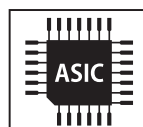
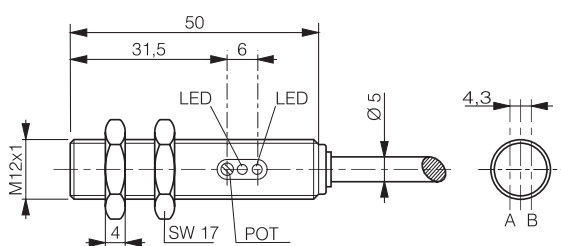


800 mm

- ✓ M12 metal housing
- ✓ Sensitivity adjustment via potentiometer
- ✓ Focused RED light source
- ✓ Calibrated range
- ✓ Immune to mutual interference
- ✓ IO-Link v1.0

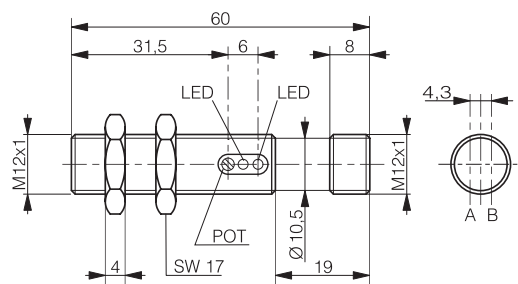


HM 2502



A: emitter axis B: receiver axis

LTR-M12MA-PMK-xxx



A: emitter axis B: receiver axis

LTR-M12MA-PMS-xxx

OPTICAL DATA

Sensing range typ. max.	5...800 mm
Operating range	6...650 mm
Light source	LED, red 645 nm
Light spot size (distance)	□ 15 mm (0.3 m) / □ 25 mm (0.6 m)

INTERFACE

Sensitivity adjustment	90...800 mm, 3/4-turn pot.
Indicator LED, green	Excess gain
Indicator LED, yellow	Sensing state
IO-Link	✓
MTTF (@40°C)	686

¹Object with 90% reflectance (standard white paper)

ELECTRICAL DATA

Supply voltage range (U _b)	10...30 VDC
Residual ripple	≤ 10% V _{pp}
Output current	≤ 200 mA
Signal PNP high/low	≤ (U _b -2.0 V)/approx. 0 V
Signal NPN high/low	Approx. U _b /≤ 2.0 V
Power consumption (no load)	≤ 15mA
Response time ¹	≤ 300 μs (normal) / ≤ 1 ms / ≤ 100 μs
Switching frequency ¹	≤ 1.5 kHz (normal) / ≤ 500 Hz / ≤ 5 kHz
Short circuit protection	✓
Voltage reversal protection	✓

MECHANICAL DATA

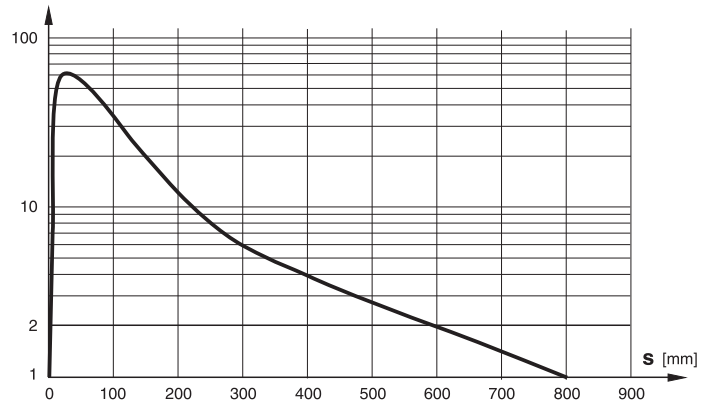
Enclosure rating	IP 67
Ambient temperature operation	-25...+65 °C
Shock and vibration	IEC 60947-5-2
Housing material	Chrome-plated brass
Window material	PMMA

¹By default, "Normal" mode. "Fine" and "Fast" modes selectable via IO-Link.

SENSING RANGE

EXCESS GAIN

Target	Operating range	Sensing range max.
90%	6...650 mm	5...800 mm
18%	12...350 mm	10...420 mm
6%	20...170 mm	16...230 mm



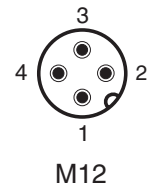
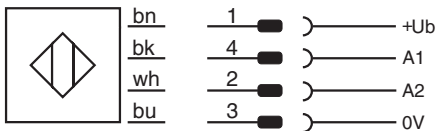
IO-LINK FUNCTIONALITIES

IO-Link version	1.0
SIO mode	Supported
Process data	Detection state & stability alarm
Baudrate	COM2 (38.4 kBaud)
Special functions	Output configuration, output timing, sensor mode, detection counter, event flags, maximum and actual sensor temperature

IO-Link specifications and IODD files may be downloaded from www.contrinex.com (Download section)

WIRING DIAGRAM

PIN ASSIGNMENT



AVAILABLE TYPES

Part number	Part reference	Polarity	Connection	Output (A1)	Output (A2)	Weight
620-600-406	LTR-M12MA-PMS-603	PNP	M12 4-pin	Light-on/IO-Link	Dark-on	14.3 g
620-600-407	LTR-M12MA-PMS-101	NPN	M12 4-pin	Light-on	Dark-on	14.3 g
620-600-404	LTR-M12MA-PMK-603	PNP	PVC, 2m, 4 wire	Light-on/IO-Link	Dark-on	79 g
620-600-405	LTR-M12MA-PMK-101	NPN	PVC, 2m, 4 wire	Light-on	Dark-on	79 g

Note: additional suffix can appear to indicate a revision version or a special version.

Operators of the products we supply are responsible for compliance with measures for the protection of persons. The use of our equipment in applications where the safety of persons might be at risk is only authorized if the operator observes and implements separate, appropriate and necessary measures for the protection of persons and machines. Terms of delivery and rights to change design reserved.