



Photoelectric sensors
DeltaPac, Photoelectric proximity sensor

WTD20EC-V2419



Model Name > [WTD20EC-V2419](#)
Part No. > [1064782](#)



Illustration may differ

At a glance

- Delta-S technology®: four PinPoint emitters and two receivers combined with SIRIC® and distance measurement technology
- Direction-independent object contours with radius up to 20 mm
- For conveyor speeds up to 1.2 m/s or production capacities up to 55,000 packages per hour
- Pre-configured sensors and individual setting via IO-Link
- Compact housing (42 mm x 42 mm x 45 mm) with an IP 67 enclosure rating

Your benefits

- Selective process optimization: information about the number of packages in the process enables better production monitoring
- Better space utilization: no mechanical devices are required to isolate packages, reducing the width of packaging systems and saving space
- Better time management: packages run in push-push mode, which prevents collisions and toppling, and reduces machine downtime
- Stable production for reduced energy consumption
- Fast and intuitive commissioning due to pre-configuration
- Configuration via the IO-Link enables users to customize features based on the applications
- Space-saving mounting due to compact housing



Features

Sensor/detection principle:	Photoelectric proximity sensor
Dimensions (W x H x D):	42 mm x 42 mm x 45 mm
Housing design (light emission):	Rectangular
Sensing range max.:	30 mm ... 40 mm ¹⁾
Sensing range:	30 mm ... 40 mm
Type of light:	Visible red light
Light source:	PinPoint LED ²⁾
Wave length:	635 nm
Light spot size (distance):	4 x Ø 1 mm (30 mm)
Background suppression:	≥ 80 mm
Optimized parameterization for the following objects:	Rounded, rounded out and prism shaped packaging, such as beverage cartons and soft packaging
Key feature of the object:	Rounded out body and prism shaped

¹⁾ The sensing range max. refers to the object leading edge. The individual object leading edges must be within the operating range ²⁾ Average service life: 100,000 h

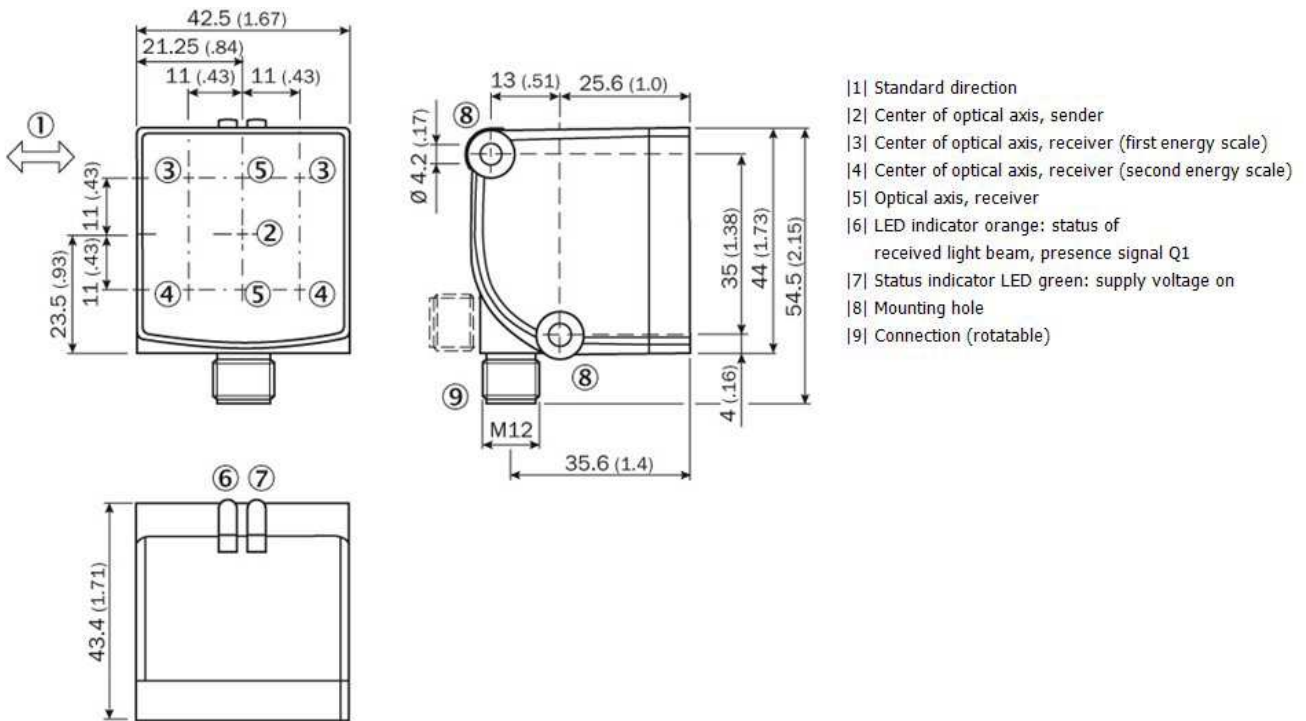
at T_U = +25 °C

Mechanics/electronics

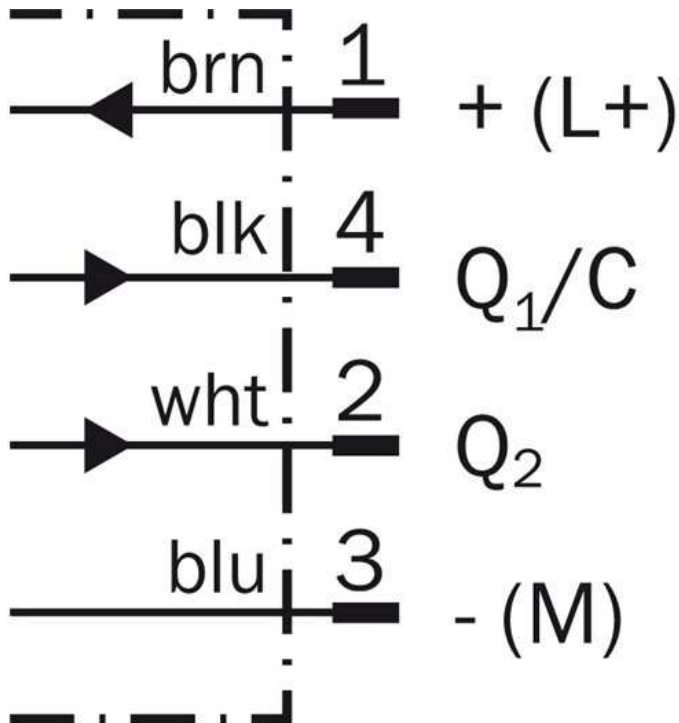
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5 \text{ Vpp}$ ²⁾
Power consumption:	$\leq 70 \text{ mA}$ ³⁾
Output type:	PNP
Output current I _{max.} :	$\leq 2 \times 100 \text{ mA}$
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C ^{4) 5) 6)}
Protection class:	III
Weight:	130 g
IO-Link:	✓
Special device:	-
Enclosure rating:	IP 67
Ambient temperature operation:	-40 °C ... +55 °C
Ambient storage temperature:	-40 °C ... +75 °C
Productivity max.:	200,000 Stk./h
Switch on delay Q1 & Q2:	0 ms ... 255 ms
Time delay off Q1:	0 ms ... 255 ms
Object speed max.:	3 m/s
Radius of the object contour:	2 mm ... 20 mm
Switching accuracy:	$\leq 2 \times \text{radius}$
Repeatability (T _a not constant):	Typ. < 1 mm
Object width min.:	$\geq 20 \text{ mm}$
Object height min.:	50 mm
Housing material:	Plastic, Bayblend
Transmission rate:	COM2

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ May not exceed or fall below U_v tolerances ³⁾ At 24 V ⁴⁾ A = V_S
connections reverse-polarity protected ⁵⁾ B = inputs and output reverse-polarity protected ⁶⁾ C = interference suppression

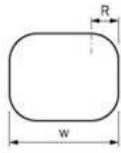
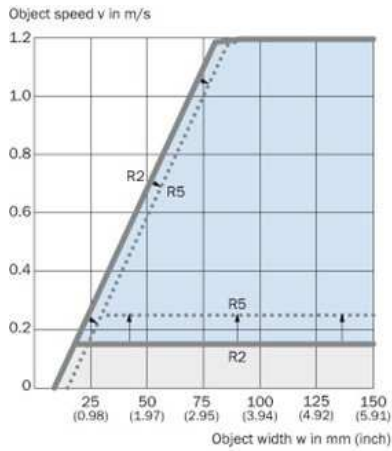
Dimensional drawing



Connection diagram



Characteristic curve, speed

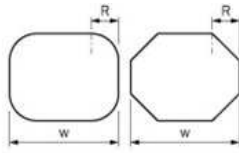
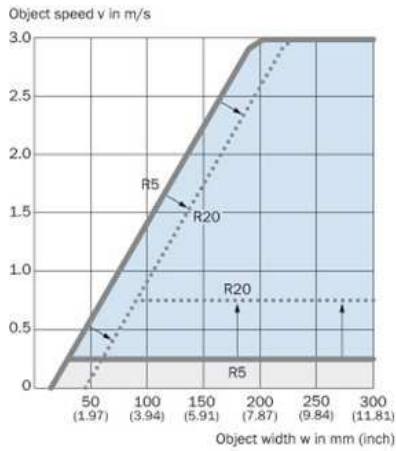


Parameter example, dimensions in mm (inch)

Object width	Object radii	Object speed min.	Object speed max.
75 (2.95)	2 (0.08)	0.15 m/s	1.1 m/s
125 (4.92)	5 (0.20)	0.25 m/s	1.2 m/s

- = R2, Radii of 2 mm
- = R5, Radii of 5 mm
- = Working range
- = Maximal working range

Characteristic curve, speed



Parameter example, dimensions in mm (inch)

Object width	Object radii	Object speed min.	Object speed max.
200 (7.87)	5 (0.20)	0.25 m/s	3.0 m/s
250 (9.84)	20 (0.79)	0.75 m/s	3.0 m/s

- = R5, Radii of 5 mm
- = R20, Radii of 20 mm
- = Working range
- = Maximal working range

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