



Photoelectric sensors
V12-2, Photoelectric proximity sensor, energetic

VT12T-2P112



Model Name > [VT12T-2P112](#)
Part No. > [6026211](#)



Illustration may differ

At a glance

- Sensing distance up to 115 mm or 340 mm (90% remission)
- 2 teach-in modes: Standard teach mode for basic applications, precise teach mode with small hysteresis for special applications
- Adjustable light or dark switching as complementary outputs
- PNP or NPN output available
- Complements inductive sensor portfolio
- M12 housing
- 4-pin M12 connector or 2 m cable

Your benefits

- Standard M12 miniature housing saves installation space on the machine
- Simple design and time-saving installation due to a standard M12 housing
- Operating reserve display simplifies commissioning and saves maintenance time
- Cost-effective solution due to simple mounting, standardized connection technology and broad application use
- Fast response times ensure reliable detection of objects at high speeds, increasing machine throughput
- Tough metal housing provides a long service life, reducing maintenance time and costs



Features

Sensor/detection principle:	Photoelectric proximity sensor, energetic
Housing design (light emission):	Cylindrical, straight
Housing length:	54.5 mm
Thread diameter (housing):	M12 x 1
Sensing range max.:	0 mm ... 115 mm ¹⁾
Sensing range:	2 mm ... 100 mm
Type of light:	Infrared light
Light source:	LED ²⁾
Light spot (distance):	20 mm (100 mm)
Wave length:	880 nm
Sensitivity adjustment:	Manual, via teach-in button electronic, via control input C (0 V)
Angle of dispersion:	11.4 °

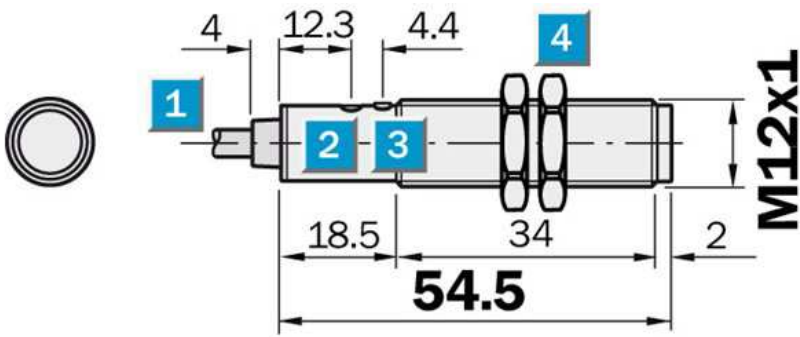
¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

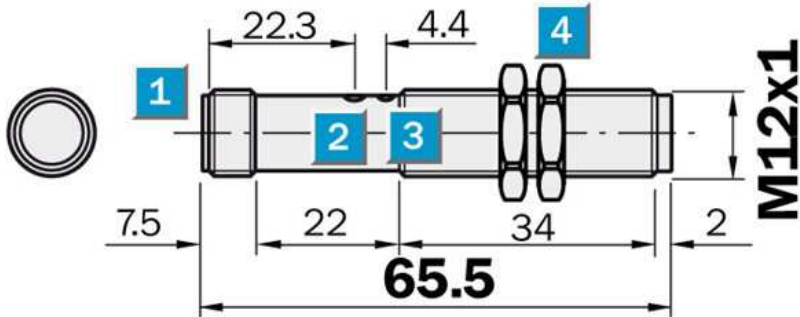
Supply voltage:	10 V DC ... 30 ¹⁾
Residual ripple:	$\leq 10\%$ ²⁾
Power consumption:	20 ³⁾
Output type:	PNP, Light/dark-switching, Selectable via control input C
Output current I _{max.} :	100 ⁴⁾
Response time:	≤ 1.25 ms ⁵⁾
Switching frequency:	400 ⁶⁾
Electrical connection:	Cable, 4-wire, 2 m ⁷⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²
Cable diameter:	3.75 mm
Circuit protection:::::	A, B, C, D ^{8) 9) 10) 11)}
Protection class:	III
Weight:	54 g
Housing material:	Nickel-plated brass/PA
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient temperature operation:	-25 ... 70 °C
Ambient storage temperature:	-25 ... 70 °C

¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ^{3) 4)} Without load ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ Do not bend below 0 °C ⁸⁾ A = V_S connections reverse-polarity protected ⁹⁾ B = inputs and output reverse-polarity protected ¹⁰⁾ C = interference suppression ¹¹⁾ D = outputs overcurrent and short-circuit protected

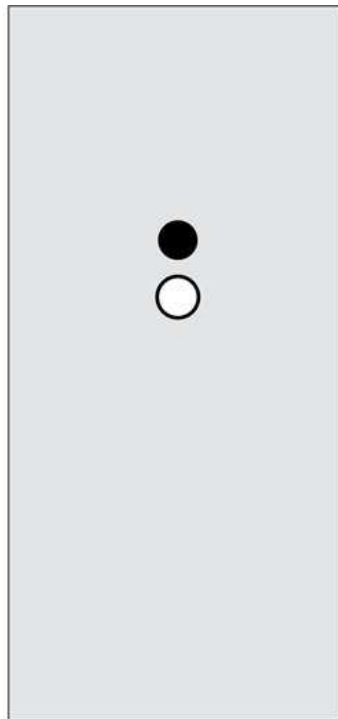
Dimensional drawing



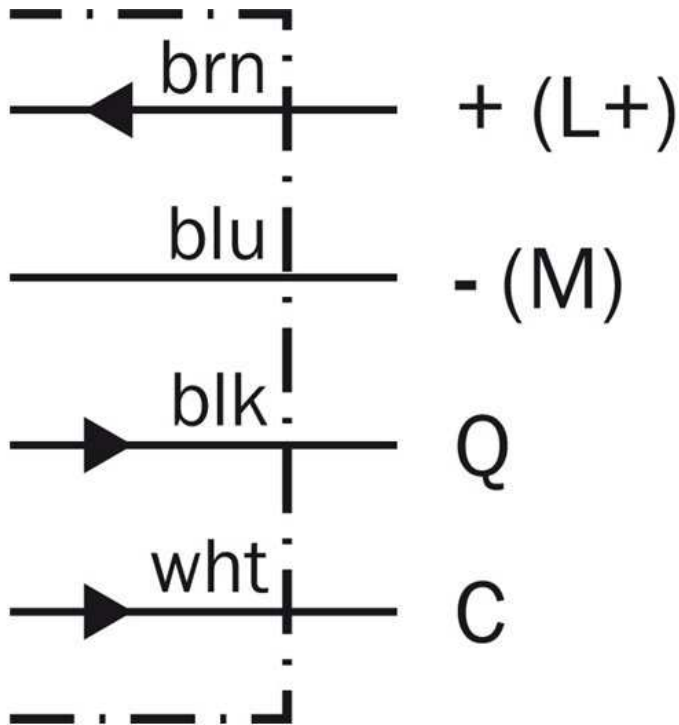
- |1| Cable or connector M12, 4-pin
- |2| Sensitivity setting; single teach button
- |3| Yellow LED indicator:- lights continuously:reception signal> reserve factor 2- b links: Reception signal< reserve factor 2 but > switching
- |4| fastening nuts (2 x); width across 17, metal



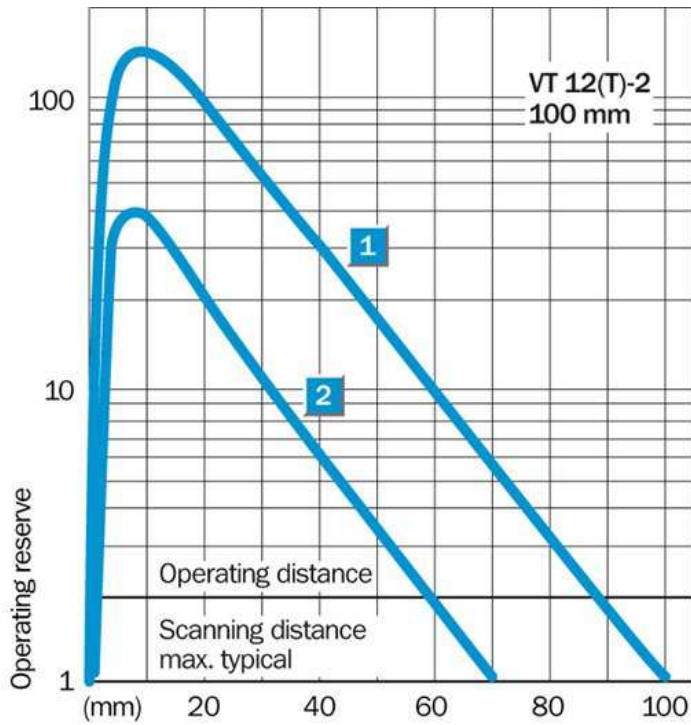
Adjustments possible



Connection diagram



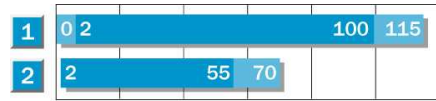
Characteristic curve



Connection type



Sensing range diagram



0 (mm) 20 40 60 80 100 120

■ Operating distance ■ Scanning distance, max. typical

1	Scanning distance on white, 90 % remission
2	Scanning distance on grey, 18 % remission

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