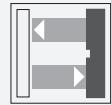


Diffuse mode sensor

VT18-8-400-M-LAS/32/40a/118

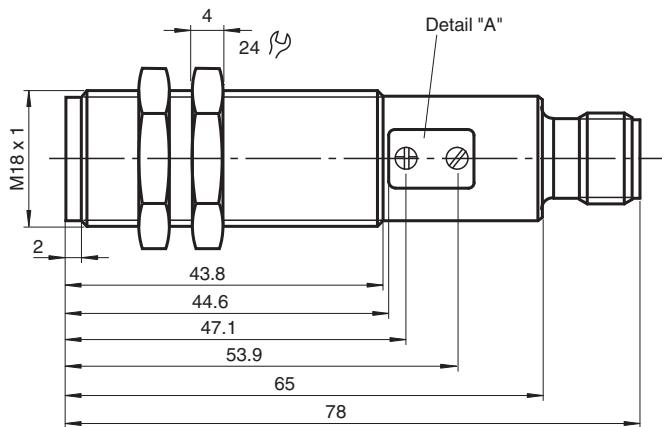


- M18 threaded housing made of brass, nickel plated
- Visible red light, pulsed LASER light
- Array control panel with highly visible LED display
- Flashing power on LED in case of short-circuit
- Multiple device installation possible, no mutual interference (no cross-talk)
- Not sensitive to ambient light, even with switched energy saving lamps
- Protection class II

Diffuse mode sensor, M18 threaded housing design, metal housing, 400 mm detection range, red laser diode, sensitivity adjuster, light/dark on, PNP output, M12 plug



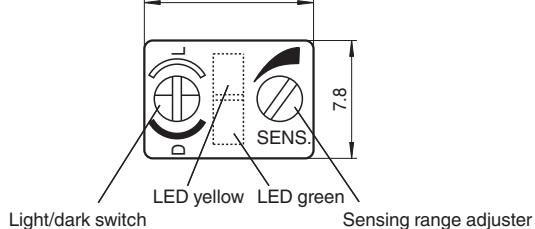
Dimensions



Detail "A"

Indicating/
Operating means

11.2



Technical Data

General specifications

Detection range	0 ... 400 mm , adjustable	
Detection range min.	0 ... 25 mm	
Detection range max.	0 ... 400 mm	
Light source	laser diode	
Light type	modulated visible red light	
Laser nominal ratings		
Note	LASER LIGHT , DO NOT STARE INTO BEAM	
Laser class	1	
Wave length	655 nm	
Beam divergence	31.5 mrad	
Pulse length	4 µs	
Repetition rate	11.91 kHz	
max. pulse energy	4.95 nJ	
Diameter of the light spot	approx. 0.5 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
No-load supply current	I ₀	< 25 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 PNP 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	

Conformity

Product standard	EN 60947-5-2	
Compliance with standards and directives		

Standard conformity		
Laser class		IEC 60825-1:2007 Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007

Approvals and certificates

CE conformity	yes	
EAC conformity	TR CU 020/2011	
UL approval	cULus Listed, Type 1 enclosure	
CCC approval	CCC approval / marking not required for products rated ≤36 V	

Ambient conditions

Ambient temperature	-25 ... 55 °C (-13 ... 131 °F)	
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)	

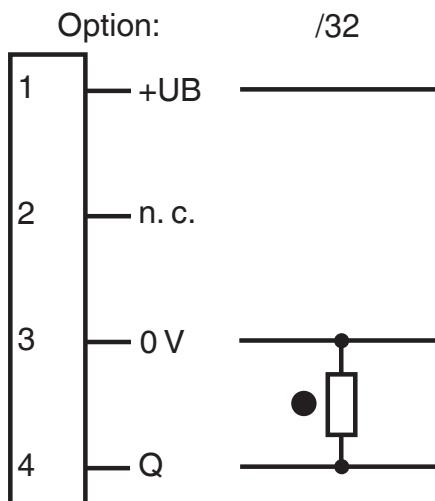
Mechanical specifications

Degree of protection	IP67	
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Technical Data

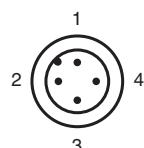
Connection	4-pin, M12 x 1 connector
Material	
Housing	brass, nickel-plated
Optical face	PMMA
Mass	60 g

Connection Assignment



○ = Light on
 ● = Dark on

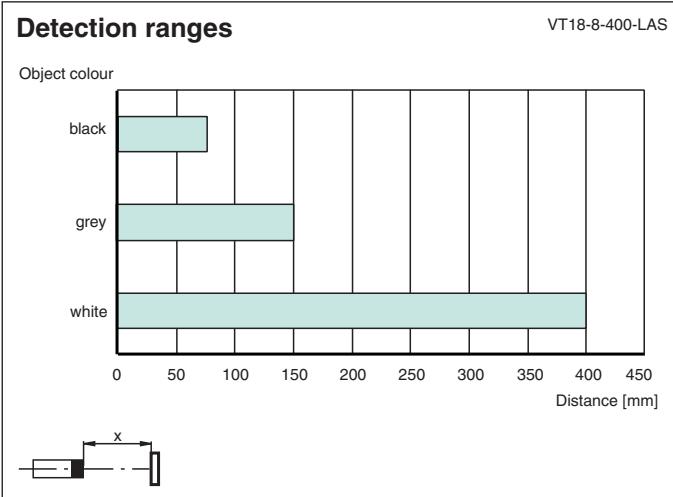
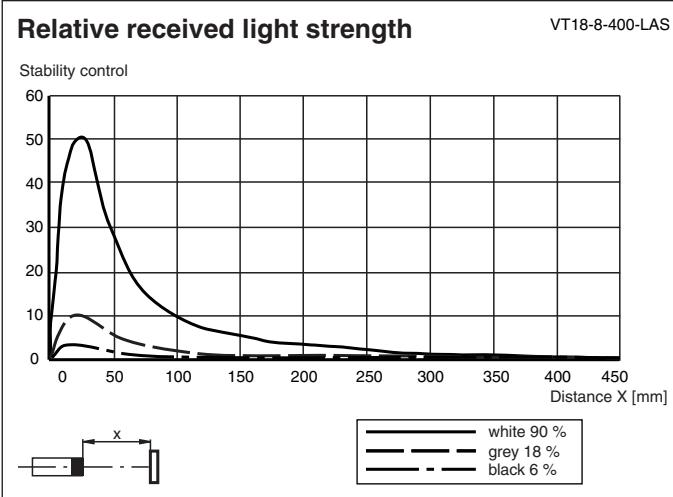
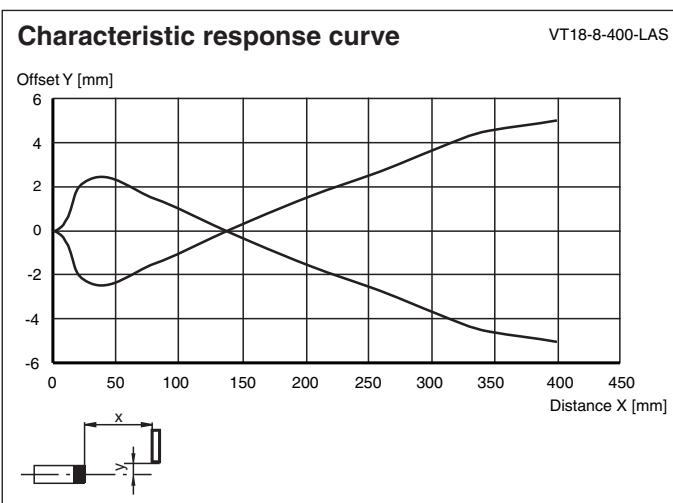
Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

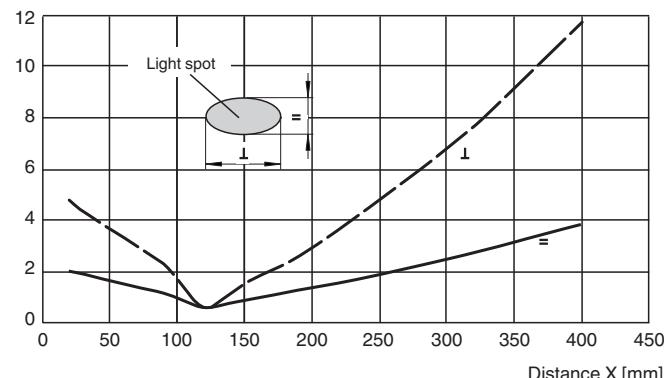
Characteristic Curve



Characteristic Curve

Emission divergence

Light spot dimensions [mm]



Safety Information

Laser Class 1 Information

The irradiation can lead to irritation especially in a dark environment. Do not point at people!

Maintenance and repairs should only be carried out by authorized service personnel!

Attach the device so that the warning is clearly visible and readable.

The warning accompanies the device and should be attached in immediate proximity to the device.

Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Accessories

	OMH-VL18	Mounting Bracket with swivel nut
	BF 18	Mounting flange, 18 mm
	BF 18-F	Plastic mounting adapter, 18 mm
	BF 5-30	Universal mounting bracket for cylindrical sensors with a diameter of 5 ... 30 mm
	V1-G-2M-PUR	Female cordset single-ended M12 straight A-coded, 4-pin, PUR cable grey
	V1-W-2M-PUR	Female cordset single-ended M12 angled A-coded, 4-pin, PUR cable grey

Configuration

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.

