



Fork sensors UF, UFnext

UFN3-70N415



Model Name > [UFN3-70N415](#)
Part No. > [6049680](#)



At a glance

- Detection of transparent, opaque or printed labels
- Unaffected by metallic foils and labels
- Fast response time of 250 µs
- Simple and accurate adjustment via "+"/"-"-buttons or teach-in
- Rugged, IP 65 aluminum housing

Your benefits

- Reliable label detection, regardless if labels are transparent, opaque or have a printed design, ensuring greater flexibility with one sensor
- Fast response times enable precise detection - even at high web speeds
- The aluminum housing meets all requirements for use in harsh industrial conditions
- Setting the switching threshold using the +/- push buttons or teach-in
- Ultrasonic technology prevents false detection, which may be caused by ambient light or shiny surfaces



Features

Functional principle:	Ultrasonic detection principle
Fork width:	3 mm
Fork depth:	69 mm
MDO ¹⁾ ; ²⁾ :	Size of labels: 2 mm Gap between labels: 2 mm
Label detection:	✓
Adjustment:	Dynamic teach-in Static teach-in
Output function:	Light/darkswitching, selectable via button

¹⁾ Minimum detectable object ²⁾ Depends on the label thickness

Mechanics/electronics

Supply voltage V_s ¹⁾ :	DC 10 V ... 30 V
Ripple ²⁾ :	< 10 %
Power consumption ³⁾ :	40 mA
Switching frequency ⁴⁾ :	1,500 Hz
Response time ⁵⁾ :	250 µs
Output type:	NPN: HIGH = approx. V_S / LOW \leq 2 V
Switching mode:	NPN

Output current I _{max.} ⁶⁾ :	100 mA
Input, teach-in (ET):	Run: U < 2 V Teach: U > 7 V ... < U _V
Initialization time:	100 ms
Connection type:	Connector M8, 4-pin
Protection class ⁷⁾ :	III
Circuit protection:	Output Q short-circuit protected Interference suppression
Enclosure rating:	IP 65
Weight:	Ca. 95 g
Housing material:	Aluminum

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾
 With light/dark ratio 1:1, typical, dependent on material and speed ⁵⁾ Signal transit time with resistive load ⁶⁾ Output current minimal 0.03 mA ⁷⁾ Reference voltage DC
 50 V

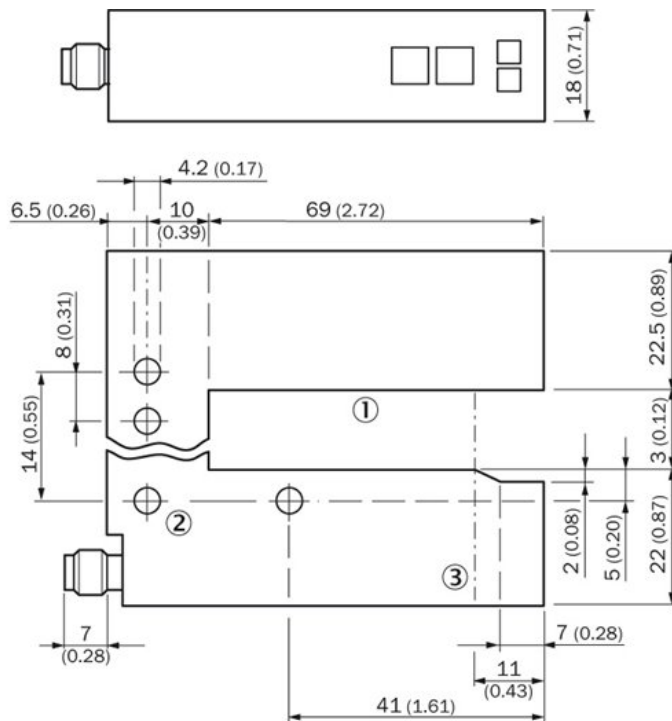
Ambient data

Ambient temperature ¹⁾ :	Operation: 5 ... 55 °C Storage: -20 ... 70 °C
Shock load:	According to EN 60068-2-27
EMC:	EN 60947-5-2 ²⁾

¹⁾ Do not bend below 0 °C ²⁾ The UFN complies with the Radio Safety Requirements (EMC) for the industrial sector (Radio Safety Class A).

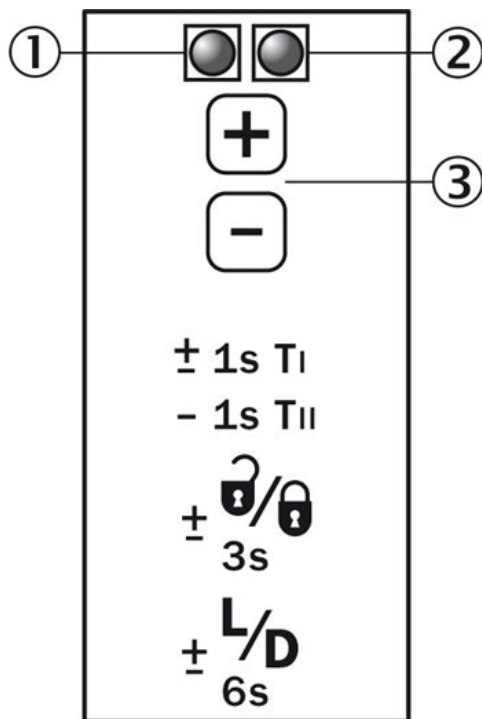
It may cause radio interference if used in residential areas.

Dimensional drawing



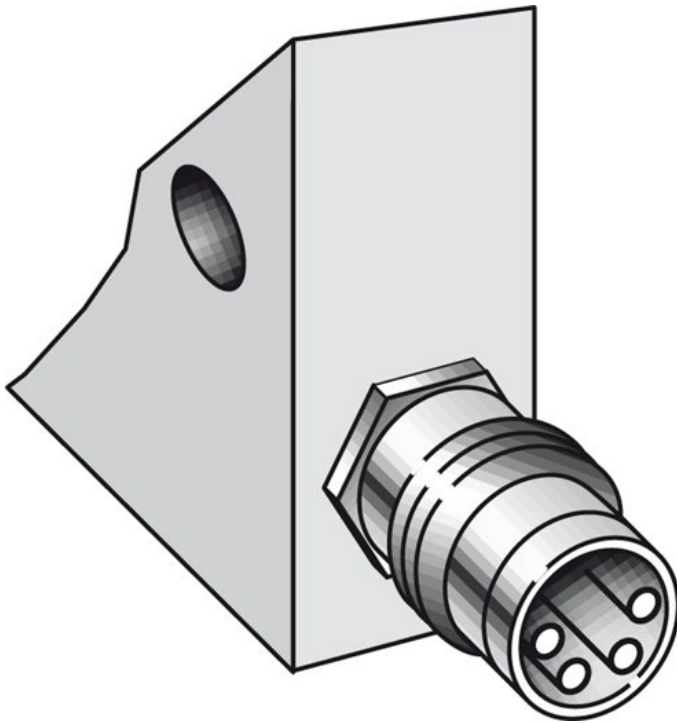
- [1] Fork opening: fork width 3 mm, forks depth 69 mm
- [2] Mounting hole, Ø 4.2 mm
- [3] Detection axis

Adjustments

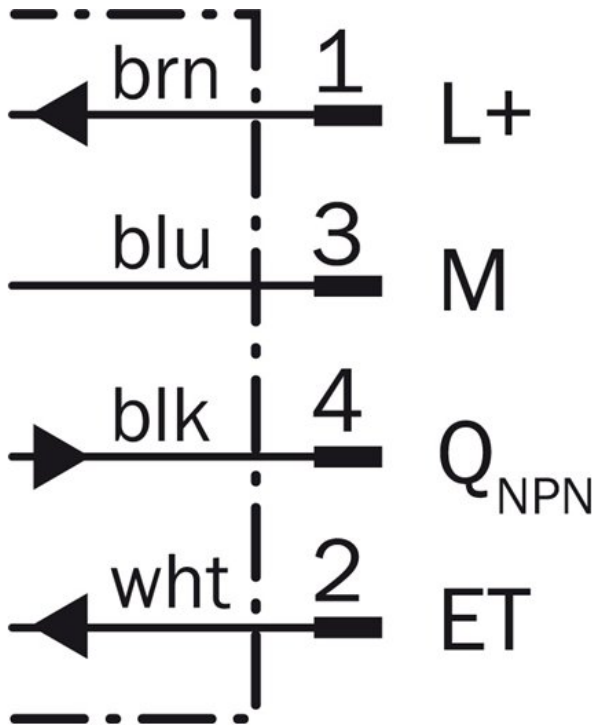


- |1| Function signal indicator (yellow), switching output
- |2| Function indicator (red)
- |3| "+" "-" buttons and function button

Connection type



Connection diagram



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