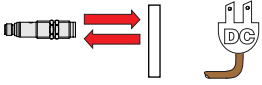


# VTE 18

## Proximity/Diffuse Sensors-Energetic



**0.1...31.5 in (3...800 mm)**  
sensing range



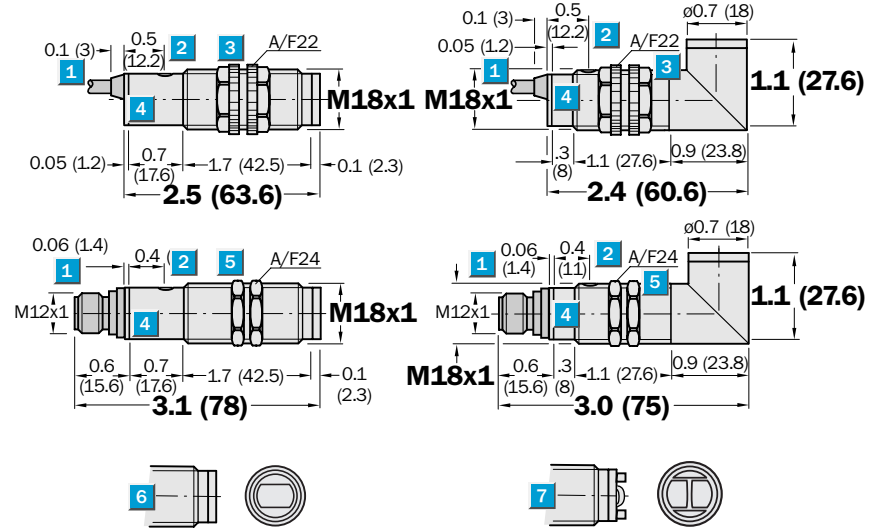
## Highlights

- Rugged plastic or metal housing
- Standard 18 mm diameter
- Light or dark switching available
- Easy mounting with included nuts
- 3 sensing range options:  
SD 1 = 7.9 in (200 mm)  
SD 2 = 15.7 in (400 mm)  
SD 3 = 31.5 in (800 mm)

## VT 18

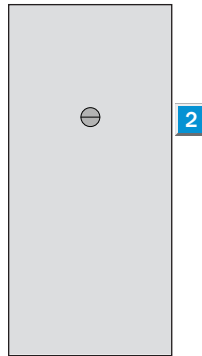


## Dimensional Drawing



## Adjustments

See selection table on page 896



- 1 Connecting cable or M12 plug
- 2 Sensitivity control
- 3 Fastening nut, width across 22 mm, made of plastic for equipment with plastic housing
- 4 Signal strength indicator, LED, yellow
- 5 Fastening nut, width across 24 mm, made of metal for equipment with metal housing
- 6 Sensors with a range of 200 mm to 400 mm
- 7 Sensors with a range of 800 mm

## Order Information

See selection table on page 896

## Accessories

Accessories	page
Cables and connectors	909
Mounting brackets	925, 926

Technical Data		VTE 18-	3_2...	4_2...	3_4...	4_4...	3_8...	4_8...			
<b>Housing</b>	Straight										
	Angled, 90°										
<b>VTE 18 Sensing range 7.9 in (200 mm)</b>											
<b>Sensing range<sup>1)</sup></b>	0.1...7.9 in (3...200 mm)										
Light spot diameter	Approx. 0.4 in at 7.9 in (10 mm at 200 mm)										
<b>VTE 18 Sensing range 15.7 in (400 mm)</b>											
<b>Sensing range<sup>1)</sup></b>	0.2...15.7 in (5...400 mm)										
Light spot diameter	Approx. 0.8 in at 15.7 in (20 mm at 400 mm)										
<b>VTE 18 Sensing range 31.5 in (800 mm)</b>											
<b>Sensing range<sup>1)</sup></b>	0.4...31.5 in (10...800 mm)										
Light spot diameter	Approx. 1.6 in at 31.5 in (40 mm at 800 mm)										
Sensitivity adjustable (optional)	Potentiometer 270°										
<b>Light source<sup>2)</sup>, light type</b>	LED, infrared light										
Angle of divergence	Approx. 2.8°										
<b>Supply voltage V<sub>S</sub></b>	10...30 V DC <sup>3)</sup>										
Ripple <sup>4)</sup>	± 10%										
Current consumption <sup>5)</sup>	≤ 30 mA										
<b>Switching outputs</b> (optional)	PNP/NPN; open collector: Q										
Operation mode	Q, light/dark switching										
	Q, light switching										
	Q, light/dark switching via control wire L/D <sup>6)</sup>										
	+ V <sub>S</sub> = light switching										
	0 V = dark switching										
Output current I <sub>A</sub> max.	100 mA										
Response time <sup>7)</sup>	≤ 2 ms										
Max. switching frequency <sup>8)</sup>	250 Hz										
<b>Connection types</b>	Cable, 2 m, <sup>9)</sup> PVC, 3 x 0.14 mm <sup>2</sup> , Ø 3.1 mm										
	Cable, 2 m, <sup>9)</sup> PVC, 4 x 0.14 mm <sup>2</sup> , Ø 5 mm										
	Plug, M12 4-pin										
<b>VDE protection class<sup>10)</sup></b>	<input type="checkbox"/>										
<b>Circuit protection<sup>11)</sup></b>	A, B, C, D										
<b>Enclosure rating</b>	IP 67/NEMA 6										
<b>Ambient temperature T<sub>A</sub></b>	-13...158°F (-25...70°C)										
<b>Approximate weight</b>	Metal housing: 4.2 oz (120 g)										
	Plastic housing: 3.5 oz (100 g)										
<b>Housing material</b>	Nickel-plated brass, PBT/PC										
	Plastic housing, PBT/PC										

- Object with 90% reflectance (referred to standard white DIN 5033)
- Average service life 100,000 h at T<sub>A</sub> = 25°C
- Limit values

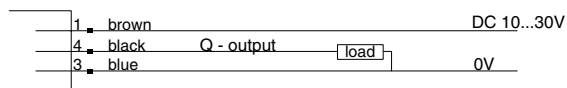
- Must be within V<sub>S</sub> tolerances
- Without load
- Control wire open:  
NPN: light-switching  
PNP: dark-switching

- With resistive load
- With light/dark ratio 1:1
- Do not bend below 0°C
- Reference voltage 50 V DC

- A = V<sub>S</sub> connections reverse-polarity protected
- B = Inputs/outputs reverse-polarity protected
- C = Interference suppression
- D = Outputs overcurrent and short-circuit protected

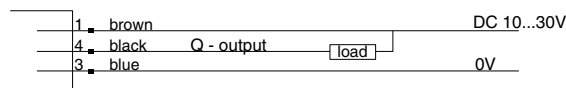
### Connection Diagram

#### PNP Models

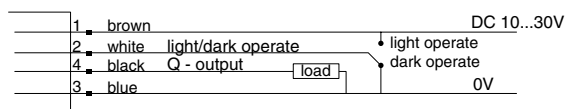


wire colors refer to standard cable, not included with quick disconnect models.

#### NPN Models



#### PNP Models



#### NPN Models

