

FACTORY AUTOMATION



LIGHT BEAM SWITCHES

SERIES ML7



*With precision
into detail...*

Yellow LED behind the front panel

ML7 - with light outlet on the side

High-visibility LEDs

Flashing Power-On indicator in the event of a short-circuit

TEACH-IN switch

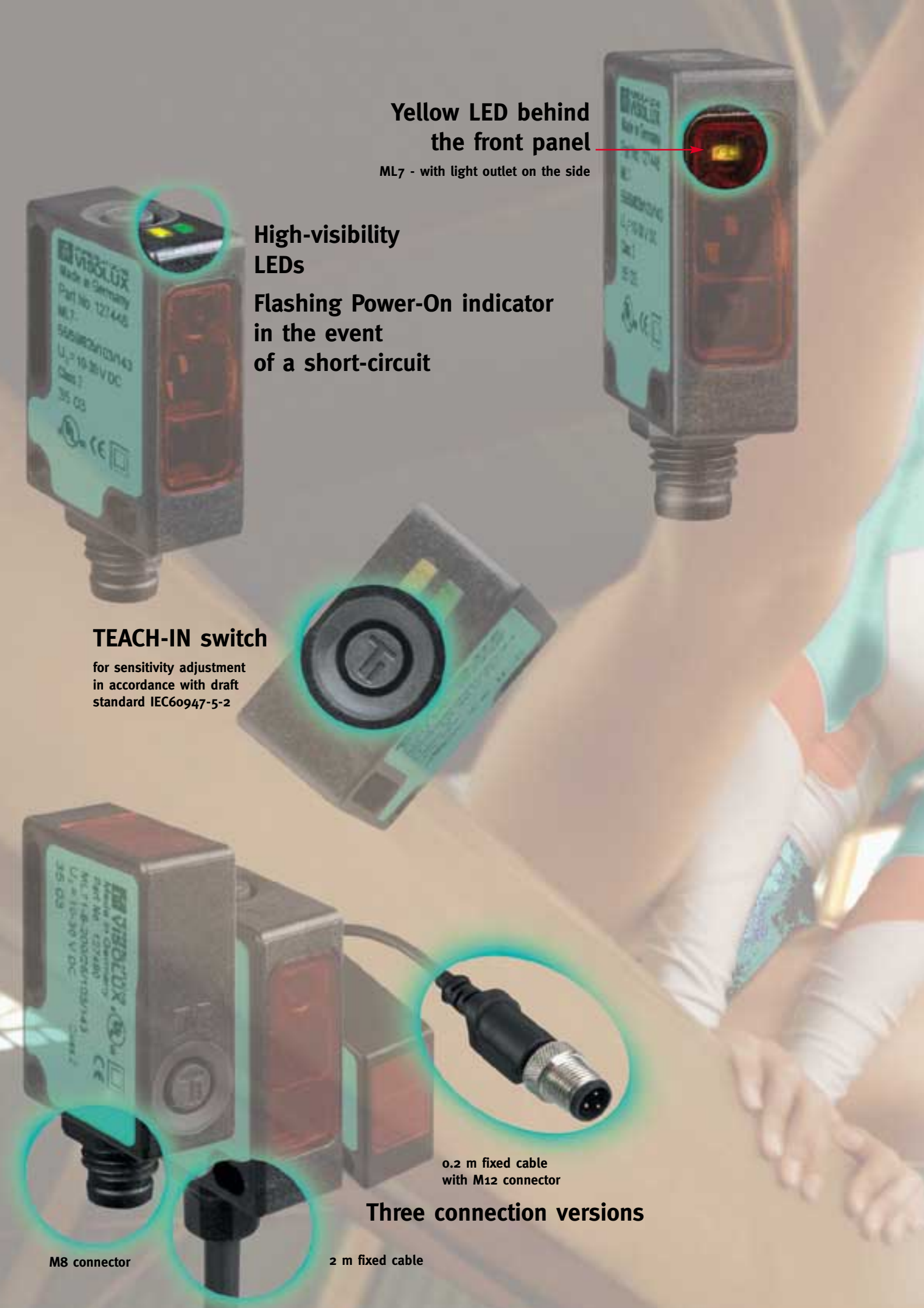
for sensitivity adjustment in accordance with draft standard IEC60947-5-2

Three connection versions

M8 connector

2 m fixed cable

0.2 m fixed cable with M12 connector



Versions with light outlet lateral or frontal



ML7



ML71

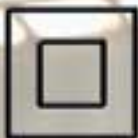
...also our "SMALL ONES" convince with maximum performance!



Increased resistance to extraneous light

Flexible mounting options

Protection class 2 to VDI



No mutual interference



REFLEX LIGHT BEAM SWITCHES WITHOUT POLARISATION FILTER ML7-6 / ML71-6



ML7-6

SERIES

TECHNICAL DATA

Light outlet	lateral	
Range	2.5 m	
Light type	red light	
Beam angle	approx. 4.5°	
Light spot diameter	approx. 180 mm at 2000 mm	
Operating indicator	green LED, flashes in the event of short-circuit	
Function indication	yellow LED, lights up when light beam is free, flashes when falling short of the stability control	
Operating elements	TEACH-IN switch	
Operating voltage	10 V DC ... 30 V DC	
No-load supply current	< 20 mA	
Switching type	dark-on switching (optional light-on switching)	
Switching frequency	1000 Hz	
Response time	0.5 ms	
Output of the pre-fault indication	-----	inactive on undershoot of stability control limit
Protection type	IP 67	
Operating temperature	- 20° C ... + 60° C	
Housing	PC (Makrolon, glass fibre-reinforced)	
Dimensions, B x L x D	23 mm x 31 mm x 11 mm	

ORDER CODES

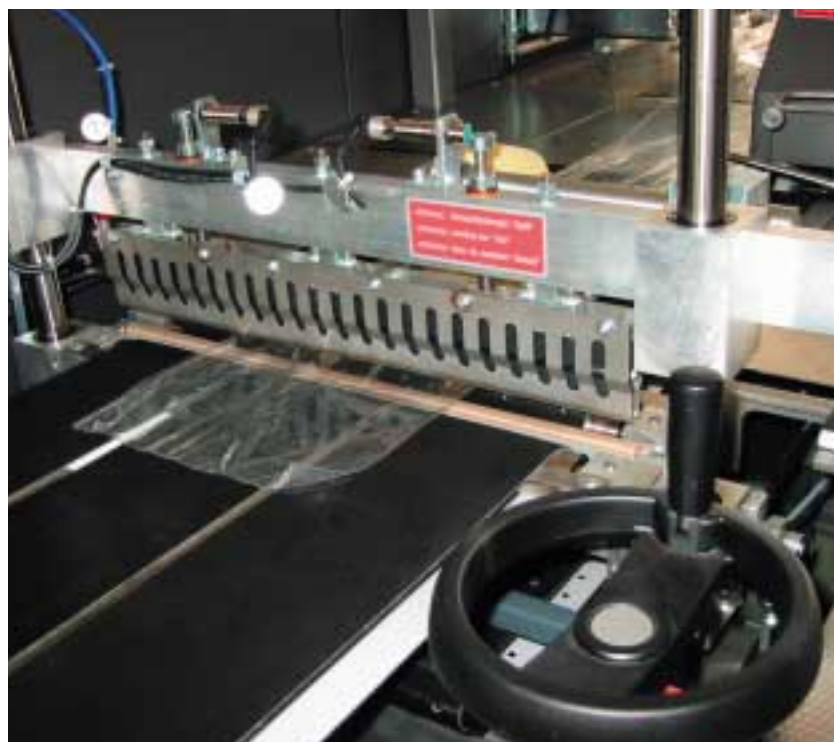
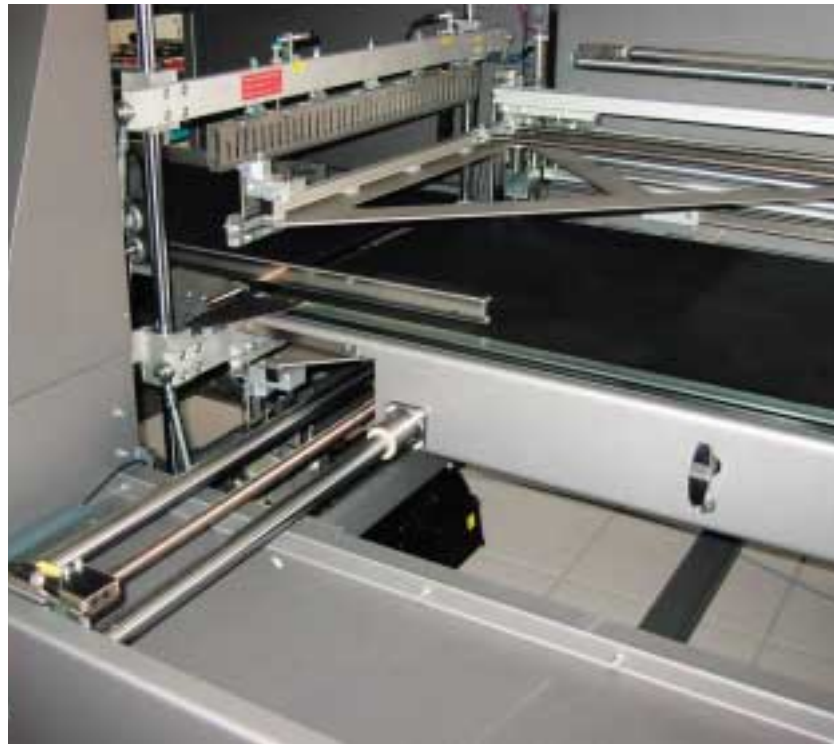
Signal output 1 NPN, reverse-polarity protected, Short-circuit proof, Open collector, 0.1 A/30 V DC	Connection type 2 m fixed cable	ML7-6/59/102/115	ML7-6/59/102/115/126b
	Connection type M8 plastic connector, 4-pin	ML7-6/59/102/143	ML7-6/59/102/126b/143
	Connection type 0.2 m fixed cable with M12 connector, 4-pin	ML7-6/59/102/115b	ML7-6/59/102/115b/126b
Signal output 1 NPN, reverse-polarity protected, Short-circuit proof, Open collector, 0.1 A/30 V DC	Connection type 2 m fixed cable	ML7-6/59/103/115	ML7-6/59/82b/103/115
	Connection type M8 plastic connector, 4-pin	ML7-6/59/103/143	ML7-6/59/82b/103/143
	Connection type 0.2 m fixed cable with M12 connector, 4-pin"	ML7-6/59/103/115b	ML7-6/59/82b/103/115b

Other options are available on request



ML71-6

	frontal
	2.5 m
	red light
	approx. 4.5°
	approx. 180 mm at 2000 mm
	green LED, flashes in the event of short-circuit
	yellow LED, lights up when light beam is free, flashes when falling short of the stability control
	TEACH-IN switch
	10 V DC ... 30 V DC
	< 20 mA
	dark-on switching (optional light-on switching)
	1000 Hz
	0.5 ms
-----	inactive on undershoot of stability control limit
	IP 67
	- 20° C ... + 60° C
	PC (Makrolon, glass fibre-reinforced)
	23 mm x 31 mm x 11 mm



ML71-6/59/102/115	ML71-6/59/102/115/126b
ML71-6/59/102/143	ML71-6/59/102/126b/143
ML71-6/59/102/115b	ML71-6/59/102/115b/126b
ML71-6/59/103/115	ML71-6/59/82b/103/115
ML71-6/59/103/143	ML71-6/59/82b/103/143
ML71-6/59/103/115b	ML71-6/59/82b/103/115b

REFLEX LIGHT BEAM SWITCHES WITH POLARISATION FILTER ML7-55 / ML71-55



ML7-55

SERIES

TECHNICAL DATA

Light outlet		lateral
Range		2.5 m
Light type		red light
Beam angle		approx. 4.5°
Light spot diameter		approx. 180 mm at 2000 mm
Operating indicator		green LED, flashes in the event of short-circuit
Function indication		yellow LED, lights up when light beam is free, flashes when falling short of the stability control
Operating elements		TEACH-IN switch
Operating voltage		10 V DC ... 30 V DC
No-load supply current		< 20 mA
Switching type		dark-on switching (optional light-on switching)
Switching frequency		1000 Hz
Response time		0.5 ms
Output of the pre-fault indication	-----	inactive on undershoot of stability control limit
Protection type		IP 67
Operating temperature		- 20° C ... + 60° C
Housing		PC (Makrolon, glass fibre-reinforced)
Dimensions, B x L x D		23 mm x 31 mm x 11 mm

ORDER CODES

Signal output 1 NPN, reverse-polarity protected, Short-circuit proof, Open collector, 0.1 A/30 V DC	Connection type 2 m fixed cable	ML7-55/59/102/115	ML7-55/59/102/115/126b
	Connection type M8 plastic connector, 4-pin	ML7-55/59/102/143	ML7-55/59/102/126b/143
Signal output 1 NPN, reverse-polarity protected, Short-circuit proof, Open collector, 0.1 A/30 V DC	Connection type 0.2 m fixed cable with M12 connector, 4-pin	ML7-55/59/102/115b	ML7-55/59/102/115b/126b
	Connection type 2 m fixed cable	ML7-55/59/103/115	ML7-55/59/82b/103/115
	Connection type M8 plastic connector, 4-pin	ML7-55/59/103/143	ML7-55/59/82b/103/143
Signal output 1 NPN, reverse-polarity protected, Short-circuit proof, Open collector, 0.1 A/30 V DC	Connection type 0.2 m fixed cable with M12 connector, 4-pin"	ML7-55/59/103/115b	ML7-55/59/82b/103/115b

Other options are available on request



ML71-55

frontal

2.5 m

red light

approx. 4.5°

approx. 180 mm at 2000 mm

green LED, flashes in the event of short-circuit

yellow LED, lights up when light beam is free,
flashes when falling short of the stability control

TEACH-IN switch

10 V DC ... 30 V DC

< 20 mA

dark-on switching (optional light-on switching)

1000 Hz

0.5 ms

----- inactive on undershoot of
stability control limit

IP 67

- 20° C ... + 60° C

PC (Makrolon, glass fibre-reinforced)

23 mm x 31 mm x 11 mm

ML71-55/59/102/115

ML71-55/59/102/115/126b

ML71-55/59/102/143

ML71-55/59/102/126b/143

ML71-55/59/102/115b

ML71-55/59/102/115b/126b

ML71-55/59/103/115

ML71-55/59/82b/103/115

ML71-55/59/103/143

ML71-55/59/82b/103/143

ML71-55/59/103/115b

ML71-55/59/82b/103/115b



DIRECT DETECTION LIGHT SCANNER ML7-8 / ML71-8



ML7-8

SERIES

TECHNICAL DATA

Light outlet		lateral
Range		2.5 m
Light type		red light
Beam angle		approx. 4.5°
Light spot diameter		approx. 15 mm at 200 mm
Operating indicator		green LED, flashes in the event of short-circuit
Function indication		yellow LED, lights up when light beam is free, flashes when falling short of the stability control
Operating elements		TEACH-IN switch
Operating voltage		10 V DC ... 30 V DC
No-load supply current		< 20 mA
Switching type		light-on switching (optional light-on switching)
Switching frequency		1000 Hz
Response time		0.5 ms
Protection type		IP 67
Operating temperature		- 20° C ... + 60° C
Housing		PC (Makrolon, glass fibre-reinforced)
Dimensions, B x L x D		23 mm x 31 mm x 11 mm

ORDER CODES

Signal output 1 NPN, reverse-polarity protected, Short-circuit proof,	Connection type 2 m fixed cable	ML7-8-200/25/102/115
	Connection type M8 plastic connector, 4-pin	ML7-8-200/25/102/143
Open collector, 0.1 A/30 V DC	Connection type 0.2 m fixed cable with M12 connector, 4-pin	ML7-8-200/25/102/115b
Signal output 1 NPN, reverse-polarity protected, Short-circuit proof,	Connection type 2 m fixed cable	ML7-8-200/25/103/115
	Connection type M8 plastic connector, 4-pin	ML7-8-200/25/103/143
Open collector, 0.1 A/30 V DC	Connection type 0.2 m fixed cable with M12 connector, 4-pin	ML7-8-200/25/103/115b

Other options are available on request



ML71-8

frontal

2.5 m

red light

approx. 4.5°

approx. 15 mm at 200 mm

green LED, flashes in the event of short-circuit

yellow LED, lights up when light beam is free,
flashes when falling short of the stability control

TEACH-IN switch

10 V DC ... 30 V DC

< 20 mA

light-on switching (optional light-on switching)

1000 Hz

0.5 ms

IP 67

- 20° C ... + 60° C

PC (Makrolon, glass fibre-reinforced)

23 mm x 31 mm x 11 mm

ML71-8-200/25/102/115

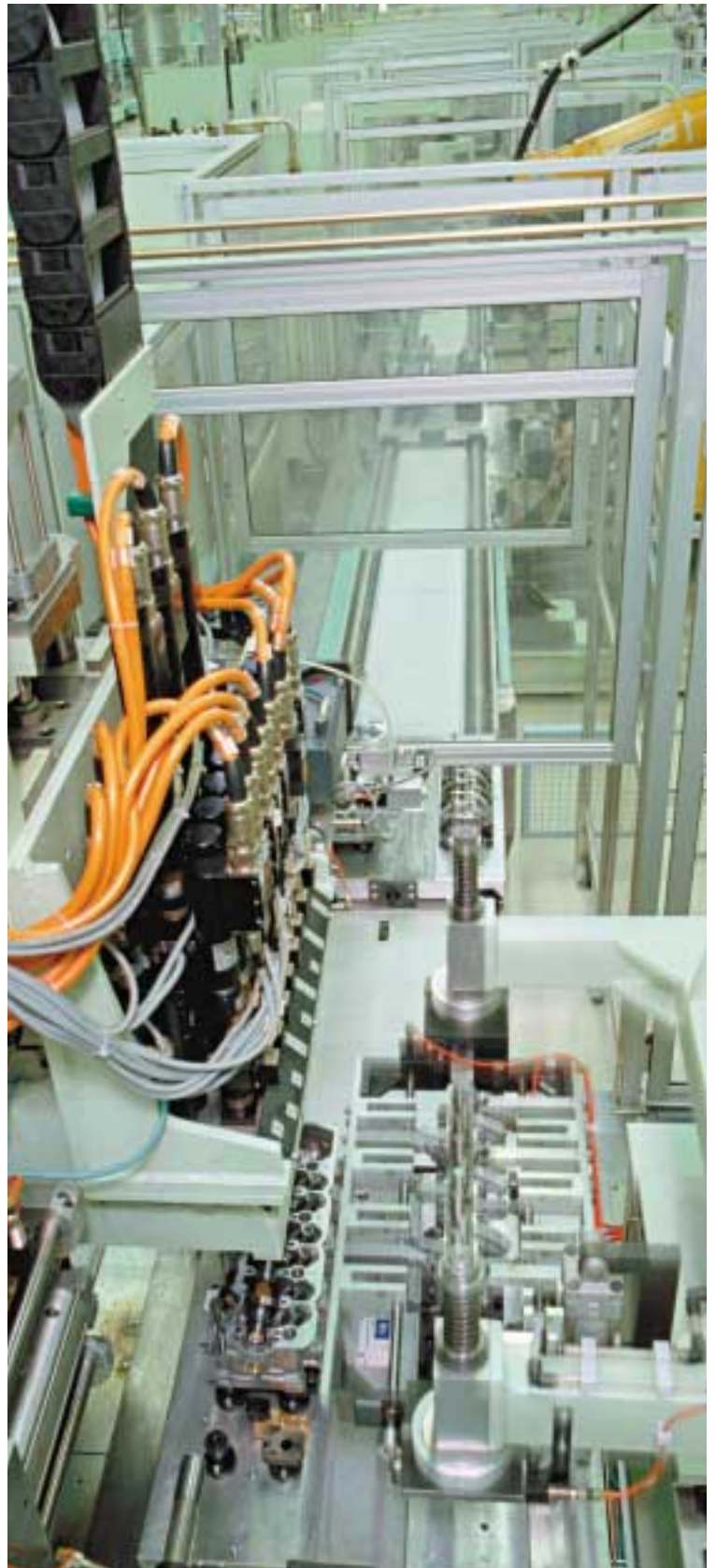
ML71-8-200/25/102/143

ML71-8-200/25/102/115b

ML71-8-200/25/103/115

ML71-8-200/25/103/143

ML71-8-200/25/103/115b



SINGLE PATH LIGHT BEAM SWITCHES M7/MV7 UND M71/MV71



M7/MV7

SERIES

TECHNICAL DATA

Light outlet		lateral
Range		4.5 m
Light type		red light
Beam angle		approx. 3°
Light spot diameter		approx. 200 mm at 3500 mm
Operating indicator		green LED, flashes in the event of short-circuit
Function indication		yellow LED, lights up when light beam is free, flashes when falling short of the stability control
Operating elements		TEACH-IN switch
Operating voltage		10 V DC ... 30 V DC
No-load supply current		transmitter: < 17 mA, receiver: < 15 mA
Switching type		dark-on switching (optional light-on switching)
Switching frequency		1000 Hz
Response time		0.5 ms
Test input		Emitter switch-off with +UB
Stability control output	-----	inactive on undershoot of stability control limit
Protection type		IP 67
Operating temperature		- 20° C ... + 60° C
Housing		PC (Makrolon, glass fibre-reinforced)
Dimensions B x L x D		23 mm x 31 mm x 11 mm

ORDER CODES

Signal output 1 NPN, reverse-polarity protected, Short-circuit proof, Open collector, 0.1 A/30 V DC	Connection type 2 m fixed cable	M7/MV7/59/76a/102/115	M7/MV7/59/76a/102/115/126b
	Connection type M8 plastic connector, 4-pin	M7/MV7/59/76a/102/143	M7/MV7/59/76a/102/126b/143
	Connection type 0.2 m fixed cable with M12 connector, 4-pin	M7/MV7/59/76a/102/115b	M7/MV7/59/76a/102/115b/126b
Signal output 1 NPN, reverse-polarity protected, Short-circuit proof, Open collector, 0.1 A/30 V DC	Connection type 2 m fixed cable	M7/MV7/59/76a/103/115	M7/MV7/59/76a/82b/103/115
	Connection type M8 plastic connector, 4-pin	M7/MV7/59/76a/103/143	M7/MV7/59/76a/82b/103/143
	Connection type 0.2 m fixed cable with M12 connector, 4-pin	M7/MV7/59/76a/103/115b	M7/MV7/59/76a/82b/103/115b

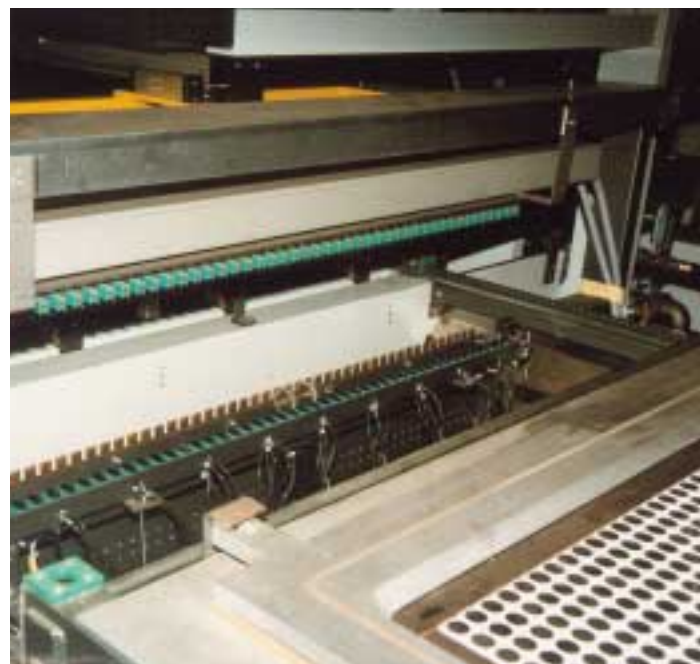
Other options are available on request



M71/MV71

frontal
4.5 m
red light
approx. 3°
approx. 200 mm at 3500 mm
green LED, flashes in the event of short-circuit
yellow LED, lights up when light beam is free, flashes when falling short of the stability control
TEACH-IN switch
10 V DC ... 30 V DC
transmitter: < 17 mA, receiver: < 15 mA
dark-on switching (optional light-on switching)
1000 Hz
0.5 ms
Emitter switch-off with +UB

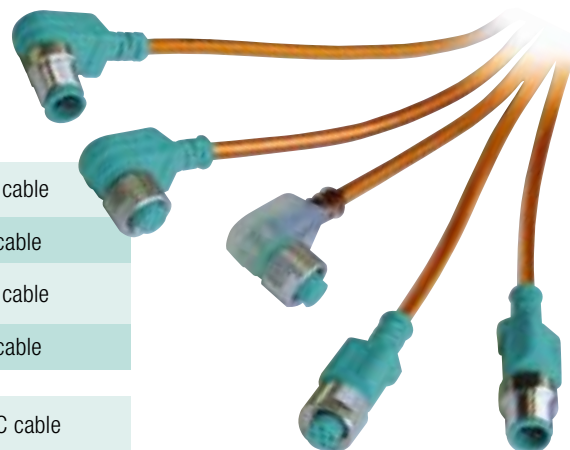
inactive on undershoot of stability control limit
IP 67
- 20° C ... + 60° C
PC (Makrolon, glass fibre-reinforced)
23 mm x 31 mm x 11 mm



M71/MV71/59/76a/102/115	M71/MV71/59/76a/102/115/126b
M71/MV71/59/76a/102/143	M71/MV71/59/76a/102/126b/143
M71/MV71/59/76a/102/115b	M71/MV71/59/76a/102/115b/126b
M71/MV71/59/76a/103/115	M71/MV71/59/76a/82b/103/115
M71/MV71/59/76a/103/143	M71/MV71/59/76a/82b/103/143
M71/MV71/59/76a/103/115b	M71/MV71/59/76a/82b/103/115b

ACCESSORIES

CONNECTION ACCESSORY



Order code	Explanation
V31-GM-2M-PVC	Plug connector, straight, M8, 4-pin with 2m PVC cable
V31-WM-2M-PVC	Plug connector, angled, M8, 4-pin with 2m PVC cable
V31-GM-5M-PVC	Plug connector, straight, M8, 4-pin with 5m PVC cable
V31-WM-5M-PVC	Plug connector, angled, M8, 4-pin with 5m PVC cable
V15-G-2M-PVC	Plug connector, straight, M12, 5-pin with 2m PVC cable
V15-W-2M-PVC	Plug connector, angled, M12, 5-pin with 2m PVC cable
V15-G-5M-PVC	Plug connector, straight, M12, 5-pin with 5m PVC cable
V15-W-5M-PVC	Plug connector, angled, M12, 5-pin with 5m PVC cable
Other lengths on request	

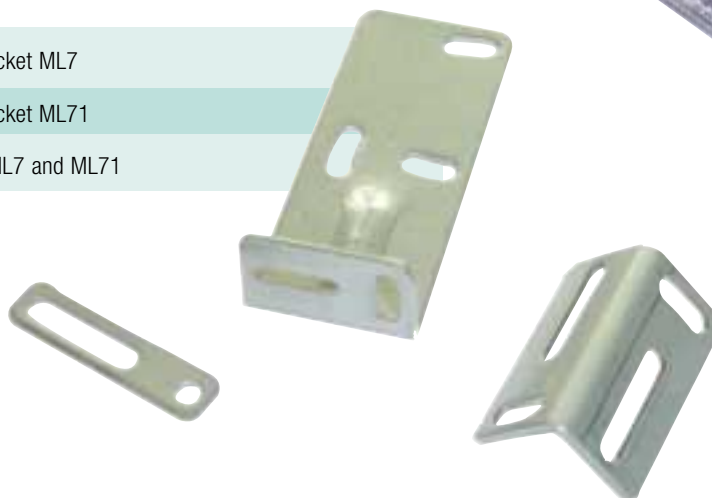
REFLECTORS

H50	Reflector, rectangular, 50 mm x 50 mm
H60	Reflector, rectangular, 60 mm x 40.5 mm
H160	Reflector, rectangular, 60 mm x 18 mm
OFR-100/100	Reflector foil 100 mm x 100 mm



MOUNTING ACCESSORIES

OMH-ML7-01	Mounting bracket ML7
OMH-ML7-02	Mounting bracket ML71
OMH-ML7-03	Fixing plate ML7 and ML71



www.pepperl-fuchs.com

Worldwide Headquarters

Pepperl+Fuchs GmbH · Königsberger Allee 87
68307 Mannheim · Germany
Tel. +49 621 776-0 · Fax +49 621 776-1000
e-mail: fa-info@de.pepperl-fuchs.com

Asia Pacific Headquarters

Pepperl+Fuchs Pte Ltd. · P+F Building
18 Ayer Rajah Crescent · Singapore 139942
Tel. +65 67799091 · Fax +65 68731637
e-mail: sales@sg.pepperl-fuchs.com

USA Headquarters

Pepperl+Fuchs Inc. · 1600 Enterprise Parkway
Twinsburg, Ohio 44087 · Cleveland-USA
Tel. +1 330 4253555 · Fax +1 330 4254607
e-mail: sales@us.pepperl-fuchs.com

 **PEPPERL+FUCHS**
SIGNALS FOR THE WORLD OF AUTOMATION