (see pages 24 and 25).

(3) The response time of a daisy-chained function must include the response time of each of the component segments. See the calculation table below:

Calculation of response time for Master/slave light curtains, type 4, standard sensing distance

$$\text{Resolution 14 mm} \quad R_{t_{\text{tot}}} = [0.06 \times (\text{No.}_{\text{slave1}} + \text{No.}_{\text{master}}) + 0.9636] \times 2$$

$$R_{t_{\text{tot}}} = [0.06 \times (\text{No.}_{\text{slave1}} + \text{No.}_{\text{slave2}} + \text{No.}_{\text{master}}) + 1.0036] \times 2$$

$$\text{Resolution 30 mm and multi-beam} \quad R_{t_{\text{tot}}} = [0.11 \times (\text{No.}_{\text{slave1}} + \text{No.}_{\text{master}}) + 0.9376] \times 2$$

$$R_{t_{\text{tot}}} = [0.11 \times (\text{No.}_{\text{slave1}} + \text{No.}_{\text{slave2}} + \text{No.}_{\text{master}}) + 1.0508] \times 2$$

Calculation of the total PFH_D for Master/slave light curtains, type 4, standard sensing distance

$$\text{PFH}_{D_{\text{tot}}} = \text{PFH}_{D_{\text{master}}} + \text{PFH}_{D_{\text{slave1}}} (+ \text{PFH}_{D_{\text{slave2}}})$$

No.: Number of light beams

R_{t_{tot}}: Total response time

PFH_{D_{tot}}: Total probability of dangerous failure per hour.

Other versions: Master/slave light curtains can be ordered for other protection heights than those listed above.
Please contact our Customer Care Center.