



Photoelectric sensors DeltaPac, Delta-S-Technology®

WTD20EC-V2419



Model Name > **WTD20EC-V2419**
Part No. > **1064782**



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 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 of 100,000 h

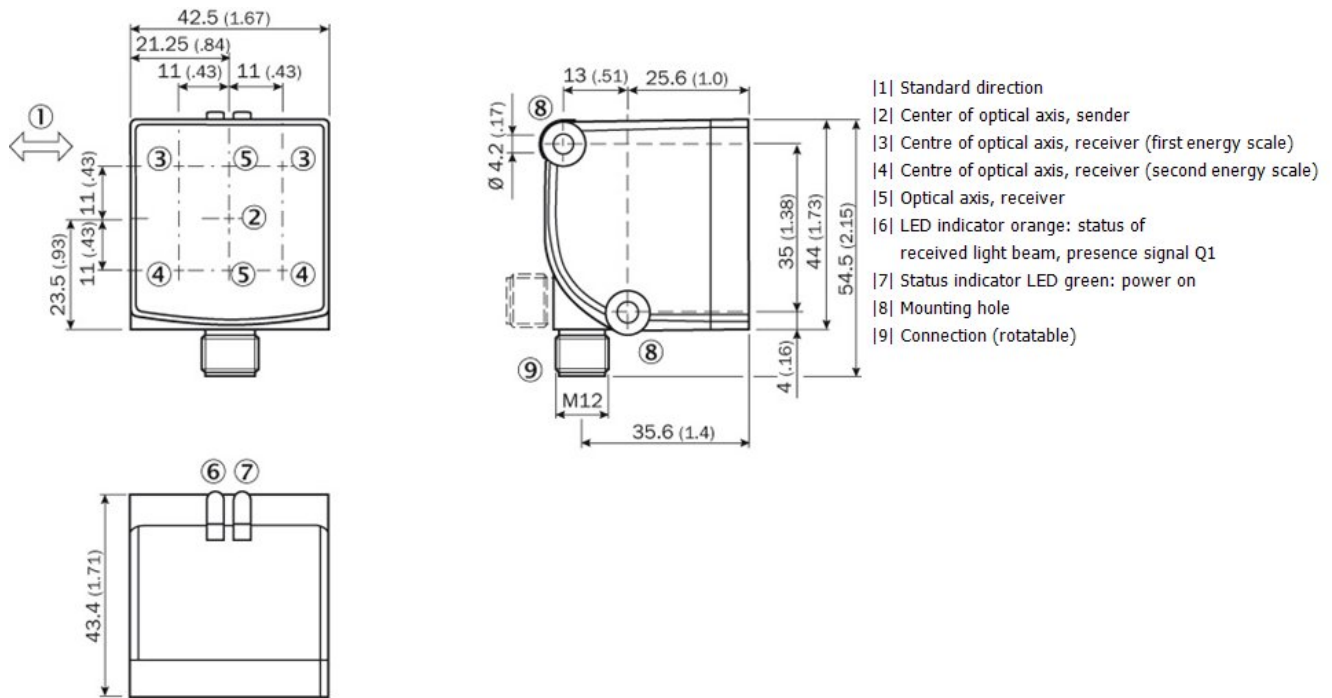
at T_A = +25 °C

Mechanics/electronics

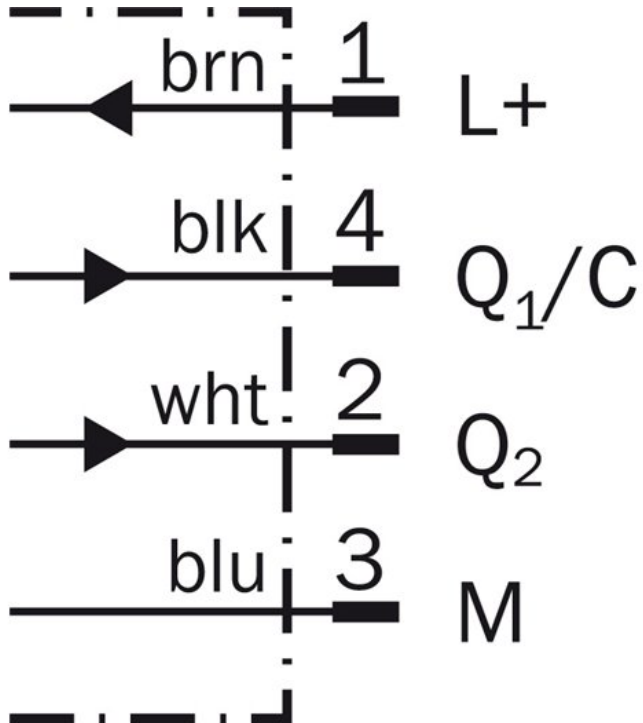
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	$\leq 5 \text{ Vpp}$ ²⁾
Power consumption:	$\leq 70 \text{ mA}$ ³⁾
Output type:	PNP, IO-Link
Output current I _{max.} :	$\leq 2 \times 100 \text{ mA}$
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, C ⁴⁾ ⁵⁾ ⁶⁾
Protection class:	III
Weight:	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.:	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

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

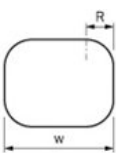
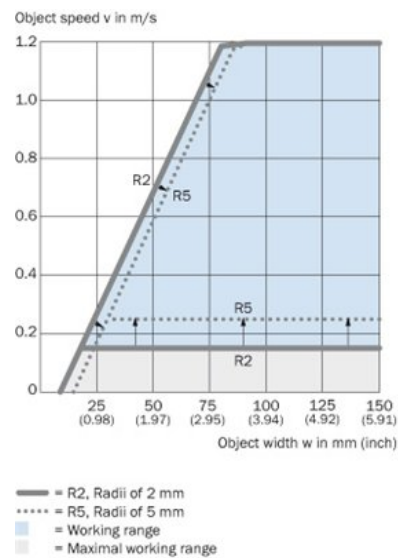
Dimensional drawing



Connection diagram



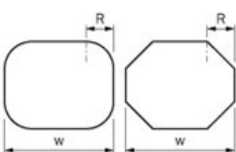
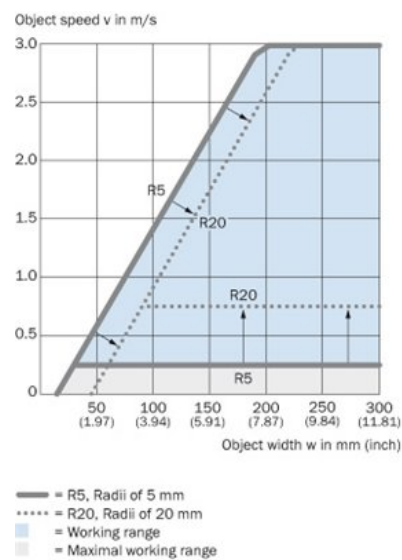
Characteristic curve, speed



Parameter example, dimensions in mm (inch)

Object width	Object radii	Object speed min.	Object speed max.
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

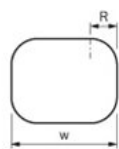
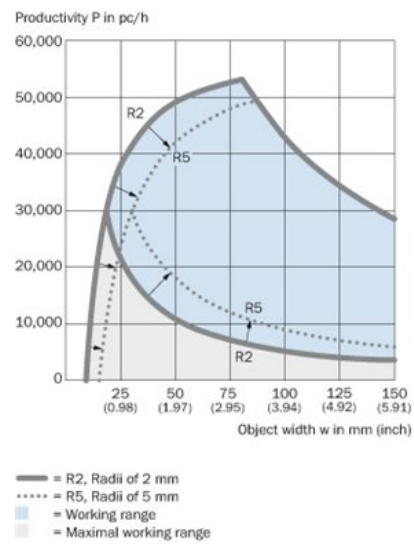
Characteristic curve, speed



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

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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Australia

Phone +61 3 9457 0600
1800 334 802 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com