

Retroreflective sensor

ML300-55-2m-RT/25/103/115



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

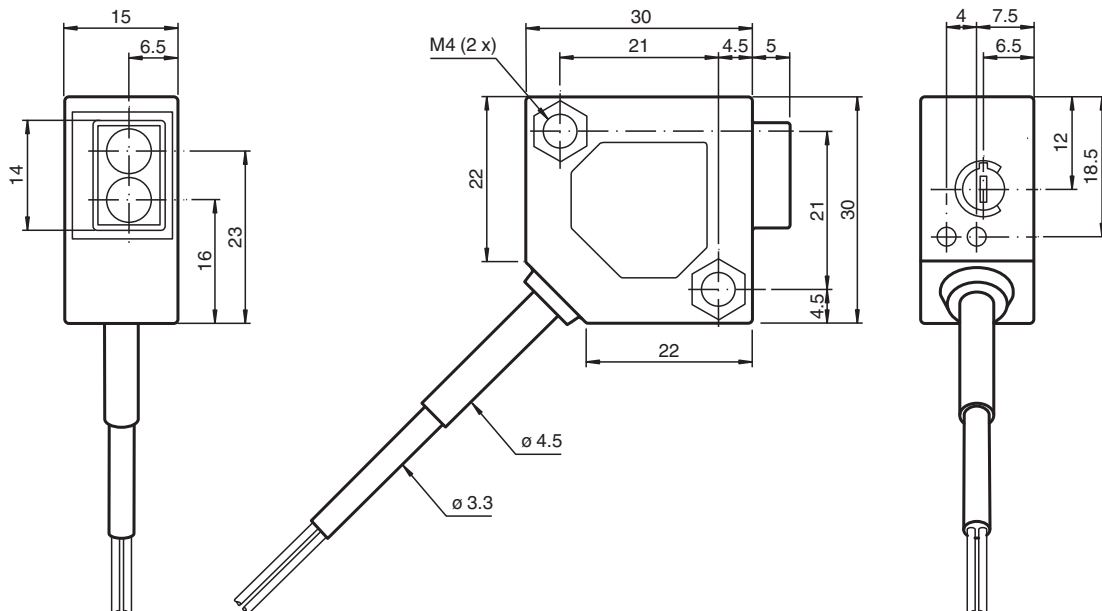
Retroreflective sensor for standard applications, miniature design, polarization filter, 3.5 m detection range, red light, light on, PNP output, fixed cable



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



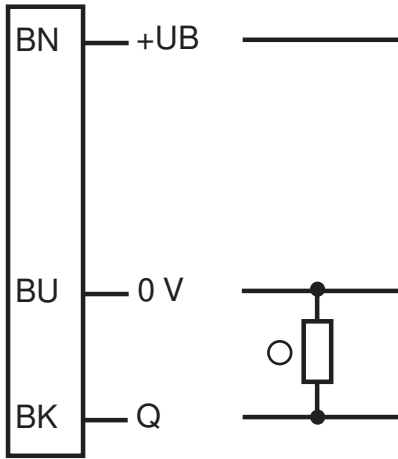
Release date: 2023-04-04 Date of issue: 2023-04-04 Filename: 238187_eng.pdf

Technical Data

General specifications		
Effective detection range		0 ... 2 m
Reflector distance		0.02 ... 2 m
Threshold detection range		3.5 m
Reference target		H85-2 reflector
Light source		LED
Light type		modulated visible red light , 660 nm
Polarization filter		yes
Diameter of the light spot		approx. 200 mm at 2 m
Opening angle		approx. 6 °
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	max. 25 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		2 m fixed cable
Material		
Housing		ABS
Optical face		plastic
Cable		PVC
Mass		75 g

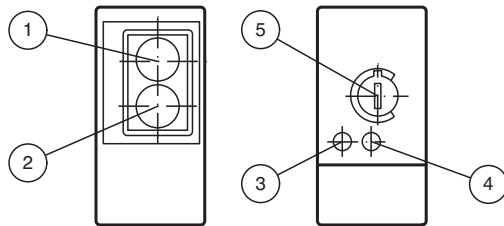
Connection Assignment

Option: 103



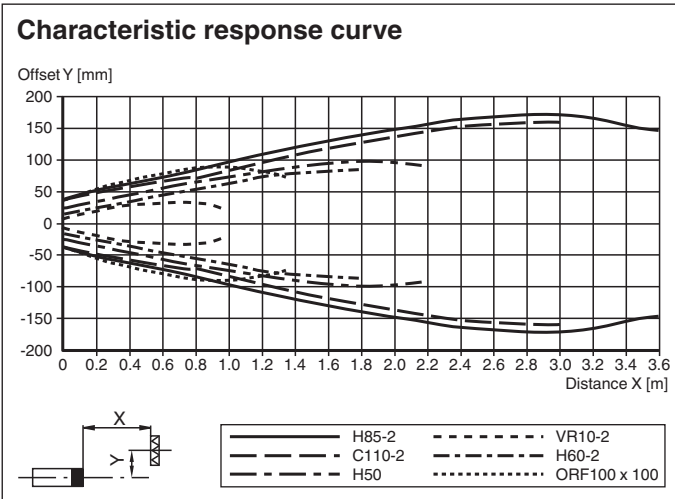
○ = Light on
● = Dark on

Assembly



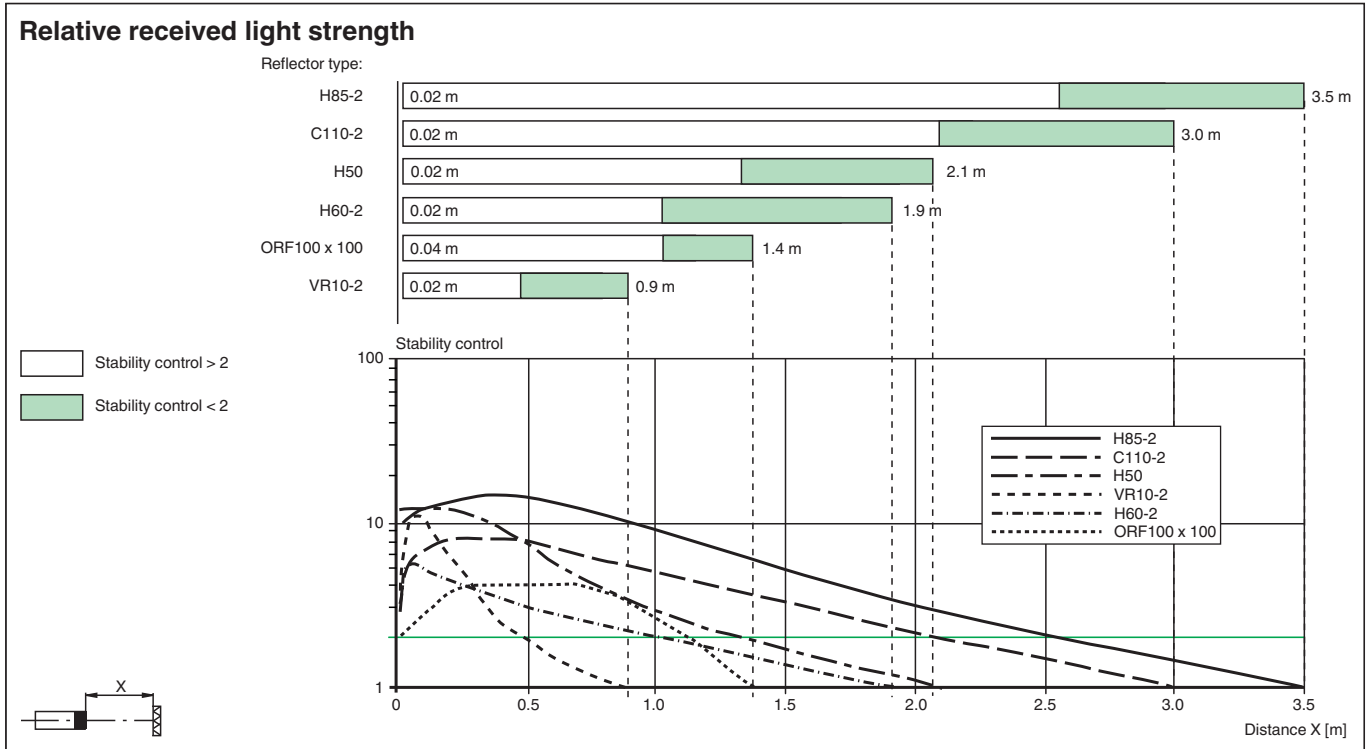
1	Receiver	
2	Emitter	
3	Switching state	yellow
4	Stability control	green
5	Sensitivity adjustment	

Characteristic Curve









Release date: 2023-04-04 Date of issue: 2023-04-04 Filename: 238187_eng.pdf

Characteristic Curve



Accessories

	OMH-ML300-01	Bracket for mounting ML300 series sensors
	REF-H85-2	Reflector, rectangular 84.5 mm x 84.5 mm, mounting holes
	REF-C110-2	Reflector, round ø 84 mm, central mounting hole
	REF-H50	Reflector, rectangular 51 mm x 61 mm, mounting holes, fixing strap
	REF-H60-2	Reflector with mounting holes
	OFR-100/100	Reflective tape 100 mm x 100 mm

Release date: 2023-04-04 Date of issue: 2023-04-04 Filename: 238187_eng.pdf