



Model Number

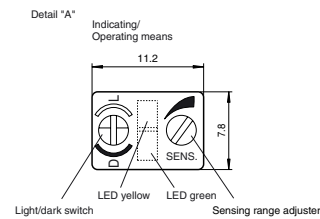
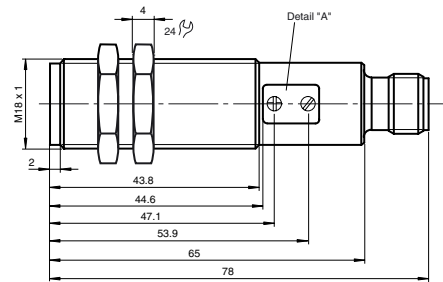
VT18-8-400-M/30/40a/118

Diffuse mode sensor
with 4-pin, M12 x 1 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 (no cross-talk)
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

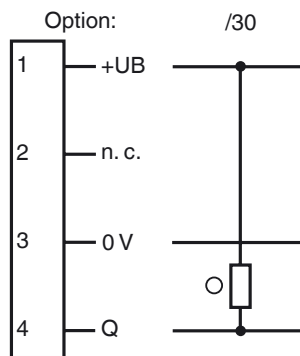
Dimensions



Unit connector



Electrical connection



○ = Light on
● = Dark on

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
Light type	modulated visible red light , 660 nm
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

Operation indicator	LED green, flashes in case of short-circuit
Function indicator	LED yellow, lights up with receiver lit
Control elements	Sensing range adjuster, light-on/dark-on changeover 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 ≤ 50 V AC with pollution degree 1-2 according to IEC 60664-1

Output

Switching type	light/dark on, switchable
Signal output	1 NPN output, short-circuit protected, reverse polarity protected, open collector
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	4-pin, M12 x 1 connector
Material	
Housing	brass, nickel-plated
Optical face	PMMA
Mass	60 g

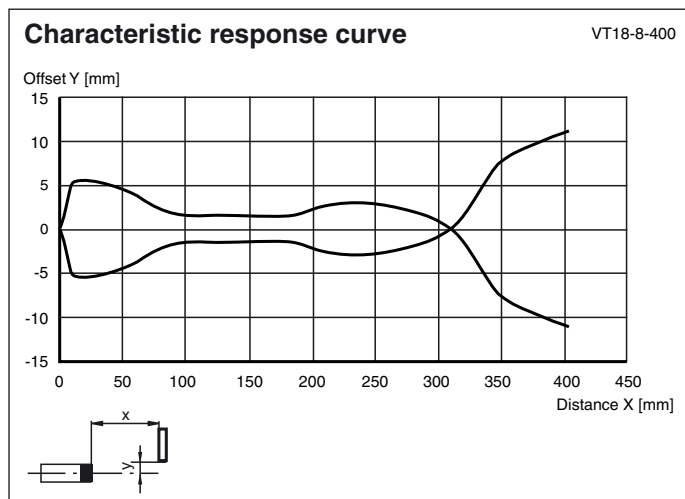
Compliance with standards and directives

Directive conformity	EMC Directive 2004/108/EC
Standard conformity	
Product standard	EN 60947-5-2

Approvals and certificates

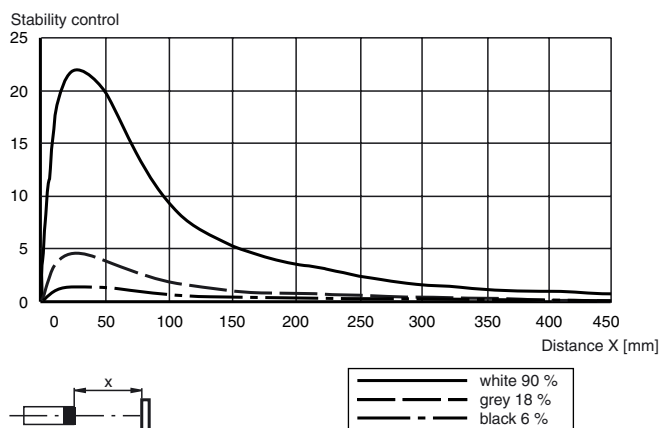
CE conformity	yes
UL approval	cULus Listed, Type 1 enclosure
CCC approval	CCC approval / marking not required for products rated ≤36 V

Curves/Diagrams

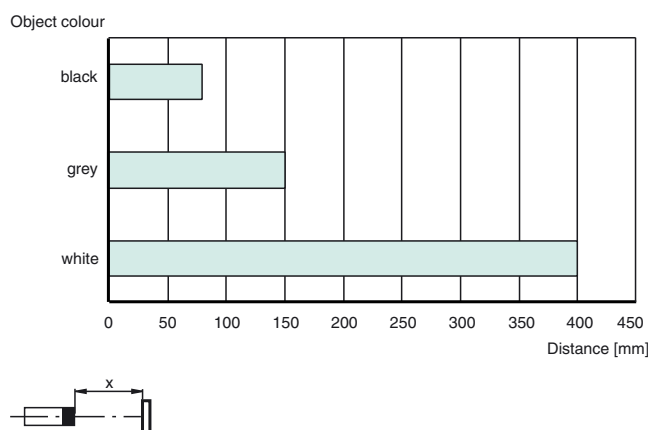


**Relative received light strength**

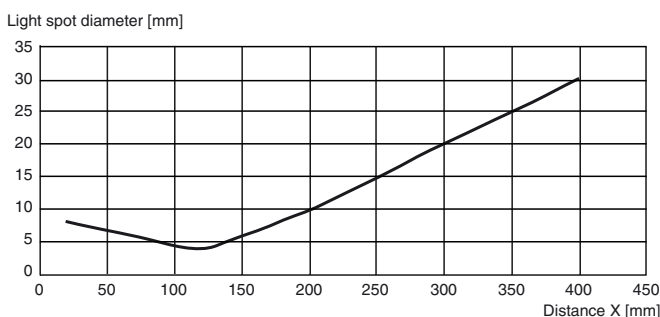
VT18-8-400

**Detection ranges**

VT18-8-400

**Emission divergence**

VT18-8-400

**Adjustment**

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.

