



Photoelectric sensors DeltaPac, Delta-S-Technology®

WTD20EC-V2449



Model Name > **WTD20EC-V2449**
Part No. > **1064783**



Illustration may differ

At a glance

- Delta-S-Technology®: four PinPoint emitters and two energy scales combined with SIRIC® and distance measurement technology
- Direction-independent object contours with radius up to 20 mm
- For conveyor speeds up to 3 m/s or production capacities up to 200.000 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 enhanced 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:	Delta-S-Technology®
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 +/- 2 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:	≥ 60 mm
Optimized parameterization for the following objects:	Folding box or stacked empty packages
Key feature of the object:	Edge

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 of 100,000 h

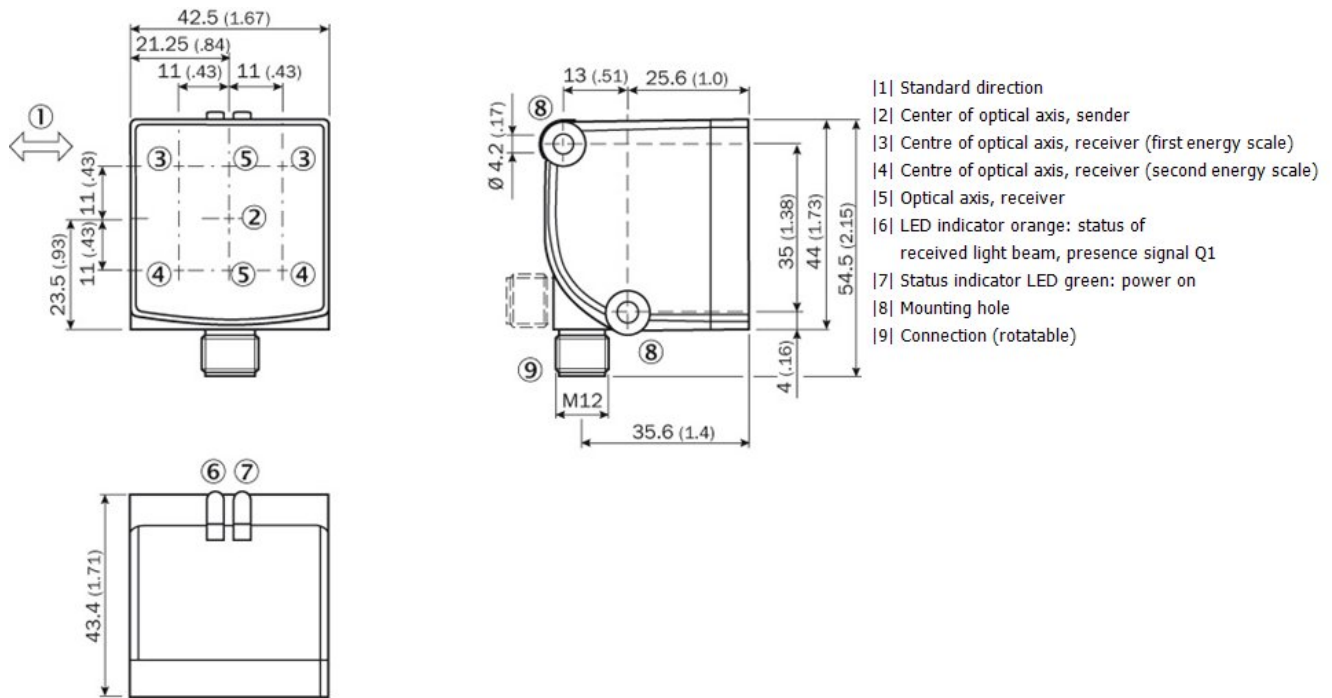
at T_A = +25 °C

Mechanics/electronics

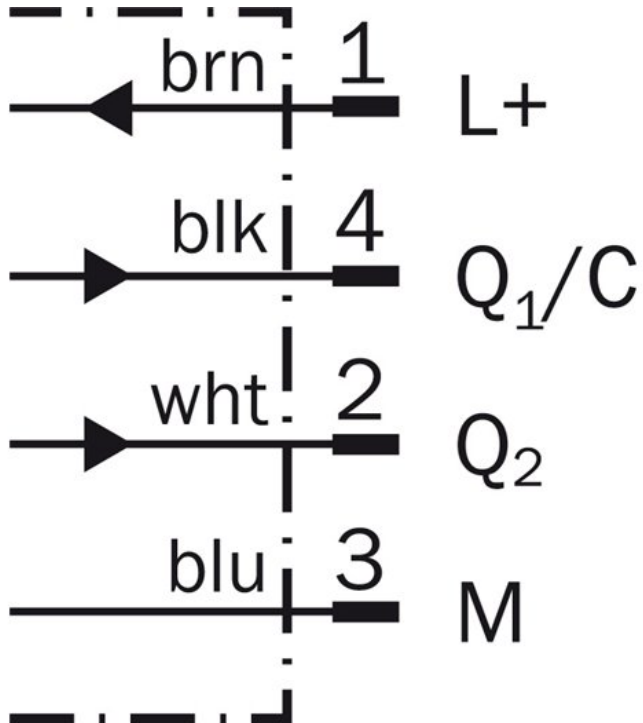
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5 \text{ Vpp}$ ²⁾
Power consumption:	$\leq 70 \text{ mA}$ ³⁾
Output type:	PNP, IO-Link
Output current I _{max.} :	$\leq 2 \times 100 \text{ mA}$
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C ⁴⁾ ⁵⁾ ⁶⁾
Protection class:	III
Weight:	130 g
IO-Link:	-
Housing material:	Bayblend
Enclosure rating:	IP 67
Ambient operating temperature:	-40 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 75 °C
Productivity max.:	200,000
Object speed max.:	0.6 m/s
Radius of the object contour:	1 mm ... 2 mm
Switching accuracy:	$\leq 2 \times \text{radius}$
Repeatability (T _a not constant):	Typ. < 1 mm
Object width min.:	$\geq 10 \text{ mm}$
Object height min.:	30 mm

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ May not exceed or fall short of V_S 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

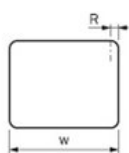
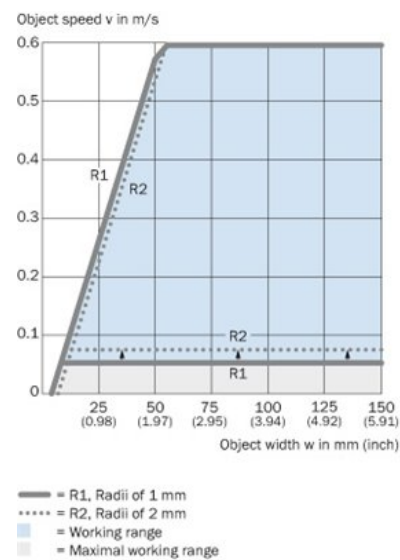
Dimensional drawing



Connection diagram



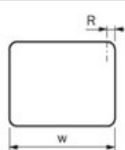
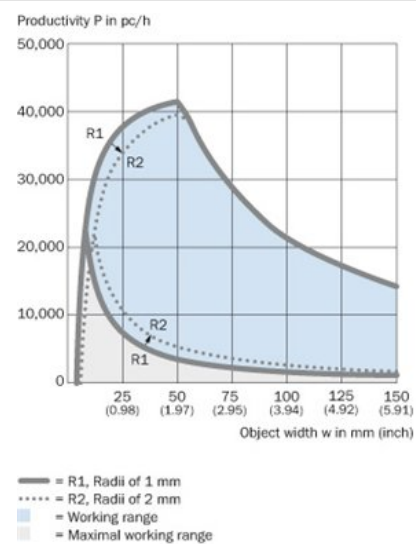
Characteristic curve, speed



Parameter example, dimensions in mm (inch)

Object width	Object radii	Object speed min.	Object speed max.
25 (0.98)	1 (0.04)	0.05 m/s	0.26 m/s
75 (2.95)	2 (0.08)	0.08 m/s	0.6 m/s

Characteristic curve, productivity



Parameter example, dimensions in mm (inch)

Object width	Object radii	Productivity min.	Productivity max.
25 (0.98)	1 (0.04)	7,500 pc/h	38,000 pc/h
75 (2.95)	2 (0.08)	3,500 pc/h	28,500 pc/h

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