

# Fork Sensor

## P4HJ301-005-050

Part Number

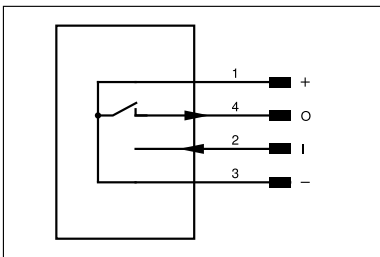
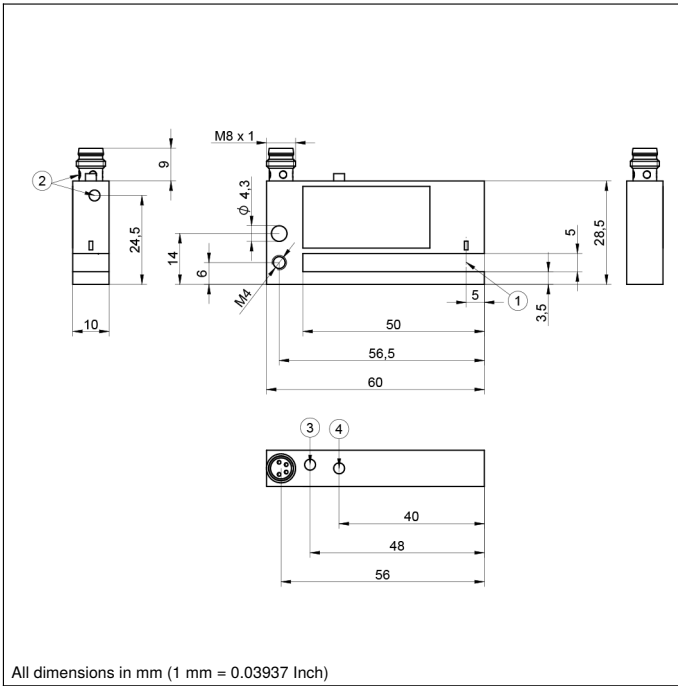



- Detection of paper, plastic and printed labels
- Easy setup via teach-in
- High reproducibility
- Maximum belt speeds

Optical label forks are ideal for safe and contactless detection of paper, plastic and printed labels on a wide range of label materials. They precisely detect the difference between labeled and unlabeled carrier material, ensuring fast and reliable labeling processes in industrial applications. The emitter and the receiver are positioned opposite each other in a housing as a barrier. As soon as a label passes through, the light is scattered or absorbed and the output of the sensor switches.

### Technical Data

Optical Data	
Fork Width	5 mm
Switching Hysteresis	0,15 mm
Light Source	Infrared Light
Max. Ambient Light	40000 Lux
Repeat Accuracy	0,05 mm
Reproducibility	0,05 mm
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 25 mA
Switching Frequency	3000 Hz
Response Time	0,16 ms
Temperature Range	-10...60 °C
Number of Switching Outputs	1
Switching Output Voltage Drop	< 2 V
Switching Output/Switching Current	100 mA
Protection Class	III
Belt speed	500 m/min
Mechanical Data	
Setting Method	Teach-In
Housing Material	Zinc diecasting
Optic Cover	Plastic, PA
Degree of Protection	IP67
Connection	M8 × 1; 4-pin
Scope of delivery	1 × initial start-up instructions 1 × sensor
Packaging unit	1 Piece
PNP NO/NC switchable	●
External teach-in input	●
Suitable Connection Equipment No.	7



Legend					
+	Supply Voltage +	PT	Platinum measuring resistor	ENAR5422	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	Not connected	ENBR5422	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	ENa	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	ENb	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	AMIN	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
Ṽ	Contamination/Error Output (NC)	O	Analog Output	Aok	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY In	Synchronization In
T	Teach Input	BZ	Block Discharge	SY OUT	Synchronization OUT
R	Reset input	AMv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	⊕	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
	IO-Link	Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
QSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
Bl_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/0 (TTL)	EDM	Contacting Monitoring	GNYE	Green/Yellow

