Model Number
VT18-8-H-120-M/40a/65b/118/128
Background suppression sensor with 4-pin, M12 x 1 connector

Features
- Adjustable background suppression
- Array control panel with highly visible LED display
- Flashing power on LED in case of short-circuit
- Multiple device installation possible, no mutual interference (no cross-talk)
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

Dimensions

Electrical connection

Option: /128

1 +UB
2 n. c.
3 0 V
4 Q

○ = Light on
● = Dark on

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".
Technical data

General specifications

Detection range 20 ... 120 mm, adjustable
Detection range min. 20 ... 40 mm
Detection range max. 20 ... 120 mm
Light source LED
Light type modulated visible red light, 660 nm
Black/White difference (6% / 90%) < 10% at a distance of 120 mm
Diameter of the light spot approx. 6 mm at a distance of 120 mm
Optical face frontal
Ambient light limit 30000 Lux

Functional safety related parameters

MTTFd 860 a
Mission Time (TM) 20 a
Diagnostic Coverage (DC) 0%

Indicators/operating means

Operation indicator LED green, flashes in case of short-circuit
Function indicator LED yellow, lights up with receiver lit
Control elements Detection range adjuster, light/dark switch

Electrical specifications

Operating voltage $U_B$ 10 ... 30 V DC
Ripple 10%
No-load supply current $I_0$ < 35 mA
Protection class II, rated voltage ≤ 300 V AC with pollution degree 1-2 according to IEC 60664-1

Output

Switching type light/dark on, switchable
Signal output Push-pull (4 in 1) output short-circuit protected overvoltage protected
Switching voltage 30 V DC
Switching current max. 200 mA
Switching frequency f 500 Hz
Response time 1 ms

Ambient conditions

Ambient temperature -25 ... 70 °C (-13 ... 158 °F)
Storage temperature -30 ... 70 °C (-22 ... 158 °F)

Mechanical specifications

Degree of protection IP67
Connection M12 connector, 4-pin (Vario-Quick quick connect technology)
Material
   Housing brass, nickel-plated
   Optical face plastic
Mass 60 g

Compliance with standards and directives

Standard conformity EN 60947-5-2

Approvals and certificates

CE conformity yes
Protection class II, rated voltage ≤ 300 V AC with pollution degree 1-2 according to IEC 60664-1
UL approval cULus
CCC approval CCC approval / marking not required for products rated ≤ 36 V

Accessories

BF 18
Mounting flange, 18 mm

OMH-VL18
Mounting Bracket with swivel nut
Curves/Diagrams

Characteristic response curve

![Characteristic response curve diagram](image)

VT18-8-H

Distance X [mm] vs. Offset Y [mm]

- white 90%
- grey 18%
- black 6%

Difference in detection distance

![Difference in detection distance diagram](image)

VT18-8-H-120-M**

measured detection distance X [mm] vs. adjusted detection distance X [mm]

- white 90%
- grey 18%
- black 6%