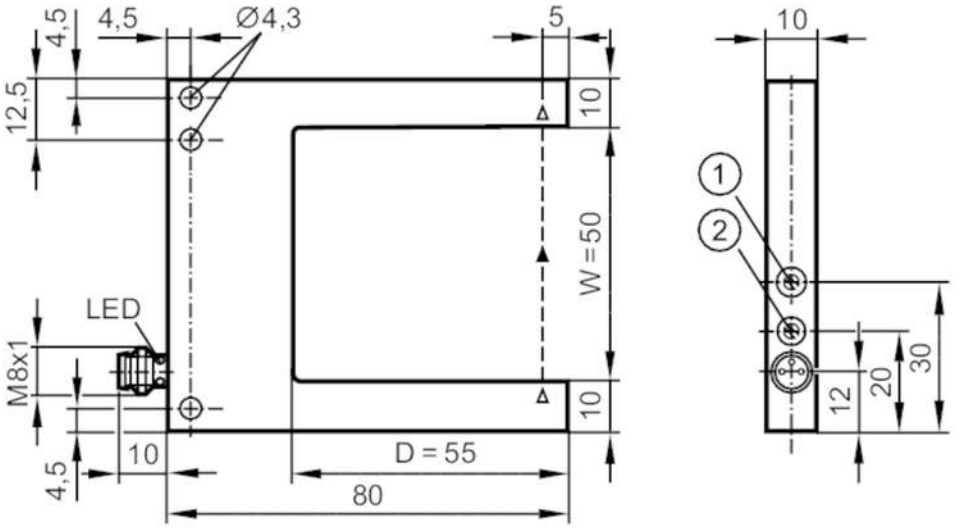
OPU701

Photoelectric fork sensor

OPULFPKG/IO-Link/AS



1 potentiometer sensitivity
2 output function switch

Product characteristics		
Type of light		red light
Laser protection class		1
Application		
Function principle		Through-beam sensor
Electrical data		
Operating voltage	[V]	10...30 DC; ("supply class 2" to cULus)
Insulation rating	[V]	500
Current consumption	[mA]	< 30
Protection class		III
Reverse polarity protection		yes
Max. power-on delay time	[ms]	150
Type of light		red light
Wave length	[nm]	655
Outputs		
Electrical design		PNP/NPN; (parameterisable)
Output function		light-on/dark-on mode; (selectable)
Max. voltage drop switching output DC	[V]	1
Permanent current rating of switching output DC	[mA]	100
Switching frequency DC	[Hz]	5000
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes

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Detection zone			
Diameter of the smallest detectable object	[mm]	0.05	
Accuracy / deviations			
Repeatability	[mm]	0.01	
Interfaces			
Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.1	
SDCI standard		IEC 61131-9	
Profiles		Smart Sensor: Device Identification; Device Diagnosis; Teach Channel; Switching Channel; Process Data Variable	
SIO mode		yes	
Required master port type		A	
Min. process cycle time	[ms]	3.2	
IO-Link process data (cyclical)		function	bit length
		process value	16
		device status	4
		binary switching information	1
IO-Link functions (acyclical)		application specific tag; operating hours counter; switching cycles counter; Min./Max. Signalspeicher; Operating mode	
Supported DeviceIDs		Type of operation	DeviceID
		Default	1209
Note		For further information please see the IODD PDF file under "Downloads"	
Operating conditions			
Ambient temperature	[°C]	-25...60	
Protection		IP 67	
Tests / approvals			
EMC		DIN EN 61000-4-2 ESD	4 kV CD / 8 kV AD
		DIN EN 61000-4-3 HF radiated	10 V/m
		DIN EN 61000-4-4 Burst	2 kV
		DIN EN 61000-4-6 HF conducted	10 V
		DIN EN 55011	Class A
Vibration resistance		EN 60068-2-6 Fc	(10-55) Hz 1 mm amplitude, oscillation period 5 min., 30 min. per axis at resonance or 55 Hz
Shock resistance		EN 60068-2-27 Ea	30 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes
Laser protection class		1	
Notes on laser protection		Caution:	laser light
		laser class:	1
			EN / IEC60825-1:2007
			EN / IEC60825-1:2014
			Complies with 21 CFR 1040 except for deviations pursuant to Laser Notice No. 50, dated June 2007.
MTTF	[years]	548	

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Mechanical data		
Weight	[g]	131
Dimensions	[mm]	70 x 10 x 80
Fork depth D	[mm]	55
Fork width W	[mm]	50
Materials		housing: diecast zinc powder-coated; lens: glass

Displays / operating elements		
Display	switching status	1 x LED, yellow

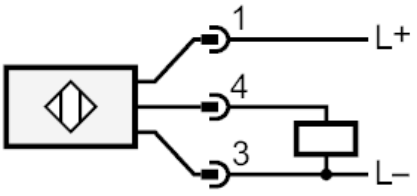
Remarks	
Pack quantity	1 pcs.

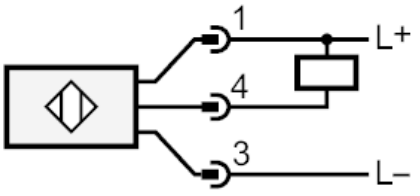
Electrical connection

Connector: 1 x M8; coding: A



Connection





Other data

operating mode adjustable via IO-Link

	standard	high resolution	Power	Speed
Resolution	0.05 mm	0.03 mm	0.1 mm	0.05 mm
Repeatability	0.01 mm	0.01 mm	0.015 mm	0.015 mm
Switching frequency	5000 Hz	2000 Hz	1000 Hz	10000 Hz

Repeatability	3 σ