



## Czujniki widelkowe WFS

WFS3-40P415



Nazwa modelu > **WFS3-40P415**

Numer części > **6043919**



#### At a glance

- Optimized housing with slim fork shape
- Dynamic teach-in IO Link or control panel and manual fine adjustment with "+" / "-" buttons
- Light/dark switching function
- Fast response time of 35 µs
- PNP or NPN
- IP 65 plastic housing
- Switching output also during teach-in active
- IO-Link version 1.1

#### Your benefits

- Slim design allows flexible mounting close to the dispenser of the label which ensures higher accuracy in the process
- Compact housing ensures space-saving installation
- User friendly adjustment allows easy and quick start-up
- IO Link or external teach-in allows automatic threshold adjustment via the PLC during the process which ensures reliable detection all the time
- Short and fast response times enables precise detection - even at high web speeds
- IO-Link provides easy data access from the PLC
- Quick and easy integration using function blocks
- Flexible sensor settings, monitoring, advanced diagnostics, and visualization thanks to IO-Link



#### Cechy

|                                  |                                                                  |
|----------------------------------|------------------------------------------------------------------|
| Sposób działania:                | Optical detection principle                                      |
| Fork width:                      | 3 mm                                                             |
| Fork depth:                      | 42 mm                                                            |
| Label detection:                 | ✓                                                                |
| Nadajnik światła:                | LED                                                              |
| Rodzaj światła:                  | Światło podczerwone                                              |
| Nastawa:                         | Manual ("+" / "-" button)<br>Dynamic teach-in<br>Static teach-in |
| Tryb przełączania:               | Light/darkswitching, selectable via button                       |
| Housing design (light emission): | Fork shaped                                                      |
| IO-Link:                         | -                                                                |
| Minimum detectable object (MDO): | Size of labels: 2 mm, Gap between labels: 2 mm <sup>1)</sup>     |

<sup>1)</sup> Depends on the label thickness

## Mechanika/elektronika

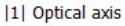
|                                     |                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Tętnienia resztkowe <sup>1)</sup> : | < 10 %                                                                                                          |
| Pobór prądu <sup>2)</sup> :         | 20 mA                                                                                                           |
| Switching frequency <sup>3)</sup> : | 20 kHz                                                                                                          |
| Czas reakcji <sup>4)</sup> :        | 50 µs                                                                                                           |
| Stability of response time:         | ± 20 µs                                                                                                         |
| Wyjście przełączające:              | PNP: HIGH = VS- ≤ 2 V / LOW approx. 0 V                                                                         |
| Tryb przełączania:                  | PNP                                                                                                             |
| Output current I <sub>max</sub> :   | 100 mA                                                                                                          |
| Input, teach-in (ET):               | PNP:<br>Run: U Teach: U > 5 V ... < U <sub>V</sub>                                                              |
| Initialization time:                | 20 ms                                                                                                           |
| Sposób przyłączenia:                | Connector M8, 4-pin                                                                                             |
| Klasa ochronności:                  | III                                                                                                             |
| Układ zabezpieczenia:               | Vs connections reverse-polarity protected<br>Wyjście Q zabezpieczone przed zwarciami<br>Tłumienie interferencji |
| Rodzaj zabezpieczenia:              | IP 65                                                                                                           |
| Ciężar:                             | ≥ ca. 36 g                                                                                                      |
| Housing material:                   | Tworzywo sztuczne, PA (glass-fiber reinforced)                                                                  |
| Napięcie zasilania:                 | 10 V DC ... 30 V DC <sup>5)</sup>                                                                               |
| Bezpieczna jasność otoczenia:       | ≤ 10.000 lx                                                                                                     |
| Fieldbus interface:                 | -                                                                                                               |

<sup>1)</sup> May not exceed or fall short of V<sub>S</sub> tolerances <sup>2)</sup> Bez obciążenia <sup>3)</sup> With light/dark ratio 1:1 <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A

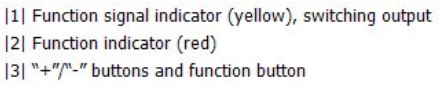
## Dane otoczenia

|                                |                                 |
|--------------------------------|---------------------------------|
| Obciążenie uderzeniowe:        | According to EN 60068-2-27      |
| Ambient operating temperature: | -20 °C ... +60 °C <sup>1)</sup> |
| Ambient storage temperature:   | -30 °C ... +80 °C               |

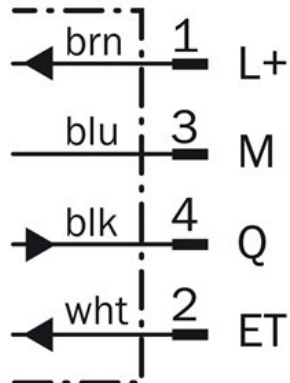
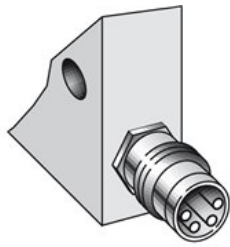
<sup>1)</sup> Do not bend below 0 °C



### Adjustments



## Anschlussart und -schema



## Bedienhinweis

1. Position label or substrate in the active area of the fork sensor

2. Move multiple labels through the fork sensor



Press both the "+" and "-" buttons together, hold > 1 s and then release the teach-in buttons. The red LED flashes.



Press "-" button, teach-in process is finished.

### Notes

Switching threshold adaptation:

Only, the first teach-in procedure after switching on is permanently stored. Teach-in can be repeated cyclically. Switching output also during teach-in active.

Once teach-in process is complete, the switching threshold can be adjusted at any time using the "+" or "-" button. To make minor adjustments, press the "+" or "-" button once. To configure settings quickly, keep the "+" or "-" button pressed for longer.

$\pm \frac{0}{3s}$  Press both the "+" and "-" buttons together (3 seconds) to lock the device and prevent unintentional actuation.

$\pm \frac{L}{6s}$  Press both the "+" and "-" buttons together (6 seconds) to define the switching function (light/dark switching). Standard setting: Q = light switching.

Teach-in (static): Setting the switching threshold without movements of label, cf. operating instruction.

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