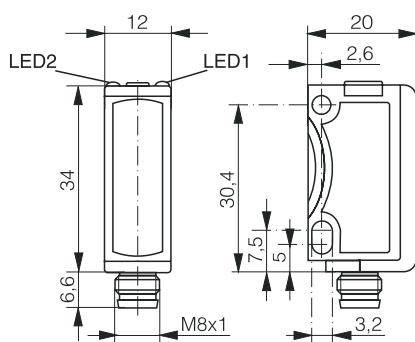


80 mm

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

- ✓ Almost surface-independent detection

HM 1902



OPTICAL DATA		INTERFACE	
Measurement range	20...80 mm ¹	Adjustment	Teach button
Resolution	0.12 mm	Indicator LED, green	Supply voltage state
Linearity	± 0.4 mm ²	Indicator LED, yellow	Sensing state
Repeatability	< 0.4 mm ²	IO-Link	No
Light source	LED, red 632 nm		
Light spot size (distance)	□ 5 mm (50 mm)		

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

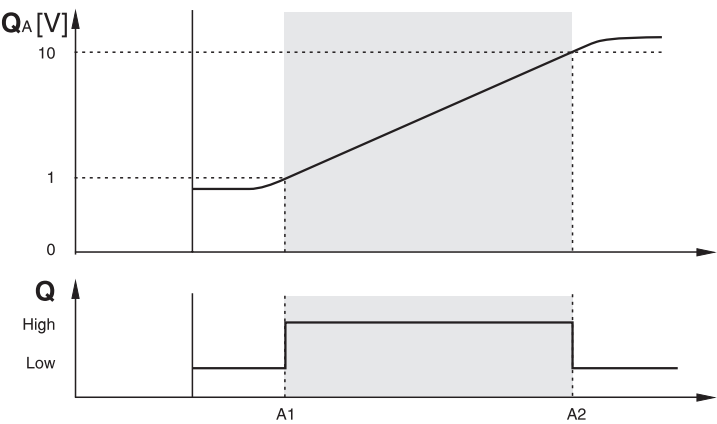
²Object with 18% reflectance (standard gray paper), constant ambient conditions

ELECTRICAL DATA		MECHANICAL DATA	
Supply voltage range (U _b)	13...30 VDC	Enclosure rating	IP67 & IP69K
Analog output	1...10 V / max. 3 mA	Ambient temperature operation	-20...+60°C (UL: max +50°C)
Output current	≤ 100 mA	Shock and vibration	IEC 60947-5-2
Signal PNP high/low	≤ (U _b -2.0 V) / approx. 0 V	Weight (connector version)	10 g
Signal NPN high/low	Approx. U _b / ≤ 2.0 V	Weight (cable version)	-
Power consumption (no load)	≤ 30 mA	Housing material	ABS
Response time (analog)	0.4 ms	Window material	PMMA
Switching frequency	≤ 1 kHz	Connection cable	-
Short circuit protection	✓	Connector type	M8 4-pin
Voltage reversal protection	✓		

MEASUREMENT RANGE

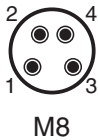
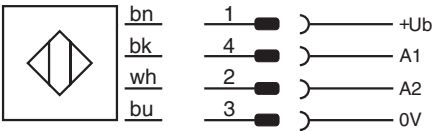
CHARACTERISTIC CURVE (INVERTIBLE & ADJUSTABLE)

Target	Measurement range
90%	20...80 mm
18%	20...80 mm
6%	20...80 mm



WIRING DIAGRAM

PIN ASSIGNMENT



AVAILABLE TYPES					
Part number	Part reference	Polarity	Connection	Output (A1)	Output (A2)
628 000 693	DTR-C23PB-TMS-139	PNP	Connector M8 4-pin	Light/Dark-on	1...10 V
628 000 694	DTR-C23PB-TMS-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.



Länna, S-142 50 SKOGÅS
Stockholm, Sweden

Ordertel 08-771 00 04
Orderfax 08-771 62 00

Växel 08-771 02 20
Teknisk 08-771 35 80

Email info@hemomatik.se
Internet www.hemomatik.se

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