



Photoelectric sensors  
V12-2, Photoelectric proximity sensor, energetic

VT12T-2N112



**Model Name** > [VT12T-2N112](#)  
**Part No.** > [6026209](#)



*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 <sup>1)</sup>
Sensing range:	2 mm ... 100 mm
Type of light:	Infrared light
Light source:	LED <sup>2)</sup>
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 °

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033)    <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

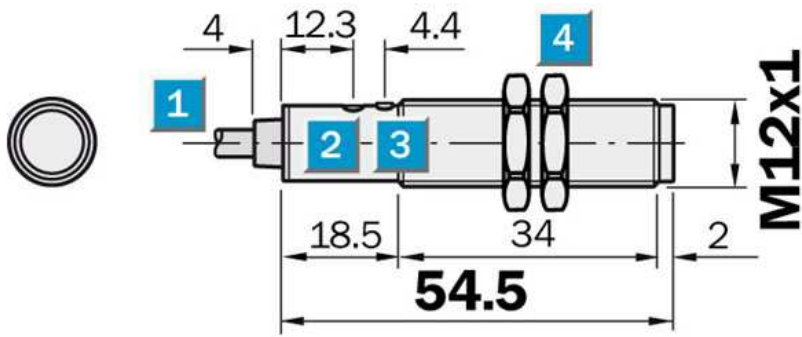
## Mechanics/electronics

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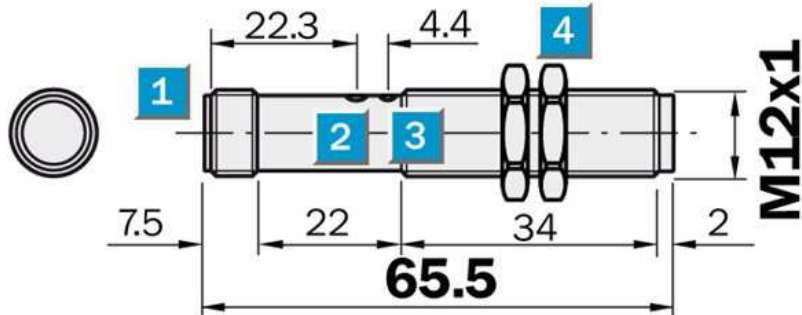
Supply voltage:	10 V DC ... 30 <sup>1)</sup>
Residual ripple:	$\leq 10\%$ <sup>2)</sup>
Power consumption:	20 <sup>3)</sup>
Output type:	NPN, Light/dark-switching, Selectable via control input C
Output current I <sub>max.</sub> :	100 <sup>4)</sup>
Response time:	$\leq 1.25$ ms <sup>5)</sup>
Switching frequency:	400 <sup>6)</sup>
Electrical connection:	Cable, 4-wire, 2 m <sup>7)</sup>
Cable material:	PVC
Conductor cross-section:	0.14 mm <sup>2</sup>
Cable diameter:	3.75 mm
Circuit protection:::::	A, B, C, D <sup>8) 9) 10) 11)</sup>
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

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

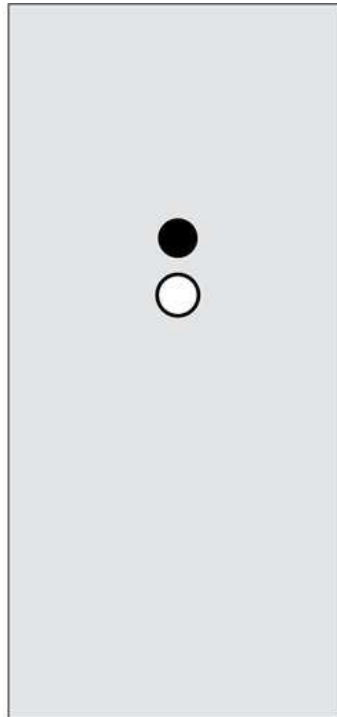
## Dimensional drawing



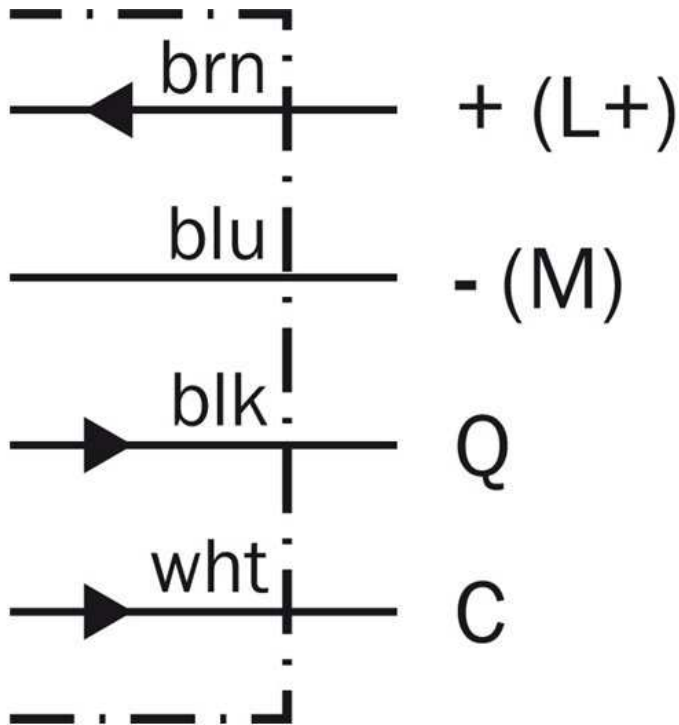
- |1| Cable or connector M12, 4-pin
- |2| Sensitivity setting; single teach button
- |3| Yellow LED indicator:- lights continuously:reception signal> reserve factor 2- b links: Reception signal< reserve factor 2 but > switching
- |4| fastening nuts (2 x); width across 17, metal



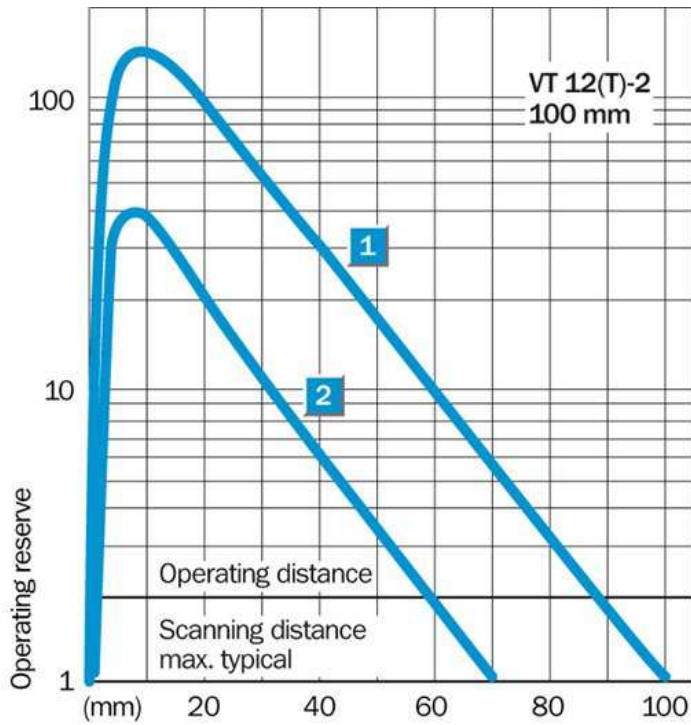
## Adjustments possible



Connection diagram



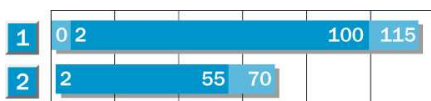
Characteristic curve



## 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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