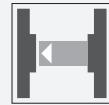




## Thru-beam sensor ML300-P-6m-RT/25/98/103



- Miniature design
- Easy to use
- Visible red light
- 45° connector

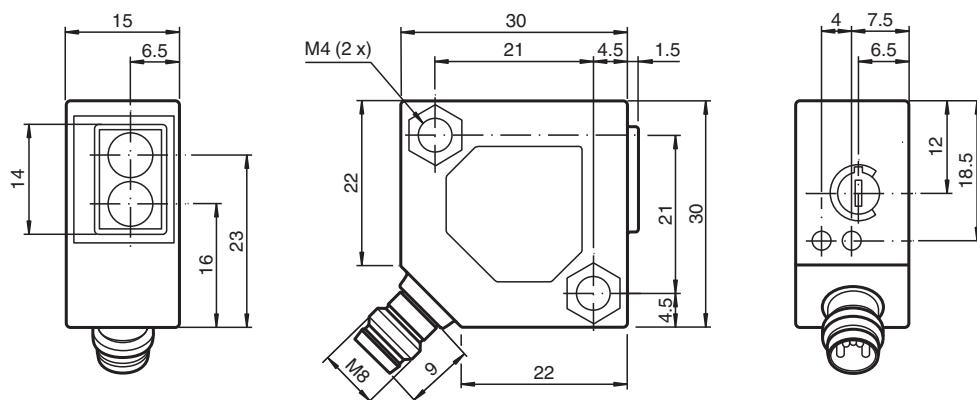
Thru-beam sensor for basic applications, miniature design, 6 m detection range, red light, light on, PNP output, M8 plug



### Function

The ML300 series has a robust miniature housing and all the standard functional principles. Of particular note are the sensors with analog output, which return a value proportional to the distance. The 45° plug/cable connection ensures flexible mounting. An LED indicates a weak signal, e.g. due to dirt.

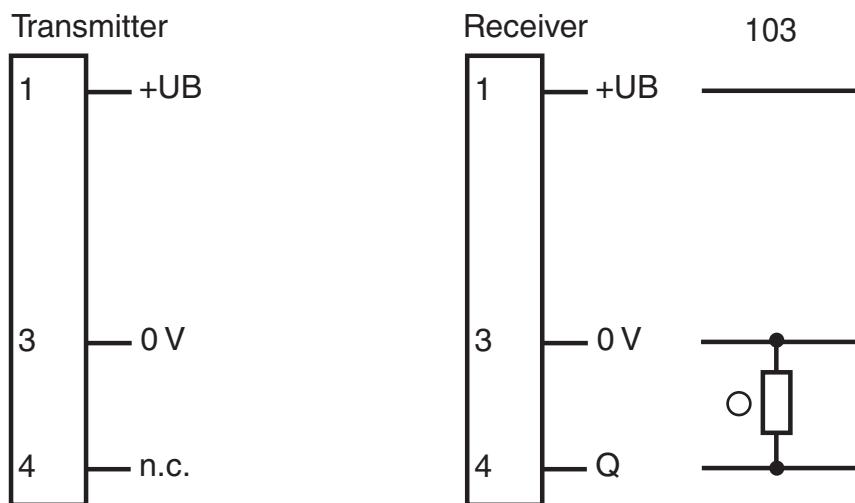
### Dimensions



## Technical Data

System components		
Emitter	ML300-T-6m-RT/98	
Receiver	ML300-R-6m-RT/25/98/103	
General specifications		
Effective detection range	0 ... 6 m	
Threshold detection range	8 m	
Light source	LED	
Light type	modulated visible red light 660 nm	
Diameter of the light spot	approx. 500 mm at 6 m	
Opening angle	approx. 5 °	
Ambient light limit		
Continuous light	10000 Lux	
Modulated light	5000 Lux	
Indicators/operating means		
Function indicator	LED yellow: lights up when output is active LED green: Sufficient stability control	
Control elements	sensitivity adjustment	
Electrical specifications		
Operating voltage	$U_B$	10 ... 30 V DC
Ripple		max. 10 %
No-load supply current	$I_0$	Emitter: ≤ 20 mA Receiver: ≤ 20 mA
Output		
Switching type	light-on	
Signal output	1 PNP output, short-circuit protected, reverse polarity protected, open collector	
Switching voltage	max. 30 V DC	
Switching current	max. 0.1 A	
Voltage drop	$U_d$	≤ 2 V DC
Switching frequency	$f$	1000 Hz
Response time	0.5 ms	
Conformity		
Product standard	EN 60947-5-2	
Compliance with standards and directives		
Standard conformity		
Shock and impact resistance	EN 60947-5-7 30 g, 11 ms, all axes	
Vibration resistance	EN 60947-5-7, 10-55 Hz/1.5 mm amplitude, all axes	
Approvals and certificates		
CCC approval	CCC approval / marking not required for products rated ≤ 36 V	
Ambient conditions		
Ambient temperature	-25 ... 55 °C (-13 ... 131 °F)	
Mechanical specifications		
Housing width	30 mm	
Housing height	30 mm	
Housing depth	15 mm	
Degree of protection	IP65	
Connection	M8 x 1 connector, 3-pin	
Material		
Housing	ABS	
Optical face	plastic	
Connector	metal	
Mass	35 g (emitter and receiver)	

## Connection Assignment



○ = Light on  
 ● = Dark on

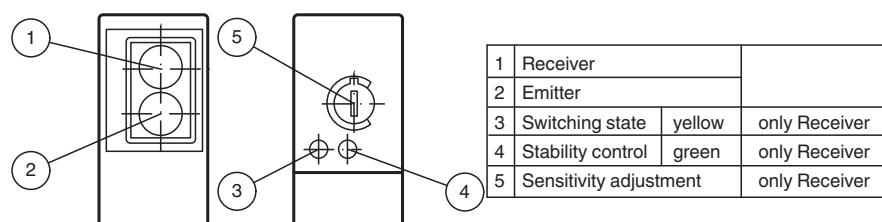
## Connection Assignment



Wire colors in accordance with EN 60947-5-2

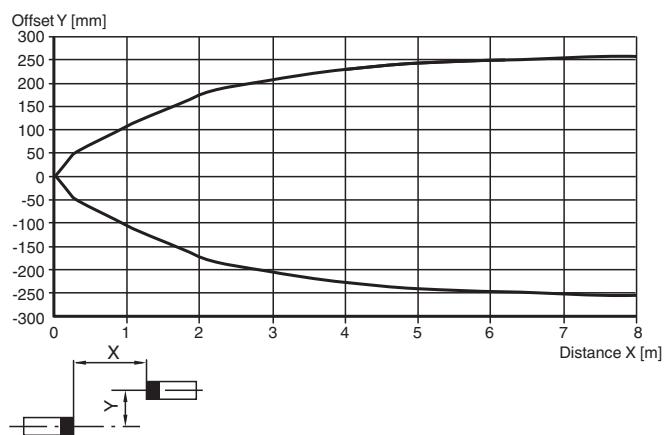
1	BN	(brown)
3	BU	(blue)
4	BK	(black)

## Assembly

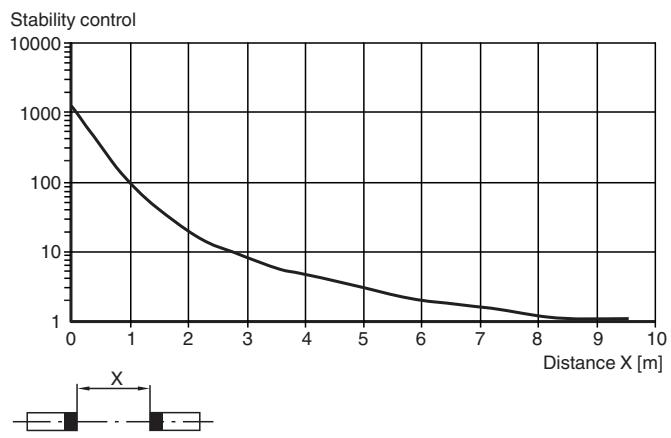


## Characteristic Curve

### Characteristic response curve



### Relative received light strength



## Accessories

	<b>OMH-ML300-01</b>	Bracket for mounting ML300 series sensors
	<b>V3-GM-2M-PVC</b>	Female cordset single-ended M8 straight A-coded, 3-pin, PVC cable grey
	<b>V3-WM-2M-PVC</b>	Female cordset single-ended M8 angled A-coded, 3-pin, PVC cable grey
	<b>V3-WM-2M-PUR</b>	Female cordset single-ended M8 angled A-coded, 3-pin, PUR cable grey