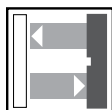




MLV40 Series Miniature Sensors

- Rugged metal housing
- Compact 14 mm (9/16") wide housing
- LED indication of switch status and signal strength
- Scratch and solvent resistant glass lens



Diffuse Mode

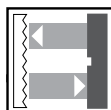
See page 514

Features:

- Adjustable sensitivity
- Complementary outputs

Sensing Range: 500 mm

Outputs: NPN, PNP



Retro-Reflective Mode

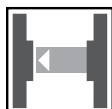
See pages 515-516

Features:

- Polarized models reliably detect shiny objects
- Cabled models allow operating mode selection by wiring

Sensing Range: 1 m, 2 m

Outputs: NPN, PNP



Thru-Beam Mode

See page 517

Features:

- Large excess gain at 5 meter distance
- High resistance to ambient lighting

Sensing Range: 5 m

Outputs: NPN, PNP

See pages 518-520 for MLV40 Series specifications, wiring and dimensions.



Diffuse Mode

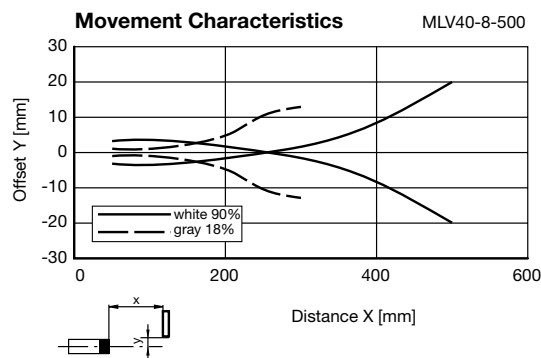
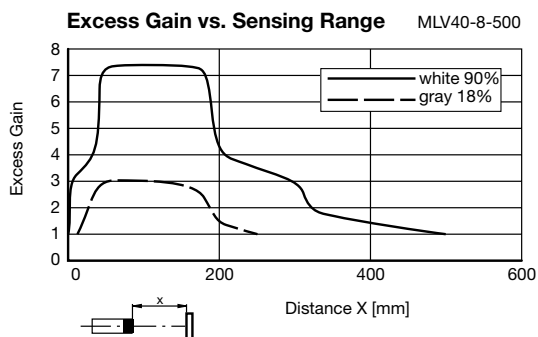
Specifications

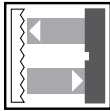
SENSING RANGE	10-500 mm	10-500 mm
SENSITIVITY ADJUSTMENT	Yes (100-500 mm)	Yes (100-500 mm)
MODEL NUMBER(S)	MLV40-8-500/47/115	MLV40-8-500/47/92
	MLV40-8-500/48/115	—
OUTPUT: Transistor, Normally Open and Normally Closed	/47	2 PNP
	/48	2 NPN
SUPPLY VOLTAGE	10-30 VDC	10-30 VDC
VOLTAGE RIPPLE	5%	5%
CURRENT CONSUMPTION	≤ 40 mA	≤ 40 mA
OPERATING MODE	Light on/dark on	Light on/dark on
RESPONSE TIME	≤ 1.0 ms	≤ 1.0 ms
SWITCHING FREQUENCY	500 Hz	500 Hz
LIGHT SPOT DIAMETER	≈ 30 mm at a range of 500 mm	≈ 30 mm at a range of 500 mm
LIGHT BEAM ANGLE	≈ 4°	≈ 4°
LIGHT SOURCE	Infrared LED	Infrared LED
AMBIENT LIGHT RESISTANCE	≤ 50,000 lux	≤ 50,000 lux
ELECTRICAL CONNECTION	 2-meter cable, PVC covered 4-conductor	 Quick disconnect type V1
ADDITIONAL DATA	See pages 518-520	

⚡ Stocked item

- Typical delivery 4 weeks or less
Consult factory for all other models

Sensing Characteristics



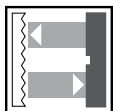


Retro-Reflective Mode

Specifications

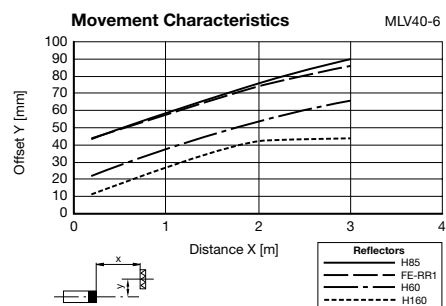
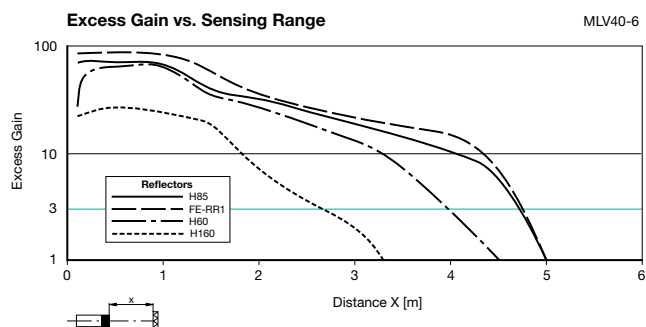
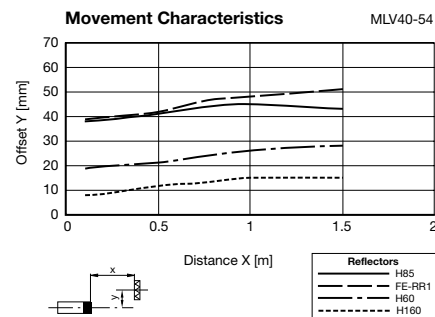
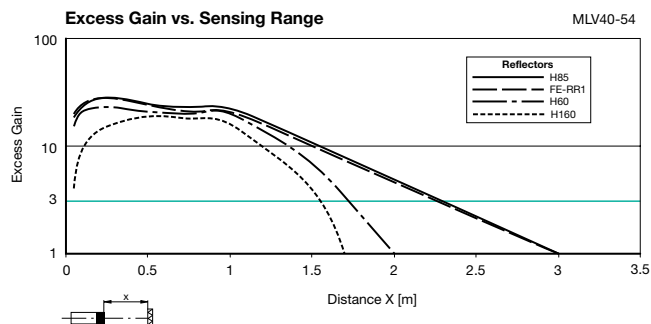
SENSING RANGE	0-1 m	0-1 m	0-2 m	0-2 m
SENSITIVITY ADJUSTMENT	No	No	No	No
REFLECTOR DISTANCE	100 mm-1 m	100 mm-1 m	100 mm-2 m	100 mm-2 m
POLARIZED FILTER	Yes	Yes	No	No
MODEL NUMBER(S)	MLV40-54/47/115 MLV40-54/48/115 MLV40-54/40b/49/115	MLV40-54/47/92 MLV40-54/48/92 MLV40-54/49/92	MLV40-6/47/115 MLV40-6/48/115 MLV40-6/40b/49/115	MLV40-6/47/92 — —
OUTPUT: Transistor				
/47	2 PNP	2 PNP	2 PNP	2 PNP
/48	2 NPN	2 NPN	2 NPN	—
/49	1 NPN and 1 PNP	1 NPN and 1 PNP	1 NPN and 1 PNP	—
SUPPLY VOLTAGE	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC
VOLTAGE RIPPLE	5%	5%	5%	5%
CURRENT CONSUMPTION	≤ 40 mA	≤ 40 mA	≤ 40 mA	≤ 40 mA
OPERATING MODE	Light on/dark on	Light on/dark on (D.O. for /49)	Light on/dark on	Light on/dark on
RESPONSE TIME	≤ 1.0 ms	≤ 1.0 ms	≤ 1.0 ms	≤ 1.0 ms
SWITCHING FREQUENCY	500 Hz	500 Hz	500 Hz	500 Hz
LIGHT SPOT DIAMETER	≈ 100 mm at a range of 1 m	≈ 100 mm at a range of 1 m	≈ 100 mm at a range of 2 m	≈ 100 mm at a range of 2 m
LIGHT BEAM ANGLE	≈ 4°	≈ 4°	≈ 4°	≈ 4°
LIGHT SOURCE	Visible red LED	Visible red LED	Infrared LED	Infrared LED
AMBIENT LIGHT RESISTANCE	≤ 80,000 lux	≤ 80,000 lux	≤ 80,000 lux	≤ 80,000 lux
ELECTRICAL CONNECTION	 2-meter cable, PVC covered 4-conductor	 Quick disconnect type V1	 2-meter cable, PVC covered 4-conductor	 Quick disconnect type V1
ADDITIONAL DATA	See pages 518-520			

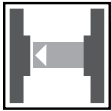
- ⚡ Stocked item
- Typical delivery 4 weeks or less
- Consult factory for all other models



Retro-Reflective Mode

Sensing Characteristics





Thru-Beam Mode

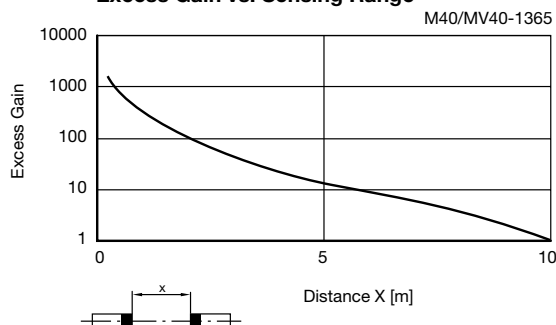
Specifications

SENSING RANGE		0-5 m	0-5 m
SENSITIVITY ADJUSTMENT		No	No
MODEL NUMBER(S)	Transmitter	M40-1365	M40-1365/92
	Receiver	MV40-1365/47	MV40-1365/47/92
		MV40-1365/48	MV40-1365/48/92
		MV40-1365/49	—
OUTPUT: Transistor	/47	2 PNP	2 PNP
	/48	2 NPN	2 NPN
	/49	1 NPN and 1 PNP	—
SUPPLY VOLTAGE		10-30 VDC	10-30 VDC
VOLTAGE RIPPLE		5%	5%
CURRENT CONSUMPTION		≤ 35 mA transmitter ≤ 25 mA receiver	≤ 35 mA transmitter ≤ 25 mA receiver
OPERATING MODE		Light on/dark on (D.O. for /49)	Light on/dark on
RESPONSE TIME		≤ 5.0 ms	≤ 5.0 ms
SWITCHING FREQUENCY		100 Hz	100 Hz
LIGHT SPOT DIAMETER		150 mm at a range of 5 m (18 mm min. target diameter)	150 mm at a range of 5 m (18 mm min. target diameter)
LIGHT BEAM ANGLE		≈ 2°	≈ 2°
LIGHT SOURCE		Infrared LED	Infrared LED
AMBIENT LIGHT RESISTANCE		≤ 100,000 lux	≤ 100,000 lux
ELECTRICAL CONNECTION		 2-meter cable, PVC covered 2/4-conductor	 Quick disconnect type V1
ADDITIONAL DATA		See pages 518-520	

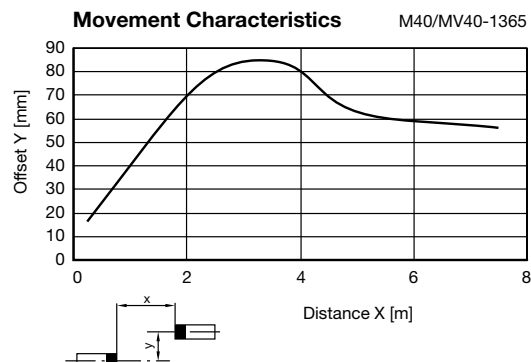
- ⚡ Stocked item
- Typical delivery 4 weeks or less
Consult factory for all other models

Sensing Characteristics

Excess Gain vs. Sensing Range



Movement Characteristics





Series Specifications

MLV40 Series Specifications

LOAD CURRENT	200 mA max.
VOLTAGE DROP	≤ 1 VDC
SHORT CIRCUIT AND OVERLOAD PROTECTION	Yes
REVERSE POLARITY PROTECTION	Yes
LED(s)	Yes (1)*
STANDARDS	EN 60947-5-2
PROTECTION (IEC)	IP65
TEMPERATURE RANGE	WORKING: -4 °F to +140 °F STORAGE: -4 °F to +167 °F
HOUSING MATERIAL	Aluminum
LENS	Glass
WEIGHT	3.5 oz (per housing)
APPROVALS	CE cULus SF

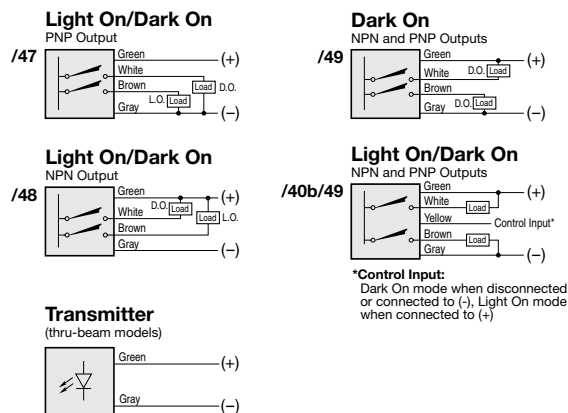
*See dimensional drawings for LED functions.

Wiring Diagrams

DC



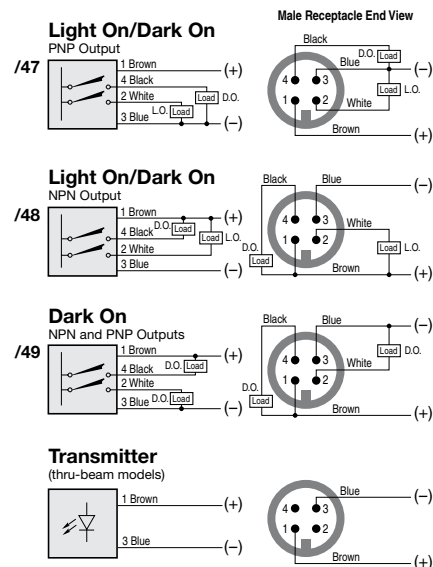
Cable Connection



Quick Disconnect

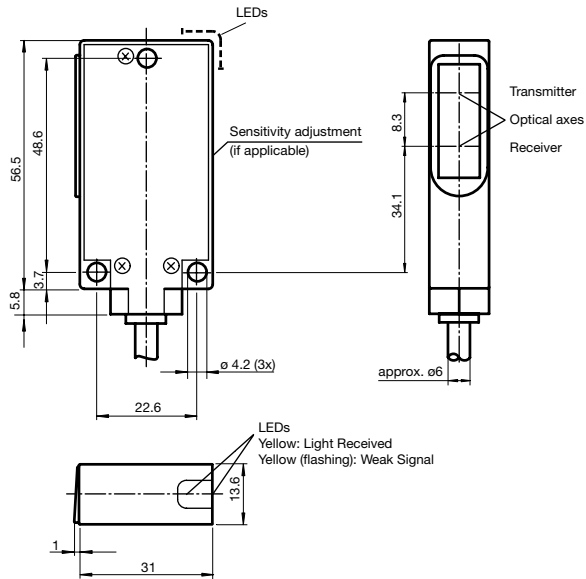
Note: Wiring diagrams show quick disconnect pin numbers.

V1 Type

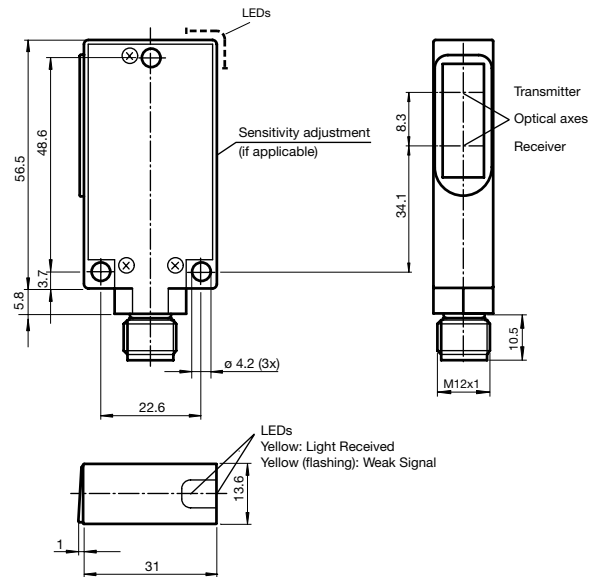


Dimensions (mm)

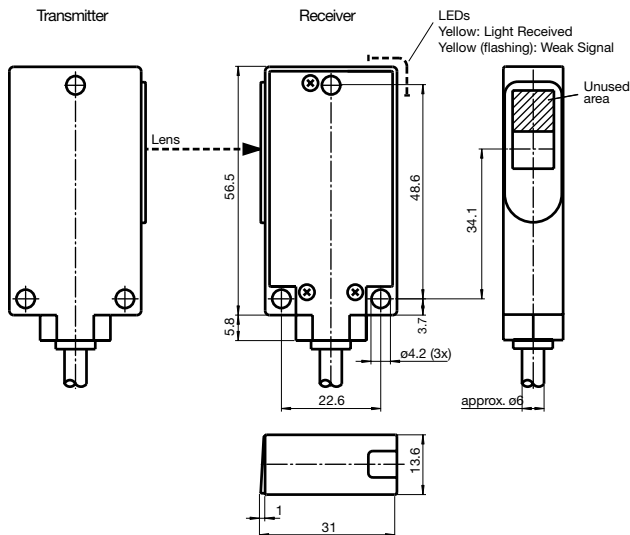
MLV40-8-500.../115, MLV40-54.../115, MLV40-6.../115



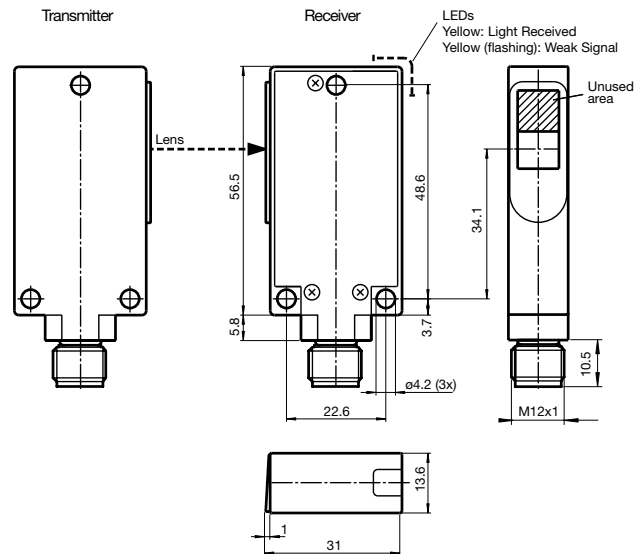
MLV40-8-500.../92, MLV40-54.../92, MLV40-6.../92



M40/MV40.../115



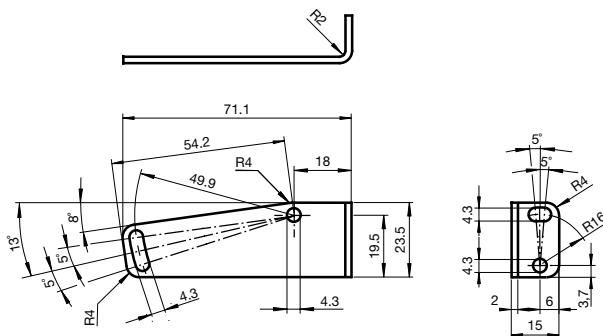
M40/MV40.../92



Accessories

(Dimensions in mm)

Mounting Bracket Model OMH-40



Material: Nickel-plated steel



See pages
803-854 for
cordsets



See pages
797-802 for
reflectors



See pages 865-872
for additional
accessories