W12-2: Fantastic performance - years of experience

- Photoelectric proximity switch FGS
- Photoelectric proximity switch BGS
- Photoelectric proximity switch energ.

- Photoelectric reflex switch
- Through-beam photoelectric switch
- Proximity switch with fibre optic cables
- Proximity switch with fibre optic cables

The W12-2 series of photoelectric switches is in use all over the world. The key advantage for the user is the wealth of experience gained from the previous W12 series. The W12-2 series is backed by years of know-how gained from many thousands of applications.

A sturdy metal housing protects the WT12-2 photoelectric proximity switch, the WL12-2 photoelectric reflex switch and the WS/WE12-2 through-beam photoelectric switch. Rotatable plugs provide flexibility of location and cable installation. Features such as foreground and background suppression, ASI interface, fibre-optic cable versions, insensitivity to ambient light and mutual interference when units are installed close together, are all device standards.

The WL12 G "glass photo-electric switch" designed for filling systems used in the beverage industry, represents more than just a technical advance. This intelligent sensor needs to be configured just once using the teach-in method and then it is able to adapt its switching threshold to increasing contamination continuously and fully automatically during operation. As a result, transparent objects, e.g. transparent films or filled PET mineral water bottles, can now be detected much more reliably. Continual cleaning and realignment are, therefore, a thing of the past. Monitoring the flow of bottles, and bottle counting, has been made possible while simultaneously minimising maintenance requirements.

Further advantages:

- The Teflon-coated version for use in, for example, the beverage industry.
- IP 69K assures reliable operation even when high pressure cleaning equipment is being used.
- The Series W12-2 sensors fulfil the test requirements of

ECOLAB®

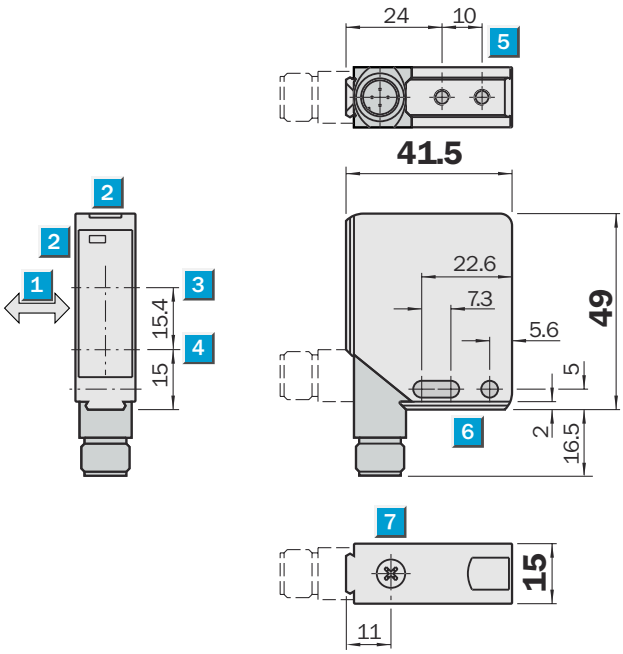
ECOLAB certifies that material resistance tests with cleaning agents and disinfectants in common use in the food-processing sector, were successfully completed.

Scanning distance
35 ... 100 mm

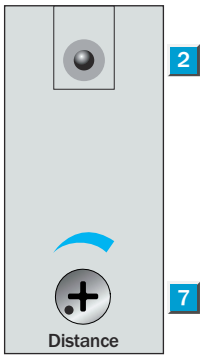
Photoelectric proximity switch

- Red light; consequently, fast alignment is possible
- Insensitive to external light sources, i.e., increased operating reliability
- M12 plug rotatable by 90°, or 2 m cable
- Adjustable foreground suppression; ideal for applications with critical surfaces

Dimensional drawing



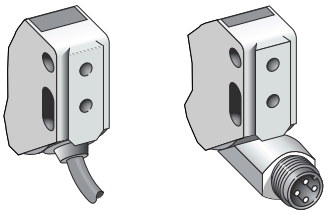
Adjustments possible



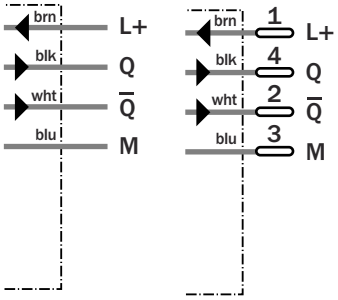
1 Standard direction of the material being scanned
2 LED signal strength indicator
3 Optical axis receiver
4 Optical axis sender
5 M4 threaded mounting hole - 4 mm deep
6 Mounting holes Ø 4.2 mm
7 Scanning distance adjustment

Connection type

WT12-2N140	WT12-2N440
WT12-2P140	WT12-2P440



4 x 0.25 mm²	M12, 4-pin



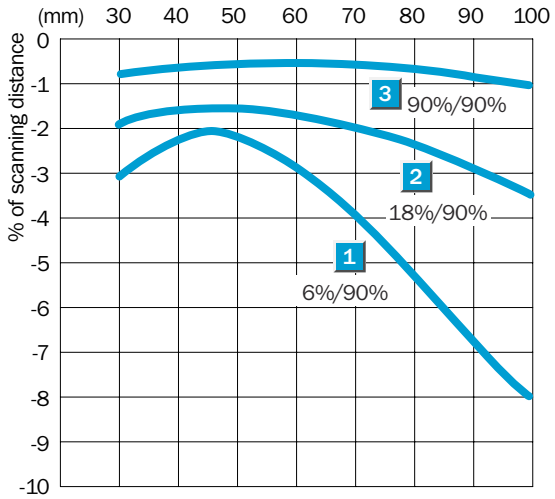
Accessories

Connector, M12, 4-pin
Mounting systems

WT12-2	N140	N440	P140	P440
Operating distance	35 ... 100 mm	■	■	■	■
Light source, light type	LED, Red light[1]	■	■	■	■
Light spot diameter	3 x 3 mm at 60 mm distance	■	■	■	■
Supply voltage V_S	DC 10 ... 30 V[2]	■	■	■	■
Ripple	≤ 5 V_{SS}[3]	■	■	■	■
Power consumption	≤ 40 mA[4]	■	■		
	≤ 30 mA[4]			■	■
Switching outputs	NPN antivalent	■	■		
	PNP antivalent			■	■
Output current $I_a$max	≤ 100 mA	■	■	■	■
Response time	≤ 330 µs[5]	■	■	■	■
Switching frequency	1,500 Hz[6]	■	■	■	■
Connection type	Cable, 2 m[7]	■		■	
	Connector, M12, 4-pin		■		■
VDE protection class	⧈[8]	■	■	■	■
Circuit protection	V_S connections reverse-polarity protected / Output Q and Q not short-circuit protected / Interference suppression	■	■	■	■
Enclosure rating	IP 69K	■	■	■	■
Ambient temperature operation	-40 °C ... +60 °C	■	■	■	■
Ambient temperature storage	-40 °C ... +75 °C	■	■	■	■
Weight	Ca. 200 g	■		■	
	Ca. 120 g		■		■
Housing material	Zinc die-cast[9]	■	■	■	■
Included with delivery	2 clamps BEF-KH-W12	■	■	■	■

[1] Average service life 100,000 h at T_a = +25 °C
[2] Limit values
[3] May not exceed or fall short of V_S tolerances
[4] Without load
[5] Signal transit time with resistive load
[6] With light/dark ratio 1:1
[7] Do not bend below 0 °C
[8] Reference voltage 50 V DC
[9] Teflon-coated housing available on request

Scanning distance



Ordering information

Model Name	Part Number
WT12-2N140	1 016 145
WT12-2N440	1 016 146
WT12-2P140	1 016 148
WT12-2P440	1 016 150