Model Number

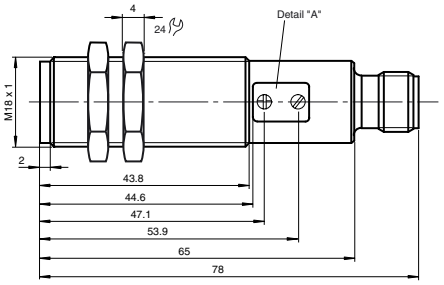
VT18-8-400-M/40a/118/128

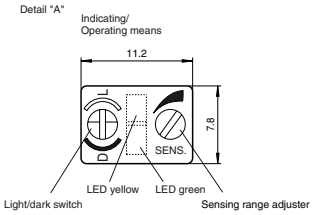
Diffuse mode sensor
with M12, 4-pin metal connector

Features

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

Dimensions

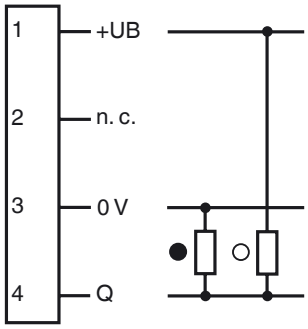




Unit connector

Electrical connection

Option: /128



○ = Light on
● = Dark on

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Technical data

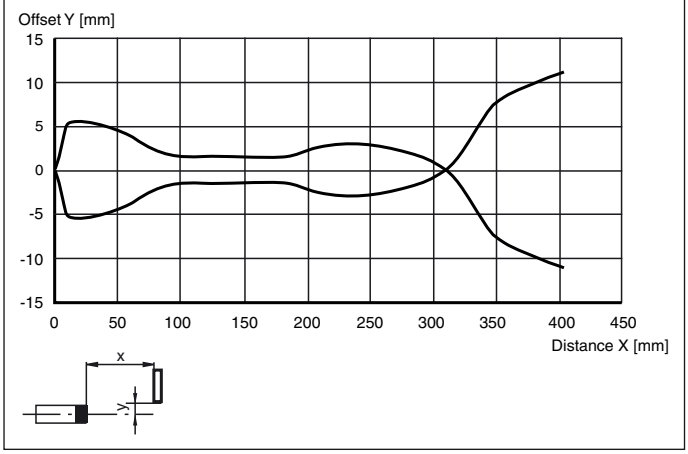
General specifications		
Detection range		0 ... 400 mm , adjustable
Detection range min.		0 ... 25 mm
Detection range max.		0 ... 400 mm
Light source		LED, 660 nm visible red light
Light type		modulated visible red light
Approvals		CE, cULus
Diameter of the light spot		approx. 4 mm at a distance of 120 mm
Optical face		frontal
Ambient light limit		30000 Lux
Hysteresis	H	< 15 %
Functional safety related parameters		
$MTTF_d$		700 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operating display		LED green, flashes in case of short-circuit
Function display		LED yellow, lights up with receiver lit
Controls		Detection range adjuster, light/dark switch
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC , class 2
Ripple		10 %
No-load supply current	I_0	< 30 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 output, short-circuit protected, reverse polarity protected
Switching voltage		30 V DC
Switching current		max. 200 mA
Switching frequency	f	500 Hz
Response time		1 ms
Standard conformity		
Standards		EN 60947-5-2
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-30 ... 70 °C (-22 ... 158 °F)
Mechanical specifications		
Protection degree		IP67
Connection		M12 connector, 4-pin (Vario-Quick quick connect technology)
Material		
Housing		brass, nickel-plated
Optical face		plastic
Mass		60 g

Approvals and certificates	
CCC approval	Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval.

Curves/Diagrams

Characteristic response curve

VT18-8-400



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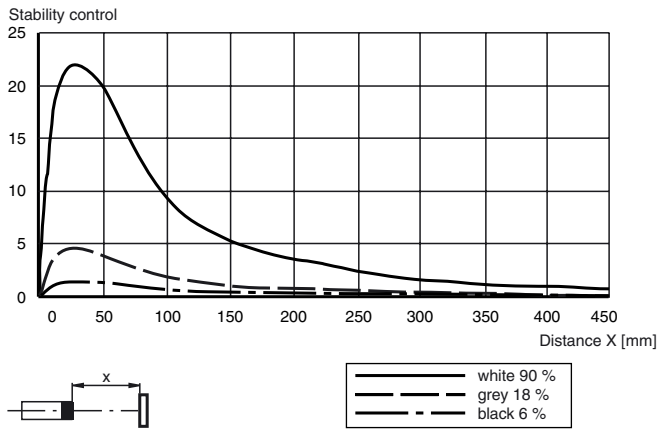
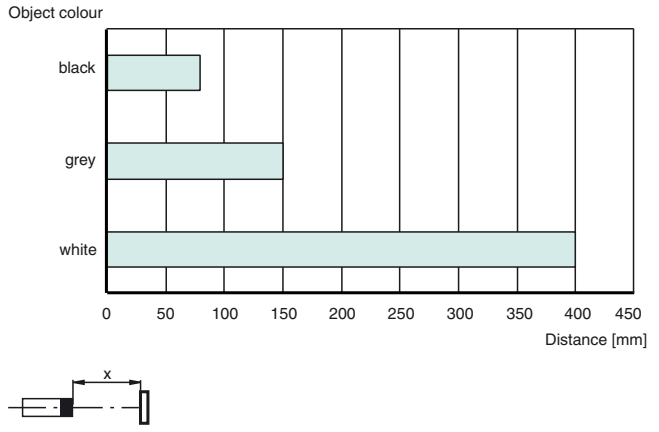
Relative received light strength

VT18-8-400



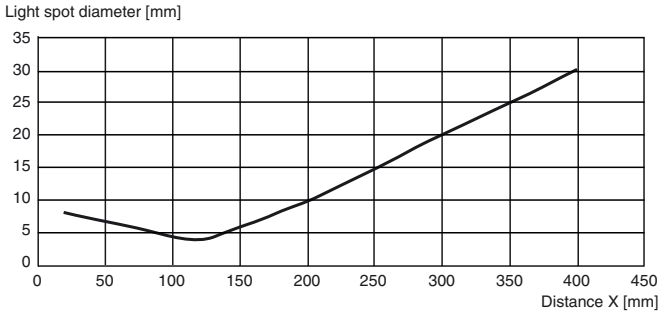
Detection ranges

VT18-8-400



Emission divergence

VT18-8-400



Adjustment

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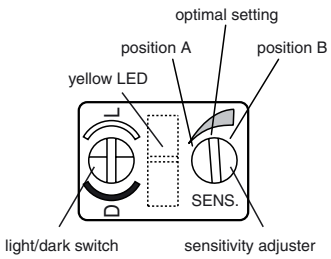
Sensitivity adjustment

- Turn sensitivity adjuster (counterclockwise) to minimum position.
- Place the object to be detected in the sensing range and turn the sensitivity adjuster clockwise until the yellow indication LED lights up. This setting indicates the position A of the sensitivity adjuster.
- Remove the object. Increase the sensitivity slowly (turning the sensitivity adjuster clockwise) until the yellow LED lights up again. This setting indicates the position B of the sensitivity adjuster.
  Note:
  In case of no background object, the LED won't light up, even in MAX. adjustment. In that case take care, that in normal operation conditions no temporal background object can appear in the sensing range (e. g. parked pallets). If this can not be excluded, place (only for adjustment matter) an object at the appropriate location. Then repeat this adjustment step. After finishing the adjustment this temporal object should be removed.
- For optimal setting, now turn the sensitivity adjuster to the middle position between the positions A and B.



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