



**Model Number**

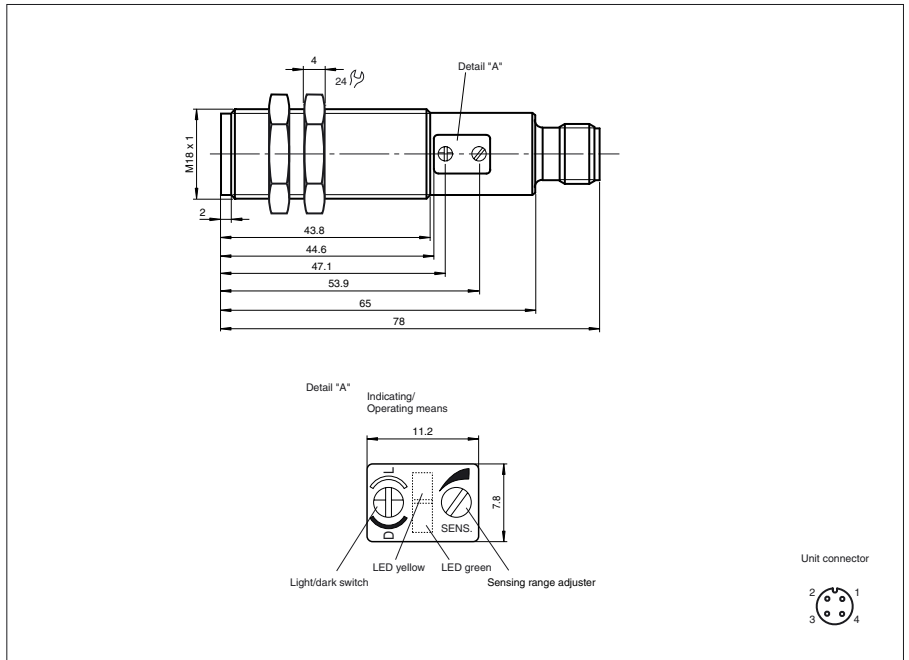
**VT18-8-400-M/30/40a/118**

Diffuse mode sensor  
with M12, 4-pin metal connector

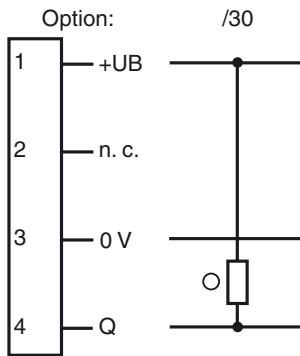
**Features**

- 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**



**Electrical connection**



○ = 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 <sub>d</sub>	700 a
Mission Time (T <sub>M</sub> )	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 <sub>B</sub>	10 ... 30 V DC , class 2
Ripple		10 %
No-load supply current	I <sub>0</sub>	< 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	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

### Standard conformity

Standards	EN 60947-5-2
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### Ambient conditions

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

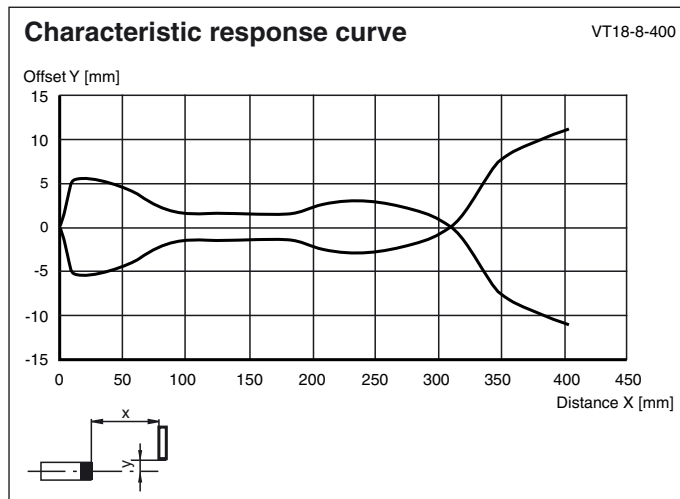
### Mechanical specifications

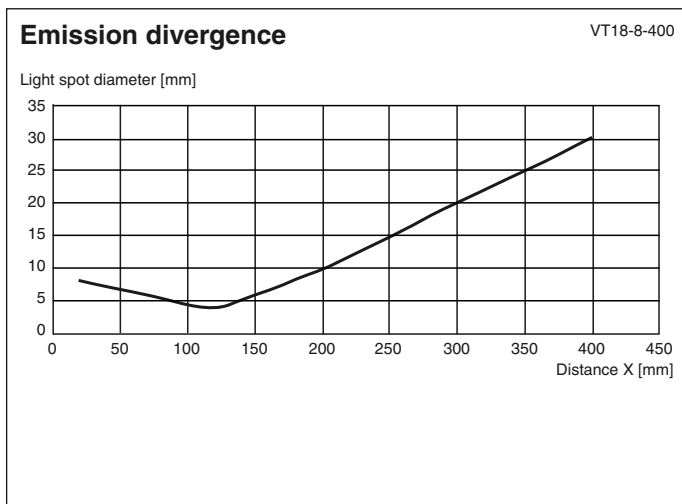
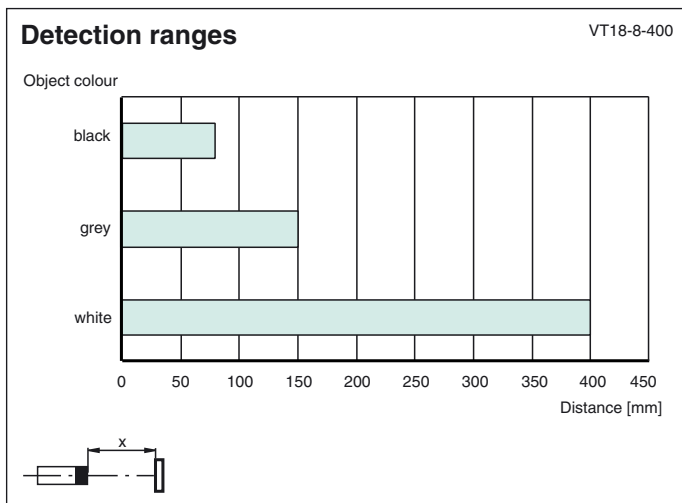
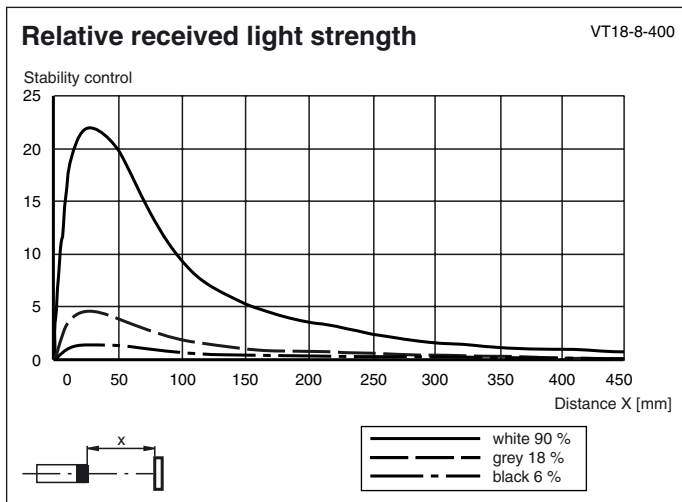
Protection degree	IP67
Connection	M12 connector, 4-pin (Vario-Quick quick connect technology)
Material	
Housing	brass, nickel-plated
Optical face	plastic
Mass	60 g

### 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.
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## Curves/Diagrams





## 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.

