ONLINE DATA SHEET
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Photoelectric sensors
DeltaPac, Delta-S-Technology®

WTD20E-V2414

SICK
Sensor Intelligence.

Photoelectric sensors
DeltaPac, Delta-S-Technology®

Model Name > WTD20E-V2414
Part No. > 1064778

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 ... 35 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 edges, 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 of 100,000 h at T_A = +25 °C

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Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	≤ 5 Vpp
Power consumption:	≤ 160 mA
Output type:	PNP
Output current Imax.:	≤ 2 x 100 mA
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C [2] [3] [4]
Protection class:	III
Weight:	130 g
IO-Link:	-
Housing material:	Bayblend
Ambient operating temperature:	-40 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 75 °C
Productivity max.:	54,000
Object speed max.:	1.2 m/s
Radius of the object contour:	2 mm ... 5 mm
Switching accuracy:	≤ 2 x radius
Repeatability (Ta not constant):	Typ. < 1 mm
Object width min.:	≥ 20 mm
Object height min.:	50 mm

[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A [2] A = V_S connections reverse-polarity protected [3] B = inputs and output reverse-polarity protected [4] C = interference suppression

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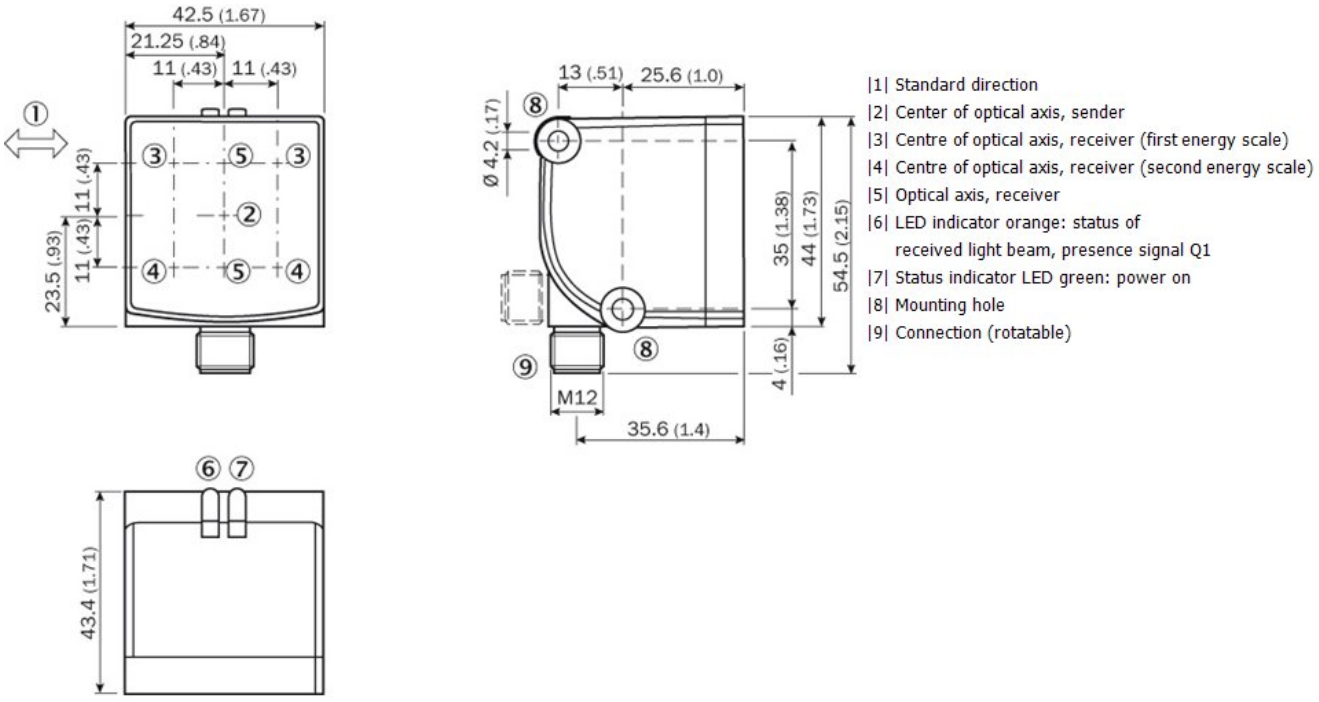
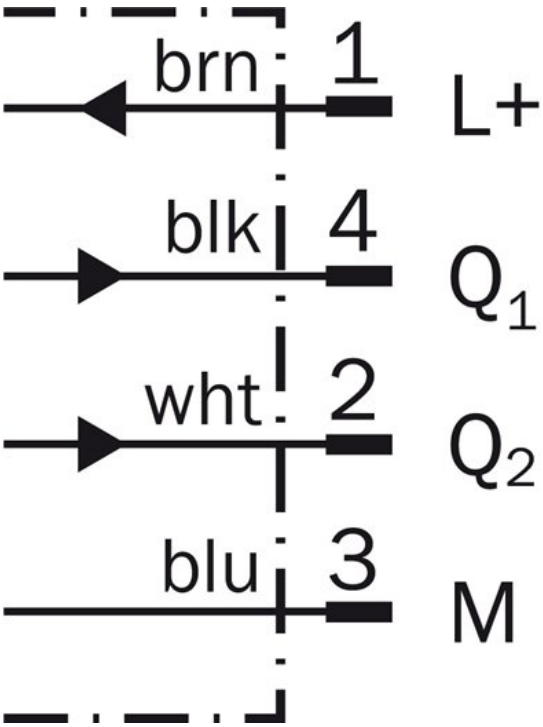
Dimensional drawing



Connection diagram



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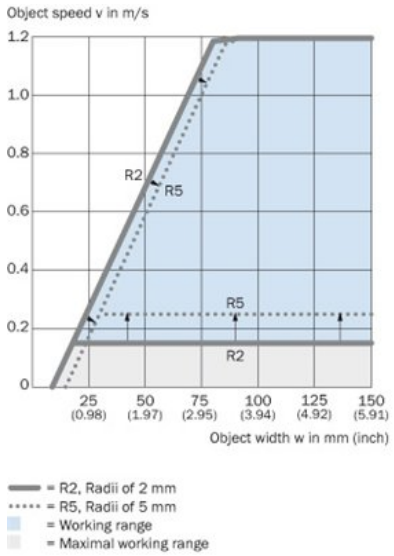
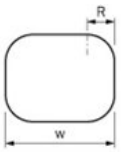
Characteristic curve, speed



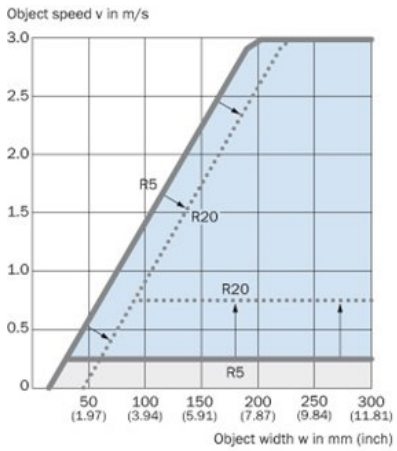
= R2, Radii of 2 mm
= R5, Radii of 5 mm
= Working range
= Maximal working range



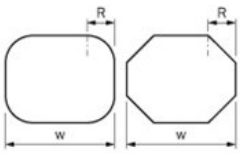
Parameter example, dimensions in mm (inch)

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

Characteristic curve, speed



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



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

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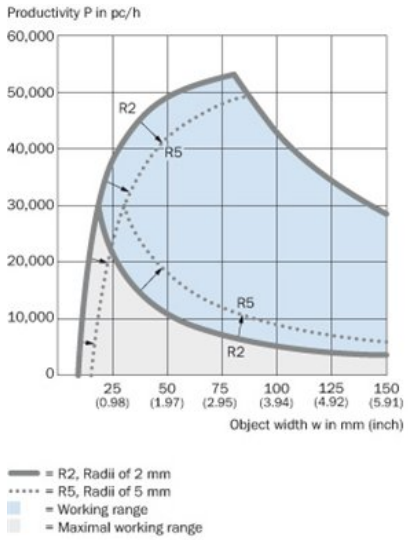
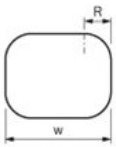
Characteristic curve, productivity





Parameter example, dimensions in mm (inch)

Object width	Object radii	Productivity min.	Productivity max.
75 (2.95)	2 (0.08)	7,000 pc/h	53,000 pc/h
125 (4.92)	5 (0.20)	7,000 pc/h	34,500 pc/h

Characteristic curve, productivity

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