

SIMPLICITY WITHOUT LIMITATION

Safety light curtains MS2800 & MS4800



» No software, no console, no problem

» **Standard connection and mounting**

» Rapid alignment and troubleshooting

Safety that's simple, efficient and effective

Safety systems need to be simple to install, to configure, and to use. Omron's new all-in-one MS2800 and MS4800 safety light curtains meet these requirements and more.

They are exceptionally easy to specify, fit and set-up for virtually any application requiring secure protection, reducing costs of engineering, inventory and maintenance.

And they are supplied and supported through Omron's unrivalled international organisation. Simple as that.

A comprehensive range to meet all requirements

These Omron light curtains are designed for use in the majority of Type 2 and Type 4 safety applications, both complying with EN 61496 Part 1. Advanced models, offering additional functionality, are suitable for more specialised areas. So, whatever the application, there is an Omron safety light curtain to suit.

Simple to specify, fit and set-up

Every Omron MS2800 and MS4800 safety light curtain is installed and configured in exactly the same way. This simplifies the task of designing, ordering, engineering, installing and maintaining the light curtains. Machine makers can maximise efficiency and increase up-time, reducing the total cost of ownership over the lifetime of a machine – and all with absolutely no compromise on safety or operator security.



Global support from a world leader

Every Omron customer benefits from global support tailored precisely to local needs. Wherever you are, wherever your machines are manufactured or installed, you can rely on the same high standards of service support, engineering back-up and parts supply. We focus totally on your needs.

Limitless simplicity

- Comprehensive range, common design approach
- Reduce total cost of ownership over the lifetime of the machine
- Save time and expense, reduce engineering and inventory costs
- Backed by Omron's global network
- Simplicity in selection



- 15% time in Design-in



- 10% time in Installation



- 10% time in Setup



- 15% time in Maintenance

"Reduce your total cost of ownership."



Safety without compromise

Omron MS2800/MS4800 safety light curtains provide a comprehensive choice, designed to meet the vast majority of applications requiring operator protection. The range includes 14mm finger-protection models with a maximum operating range of 7m and protection heights from 280mm to 1800mm. 30mm hand-protection models have a maximum range of 20m, and protection heights from 240mm to 2120mm. The curtains can be multi-cascaded in up to four sets for segmented guarding, and all models are available in standard and advanced models, the latter offering additional functionality with fixed and floating blanking and muting.

Straightforward safety

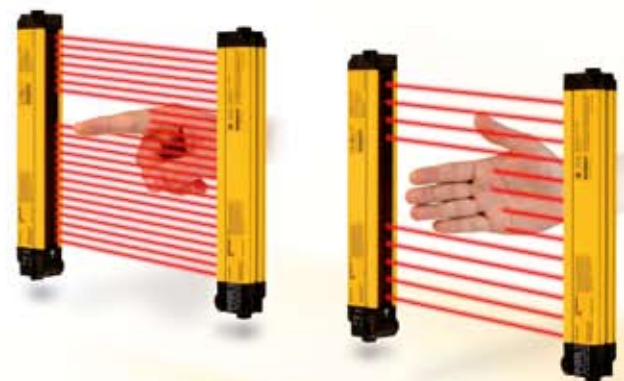
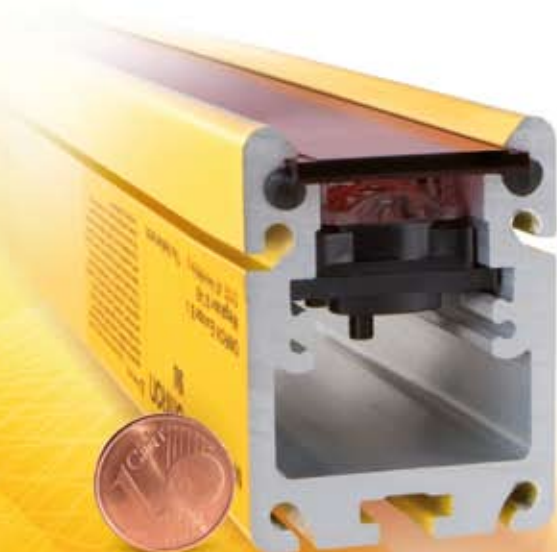
- Simple DIP-switch set-up - no specialised tools
- Pre-wired for plug-in connectivity
- Choice of 14mm or 30mm resolution
- Wide operating and protective-height range
- Easy to install
- The most robust housing in the class
- Easy set-up and troubleshooting

The most robust housing

The housings for these light curtains are the most robust in the class. Wall thickness of up to 9mm provides exceptional resistance to twisting, making the curtains completely reliable, even in the most demanding environments.

The finest detection resolution

No other Type 2 safety light curtain matches the MS2800, with its unique 14mm resolution, allowing a much smaller safety distance. With a choice of this or 30mm resolution, finger and hand protection can be designed into much more compact machines, saving space - but with no sacrifice on safety.



No programming, no software, no problem

MS2800 and MS4800 light curtains are easily configured using a series of built-in dip-switches. There's no need for external programming, no problems with operating systems or interfaces, no set-up console and no complicated menus. Simplicity itself.



Installation, setup and diagnosis

Every model in the range is pre-wired with a simple M12 all-in-one connector, and fitted with an adjustable rotating mounting bracket. So it's easy to engineer and entirely straightforward to install. Alignment is equally fast and efficient: an innovative system using intuitive LED indicators

shows whether alignment is correct. This makes adjustment of the light beams significantly easier than for comparable light curtains. The MS2800 has separate LEDs for upper and lower ranges, while the MS4800 has an indicator for each beam.



MS4800 offers an indicator for connection via M12 cable/plug each beam.



Easy to rotate and stable fixable.



MS2800 has 2 LEDs – one for the upper and one for the lower range.



Connection via M12 cable/plug.

MS2800: standard models to suit standard applications

Standardise on safety

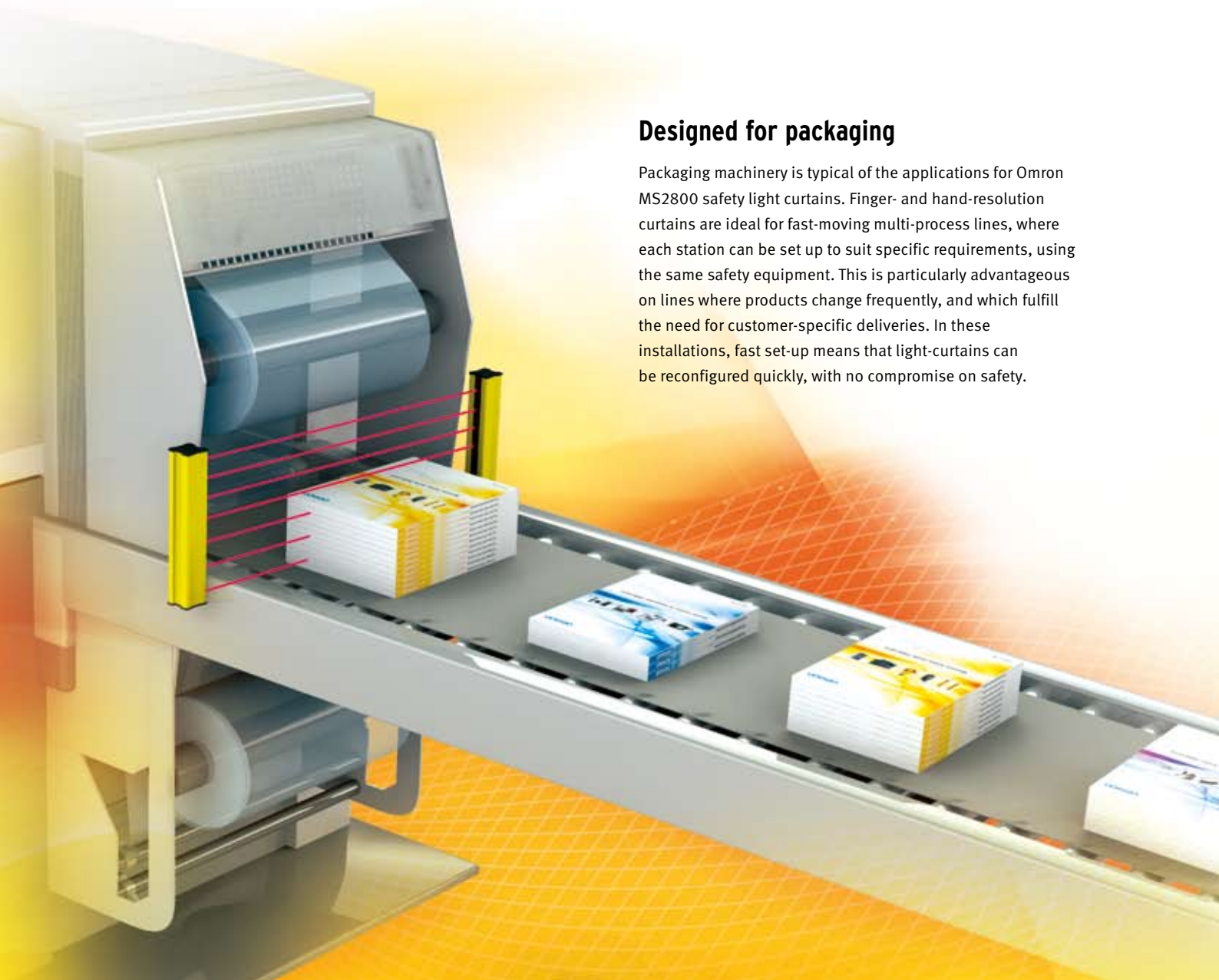
The emphasis in the design of MS2800 light curtains is on standardisation: in design, engineering, installation, set-up and facilities. The basic units are suitable for the majority of applications, and the same accessories fit all models. So engineers can concentrate on designing functionality into machines, with the comfort of knowing that the light curtains will work the same way every time. Installation engineers use the same process for every application – no specialised cables, no missing connections, no complex alignment or configuration. Safety as standard.

Features

- Designed for Type 2 applications
- Ideal for packaging machines
- Choice of 14mm or 30mm resolution
- IP housings to protect curtains even under harsh cleaning
- Fast set-up and easy configuration to cope with product changes
- Coding of beams provided as standard

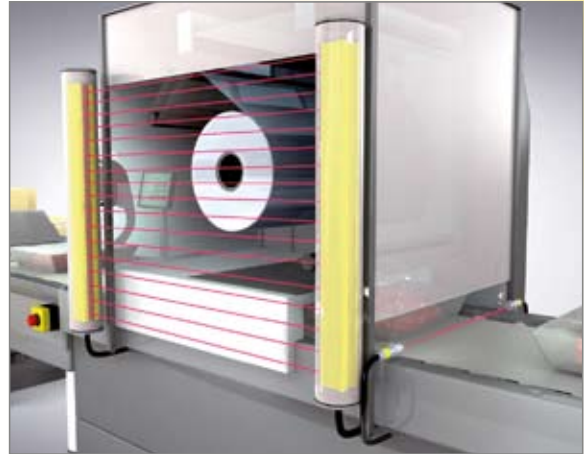
Designed for packaging

Packaging machinery is typical of the applications for Omron MS2800 safety light curtains. Finger- and hand-resolution curtains are ideal for fast-moving multi-process lines, where each station can be set up to suit specific requirements, using the same safety equipment. This is particularly advantageous on lines where products change frequently, and which fulfill the need for customer-specific deliveries. In these installations, fast set-up means that light-curtains can be reconfigured quickly, with no compromise on safety.



A range of accessories to suit the application

All Omron MS2800 safety light curtains are available with a range of accessories and features to meet the requirements of different applications. IP housings are now available to make the curtains suitable for use in food production applications, where aggressive cleaning systems and high-pressure water and steam are commonly used. Options such as fixed and floating blanking and muting (also available for Type 4 safety applications) increase functionality and extend the versatility of MS2800 curtains.



Options are available to extend functionality, making the MS2800 suitable for an even wider range of applications.

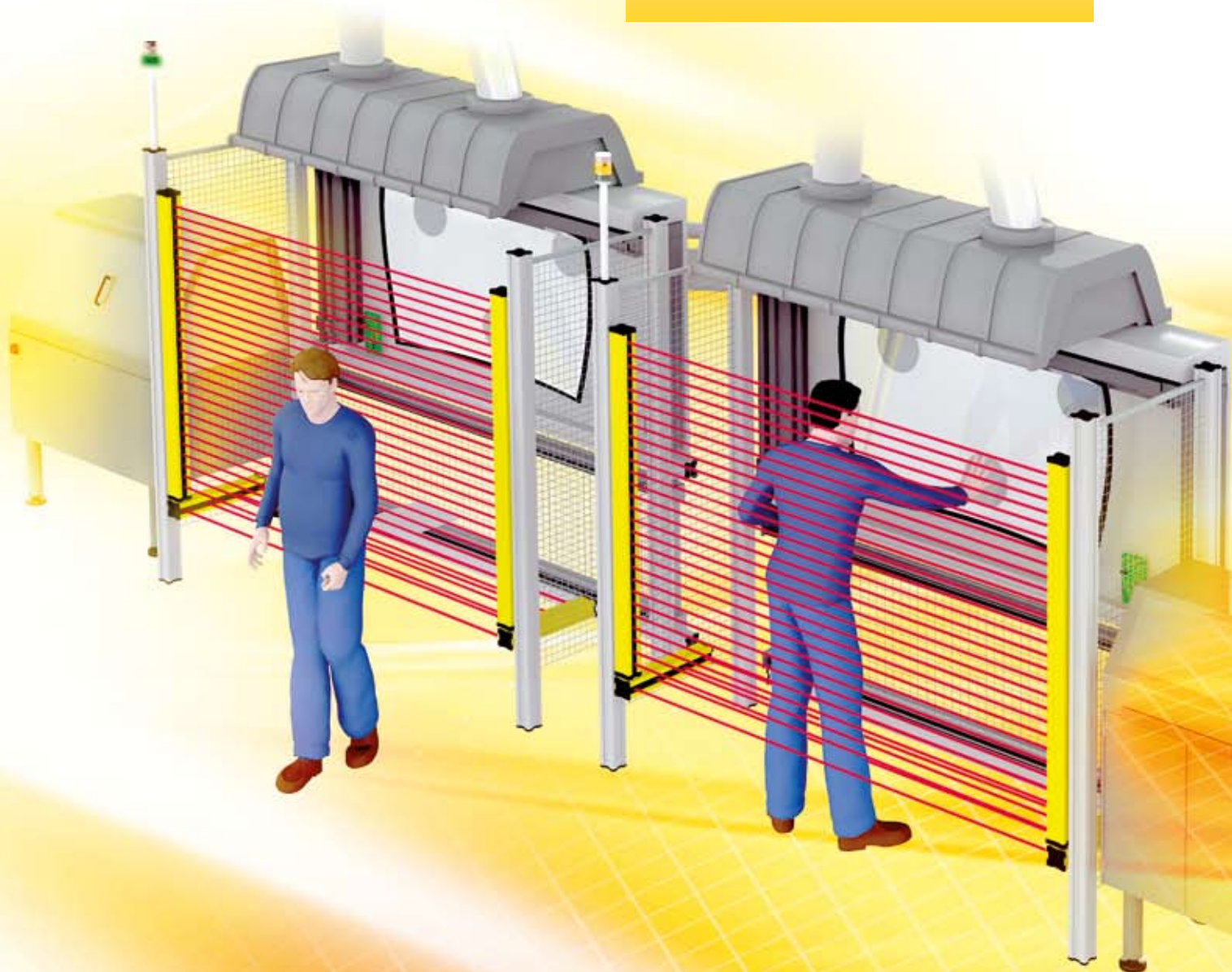


MS4800: advanced protection for specialized applications

Like the MS2800 range, MS4800 safety light curtains benefit from standard installation and configuration, and meet fully the requirements of the Type 4 safety standard. These curtains are ideal for automotive applications, where fast-moving production lines, with their emphasis on flexibility allied to high quality, must work efficiently yet safely at all times. MS4800 light curtains are available with basic facilities, to meet the majority of requirements, plus additional functionality for more specialised installations.

Features

- Meets the requirements of Type 4 standards
- Provides hand and finger protection as appropriate
- Additional functionality to extend the range of applications
- Full compliance with no compromise on efficiency
- Advanced function models support fixed blanking, floating blanking and muting
- Coding of beams as standard

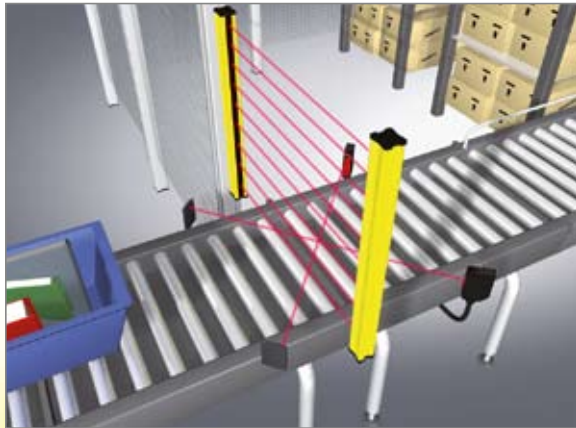


Additional functionality for intelligent safety

For applications where increased functionality is required, both MS2800 and MS4800 units are available with a range of options, including muting to allow the automatic transport of material into or out of a dangerous area. The MS2800 and MS4800 curtains offer internal control of the whole muting cycle, enabling operators to work in complete security. It also involves operators working close to machinery, and in these applications, a secure working environment is essential as well. Typical applications are in metal-working shops, where it is often necessary to guide metal manually for cutting, forming and shaping.



Floating blanking and fixed blanking as a standard function in the advanced model.



Muting system in automatic warehouse for material supply of production.

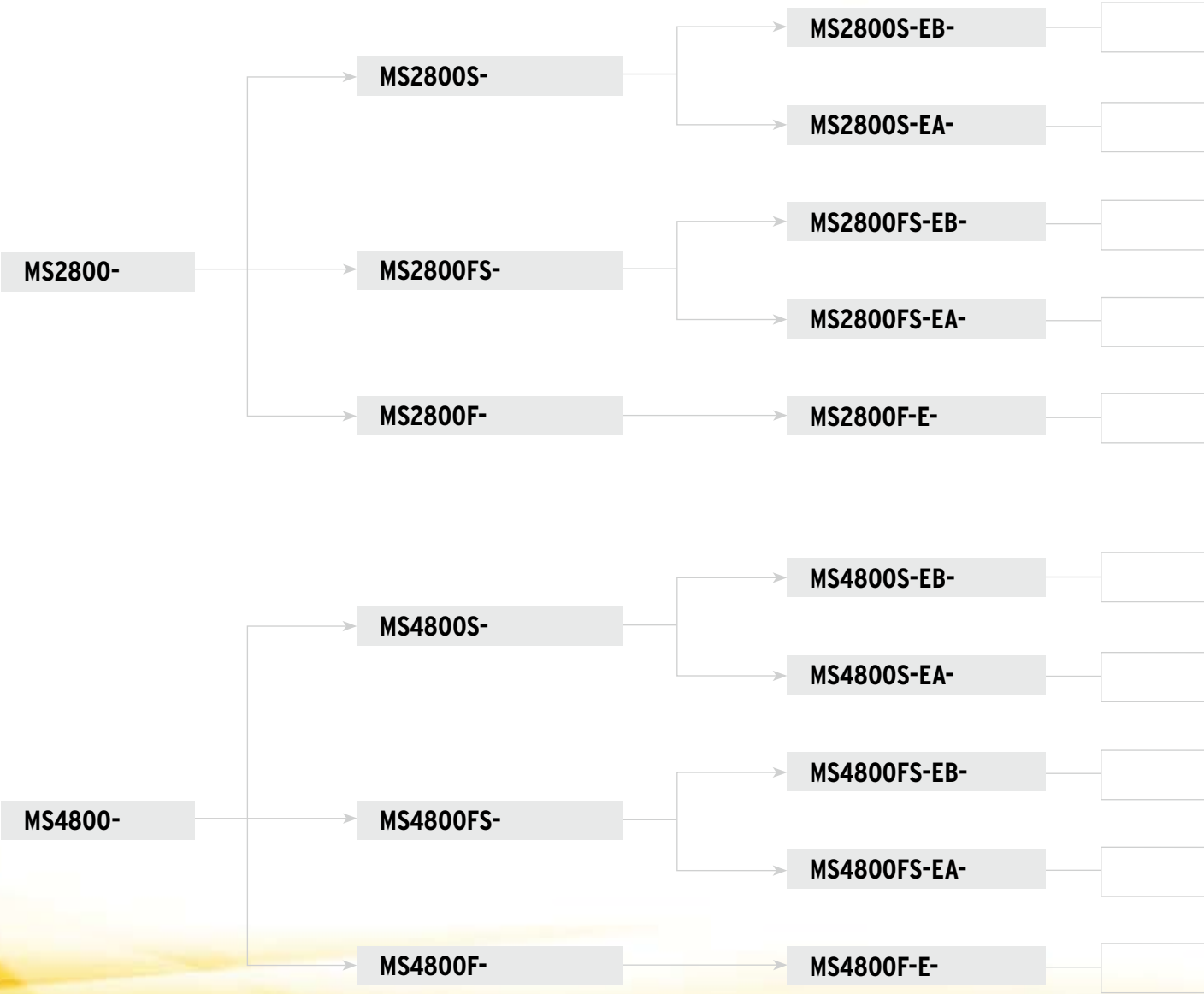
Efficiency in modern automotive plants

In highly automated manufacturing environments, such as vehicle plants, it is essential to maximize uptime on production equipment. The simplicity with which MS2800 and MS4800 light curtains can be installed and replaced is a key benefit in this kind of environment. No specialist tools, wiring or software is needed, so a light-curtain can be replaced, and the machine up and running again, in a matter of minutes.



Simplicity in selection

Safety Category	Connection Features	Function set
MS 2800 Safety category 2	Standard S standalone	Basic EB Interlock, restart, EDM, 2 optical channels integrated alignment tool
MS 4800 Safety category 4	Master FS Series connection, Muting applications	Advanced EA Muting, Blanking (fixed/floating)
	Slave F Series connectin only	



Resolution

14 mm - 014

Operating range 0,3m...7m

30 mm - 030

Operating range 0,3m...20m

Length

Maximum number of beams: 256

Maximum length (40mm increments)

14mm resolution: 1800mm

30mm resolution: 2120mm

MS2800S-EB-014-

280 ...1800

MS2800S-EB-030-

280 ...2120

MS2800S-EA-014-

280 ...1800

MS2800S-EA-030-

280 ...2120

MS2800FS-EB-014-

280 ...1800

MS2800FS-EB-030-

280 ...2120

MS2800FS-EA-014-

280 ...1800

MS2800FS-EA-030-

280 ...2120

MS2800F-E-014-

240 ...1280

MS2800F-E-030-

280 ...2120

MS4800S-EB-014-

280 ...1800

MS4800S-EB-030-

280 ...2120

MS4800S-EA-014-

280 ...1800

MS4800S-EA-030-

280 ...2120

MS4800FS-EB-014-

280 ...1800

MS4800FS-EB-030-

280 ...2120

MS4800FS-EA-014-

280 ...1800

MS4800FS-EA-030-

280 ...2120

MS4800F-E-014-

240 ...1280

MS4800F-E-030-

280 ...2120





Category 4 / 2 safety light curtain

The MS4800 and MS2800 family of safety light curtain provides simplicity in mounting, configuring, daily use and maintenance by providing a:

- Sensing distance up to 20m for 30mm resolution and 7 m for 14mm resolution
- LED bar for easy alignment and diagnosis
- DIP-switch setup for Blanking, Muting and optical coding
- Category 4 / 2 sensor complying with EN 61496-1
- All-in-one M12 connection and mounting concept with robust housing
- Multicascadable up to 4 sets

Ordering information

MS2800 Safety Category 2

Connection features	Standard				Master				Slave	
Standard Standalone operation										
Master Series connection, Muting										
Slave Series connection only										
	MS2800S-				MS2800FS-				MS2800F-	
Function Set	Basic		Advanced		Basic		Advanced			
Basic Interlock, Restart, EDM, 2 optical channels, integrated alignment tool										
Advanced Muting, Blanking (fixed/floating)										
	MS2800S-EB-		MS2800S-EA-		MS2800FS-EB-		MS2800FS-EA-		MS2800F-E-	
Resolution	14 mm	30 mm	14 mm	30 mm	14 mm	30 mm	14 mm	30 mm	14 mm	30 mm
14 mm Finger protection										
30 mm Hand protection	MS2800S-EB-014-	MS2800S-EB-030-	MS2800S-EA-014-	MS2800S-EA-030-	MS2800FS-EB-014-	MS2800FS-EB-030-	MS2800FS-EA-014-	MS2800FS-EA-030-	MS2800F-E-014-	MS2800F-E-030-
Length	280 ... 1800		280 ... 2120		280 ... 1800		280 ... 2120		240 ... 1280	
240 mm ... 2120 mm in 40 mm increments										

MS4800 Safety Category 4

Connection features	Standard				Master				Slave	
Standard Standalone operation										
Master Series connection, Muting										
Slave Series connection only										
	MS4800S-				MS4800FS-				MS4800F-	
Function Set	Basic		Advanced		Basic		Advanced			
Basic Interlock, Restart, EDM, 2 optical channels, integrated alignment tool										
Advanced Muting, Blanking (fixed/floating)										
	MS4800S-EB-		MS4800S-EA-		MS4800FS-EB-		MS4800FS-EA-		MS4800F-E-	
Resolution	14 mm	30 mm	14 mm	30 mm	14 mm	30 mm	14 mm	30 mm	14 mm	30 mm
14mm Finger protection										
30mm Hand protection	MS4800S-EB-014-	MS4800S-EB-030-	MS4800S-EA-014-	MS4800S-EA-030-	MS4800FS-EB-014-	MS4800FS-EB-030-	MS4800FS-EA-014-	MS4800FS-EA-030-	MS4800F-E-014-	MS4800F-E-030-
Length	280 ... 1800		280 ... 2120		280 ... 1800		280 ... 2120		240 ... 1280	
240mm ... 2120mm in 40mm increments										

Examples

MS2800S-EB-030-1000
 Standalone Operation
 Basic function set
 30mm resolution
 1000mm protective height

MS4800FS-EA-014-1200
 Series connection Model
 Advanced function set
 14mm resolution
 1200mm protective height

MS4800F-E-014-600
 Slave operation
 14mm resolution
 600mm protective height

Accessories

Standard cables

Cable length	Connector	Receiver	Transmitter	
10 m	M12 female connector, 8-pin	F39-JMR-10M	F39-JMT-10M	
15 m		F39-JMR-15M	F39-JMT-15M	
30 m		F39-JMR-30M	F39-JMT-30M	
50 m		F39-JMR-50M	F39-JMT-50M	

Interconnect cables

Cable length	Connector	Receiver	Transmitter	
0.3 m	M12 female/male connector, 8-pin	F39-JMCR-03M	F39-JMCT-03M	
0.5 m		F39-JMCR-05M	F39-JMCT-05M	
1.0 m		F39-JMCR-1M	F39-JMCT-1M	
2.0 m		F39-JMCR-2M	F39-JMCT-2M	
3.0 m		F39-JMCR-3M	F39-JMCT-3M	
5.0 m		F39-JMCR-5M	F39-JMCT-5M	
10.0 m		F39-JMCR-10M	F39-JMCT-10M	

IP67-Enclosure (Acrylic)

Standalone models	F39-EM67-XXXX	XXXX = length of protection field
Master/Slave models	F39-EM67FS-XXXX	

Welding/Sputter protection shield (Lexan)

F39-EMWS-XXXX	XXXX = length of protection field
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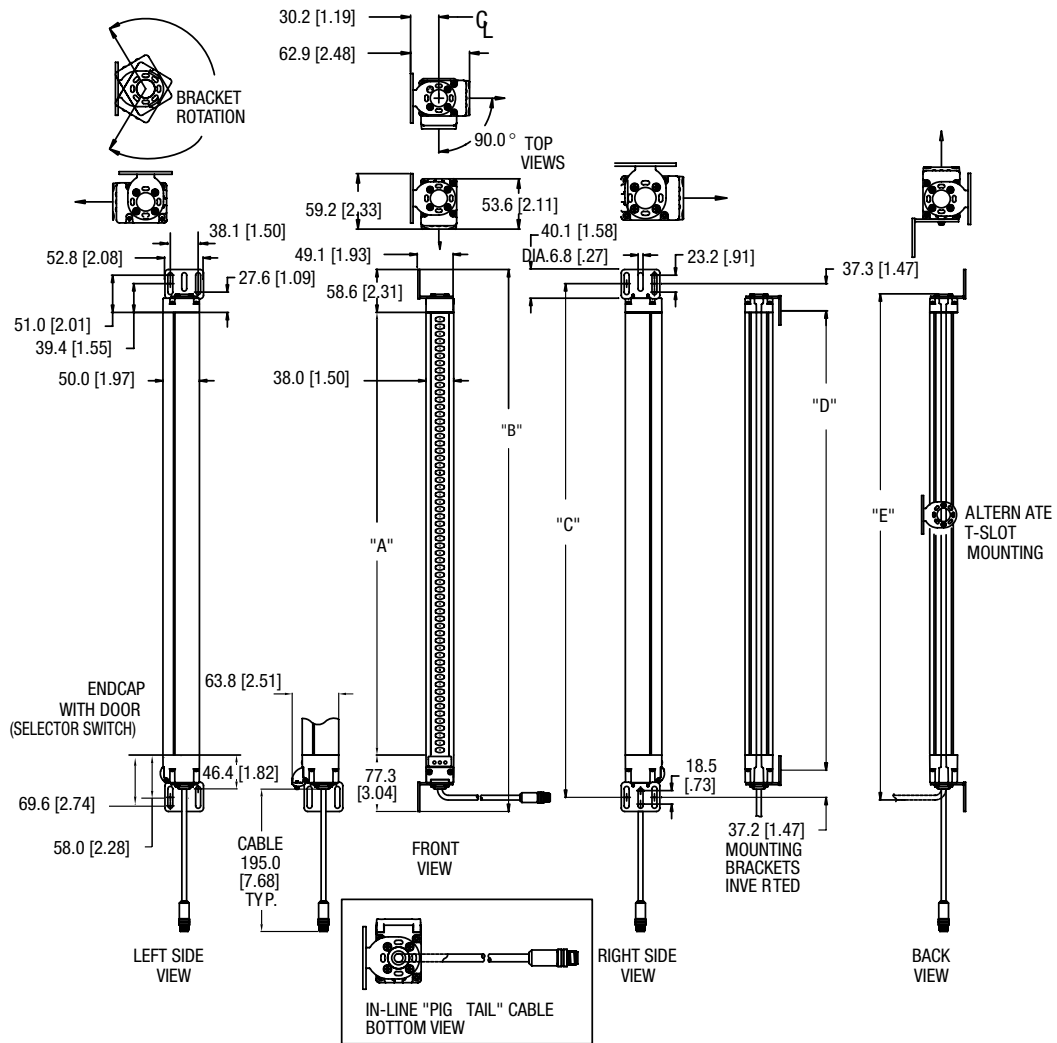
Explosion proof housing

Model	14 mm resolution	30 mm resolution
F39-EXPF-AX300	MS4800-014-0320	MS4800-030-0320
F39-EXPF-AX600	–	MS4800-030-0640
F39-EXPF-AX900	–	MS4800-030-0960
F39-EXPF-AX1200	–	MS4800-030-1240

Safety Controllers

Family	Type Name	Configuration	
G9SB	G9SB-200-D	DPST-NO	
	G9SB-301-D	3PST-NO	
G9SA	G9SA-301	3PST-NO	
	G9SA-501	5PST-NO	
	G9SA-321-T075	3PST-NO, Time delay 7.5 s	
	G9SA-321-T15	3PST-NO, Time delay 15 s	
G9SA	G9SA-321-T30	3PST-NO, Time delay 30 s	
	G9SX	G9SX-BC202	2 Safe Outputs
		G9SX-AD322-T15	3 Safe Outputs, Time delay 15 s
		G9SX-AD322-T150	3 Safe Outputs, Time delay 150 s
G9SX-ADA222-T15		2 Safe Outputs, Time delay 15 s	
G9SX	G9SX-ADA222-T150	2 Safe Outputs, Time delay 150 s	
	DeviceNet Safety	NE1A-SCPU01	16 In, 8 Out, Safety Master
DeviceNet Safety	NE1A-SCPU02	40 In, 8 Out, Safety Master	
	Safety Controller	NE1A-SCPU01L	16 In, 8 Out
Safety Controller		NE1A-SCPU02L	40 In, 8 Out
Muting Controller	F3SP-U4P	External Muting Controller	
	MS4800-RM6	Can be used with MSx800 Master/Slave	

Dimensions



	240 mm	280 mm	320 mm	360 mm	400 mm	440 mm	480 mm	520 mm	560 mm	600 mm
A	244.6	284.4	324.8	364.5	404.2	443.9	484.3	523.4	563.7	604.1
B	380.6	420.4	460.8	500.5	540.2	579.9	620.3	659.4	699.7	740.1
C	341.9	381.7	422.1	461.8	501.5	541.2	581.6	620.7	661.0	701.4
D	267.5	307.3	347.7	387.4	427.1	466.8	507.2	546.3	586.6	627.0
E	331.5	371.3	411.7	451.4	491.1	530.8	571.2	610.3	650.6	691.0
	640 mm	680 mm	720 mm	760 mm	800 mm	840 mm	880 mm	920 mm	960 mm	1000 mm
A	643.9	683.6	724.0	762.0	803.5	843.4	882.8	923.8	963.6	1002.6
B	779.9	819.6	860.0	898.0	939.5	979.8	1018.8	1059.8	1099.6	1138.6
C	741.2	780.9	821.3	859.3	900.8	941.1	980.1	1021.1	1060.9	1099.9
D	666.8	706.5	746.9	784.9	826.4	866.7	905.7	946.7	986.5	1025.5
E	730.8	770.5	810.9	848.9	890.4	930.7	969.7	1010.7	1050.5	1089.5
	1040 mm	1080 mm	1120 mm	1160 mm	1200 mm	1240 mm	1280 mm	1320 mm	1360 mm	1400 mm
A	1042.9	1083.9	1122.3	1162.7	1203.8	1242.1	1281.8	1323.6	1361.0	1401.7
B	1178.9	1219.9	1258.3	1298.7	1339.8	1378.1	1417.8	1459.6	1497.0	1537.7
C	1140.2	1181.2	1219.6	1260.0	1301.1	1339.4	1379.1	1420.9	1458.3	1499.0
D	1065.8	1106.8	1145.2	1185.6	1226.7	1265.0	1304.7	1346.5	1383.9	1424.6
E	1129.8	1170.8	1209.2	1249.6	1290.7	1329.0	1368.7	1410.5	1447.9	1488.6
	1440 mm	1480 mm	1520 mm	1560 mm	1600 mm	1640 mm	1680 mm	1720 mm	1760 mm	1800 mm
A	1443.4	1481.8	1521.5	1563.3	1600.9	1641.3	1681.3	1720.8	1764.5	1802.9
B	1579.4	1617.8	1657.5	1699.3	1736.9	1777.3	1817.3	1856.8	1896.5	1938.9
C	1540.7	1579.1	1618.8	1660.6	1698.2	1738.6	1778.6	1818.8	1857.8	1900.2
D	1466.3	1504.7	1544.4	1586.2	1623.8	1664.2	1740.2	1743.7	1783.4	1825.8
E	1530.3	1568.7	1608.4	1650.2	1687.8	1728.2	1768.2	1807.7	1847.4	1889.8
	1840 mm	1880 mm	1920 mm	1960 mm	2000 mm	2040 mm	2080 mm	2120 mm		
A	1840.6	1880.3	1922.8	1960.4	2000.1	2042.6	2079.6	2117.7		
B	1976.6	2016.3	2058.8	2096.4	2136.1	2178.6	2215.6	2253.7		
C	1937.9	1977.6	2020.1	2057.7	2097.4	2139.9	2176.9	2215.0		
D	1863.5	1903.2	1945.7	1983.3	2023.0	2065.5	2102.5	2140.6		
E	1927.5	1967.2	2009.7	2047.3	2087.0	2129.5	2166.5	2204.6		

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