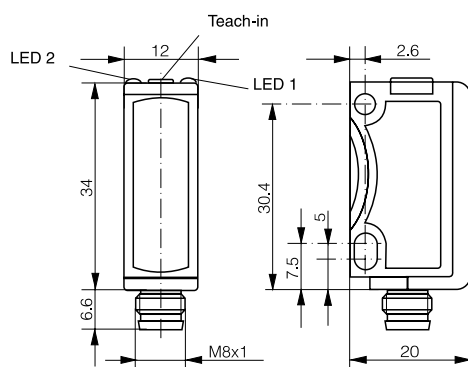


200 mm

- ✓ Miniature housing
- ✓ High precision
- ✓ Settable outputs

- ✓ Almost surface-independent detection

HM 1902



OPTICAL DATA

Measurement range	30...200 mm ¹
Resolution	0.68 mm
Linearity	± 2 mm ²
Repeatability	< 1 mm ²
Light source	LED, red 632 nm
Light spot size (distance)	□ 7 mm (60 mm)

¹Object with 6%...90% reflectance (standard black to white paper)

²Object with 18% reflectance (standard gray paper), constant ambient conditions

INTERFACE

Adjustment	Teach button
Indicator LED, green	Supply voltage state
Indicator LED, yellow	Sensing state
IO-Link	No

ELECTRICAL DATA

Supply voltage range (U _b)	13...30 VDC
Analog output	1...10 V / max. 3 mA
Output current	≤ 100 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)	≤ 30 mA
Response time (analog)	3.4 ms
Switching frequency	≤ 1 kHz
Short circuit protection	✓
Voltage reversal protection	✓

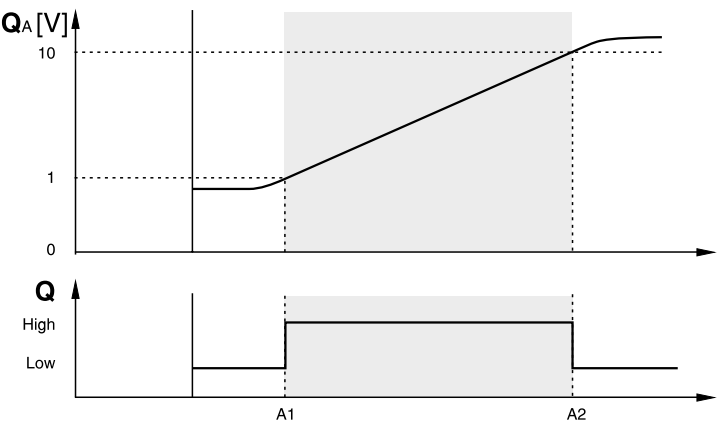
MECHANICAL DATA

Enclosure rating	IP67 & IP69K
Ambient temperature operation	-20...+60°C (UL: max +50°C)
Shock and vibration	IEC 60947-5-2
Weight (connector version)	10 g
Weight (cable version)	-
Housing material	ABS
Window material	PMMA
Connection cable	-
Connector type	M8 4-pin

MEASUREMENT RANGE

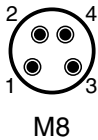
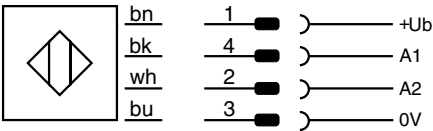
CHARACTERISTIC CURVE (INVERTIBLE & ADJUSTABLE)

Target	Measurement range
90%	30...200 mm
18%	30...200 mm
6%	30...200 mm



WIRING DIAGRAM

PIN ASSIGNMENT



AVAILABLE TYPES					
Part number	Part reference	Polarity	Connection	Output (A1)	Output (A2)
628 000 695	DTR-C23PB-TLS-139	PNP	Connector M8 4-pin	Light/Dark-on	1...10 V
628 000 696	DTR-C23PB-TLS-129	NPN	Connector M8 4-pin	Light/Dark-on	1...10 V

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



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