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

WTD20E-W1145

SICK
Sensor Intelligence.

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DeltaPac, Delta-S-Technology®

Model Name > WTD20E-W1145
Part No. > 1065773

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

IO-Link PinPoint 2.0 by SICK SIRIC optical ASIC invented by SICK Delta-S-Technology by SICK

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

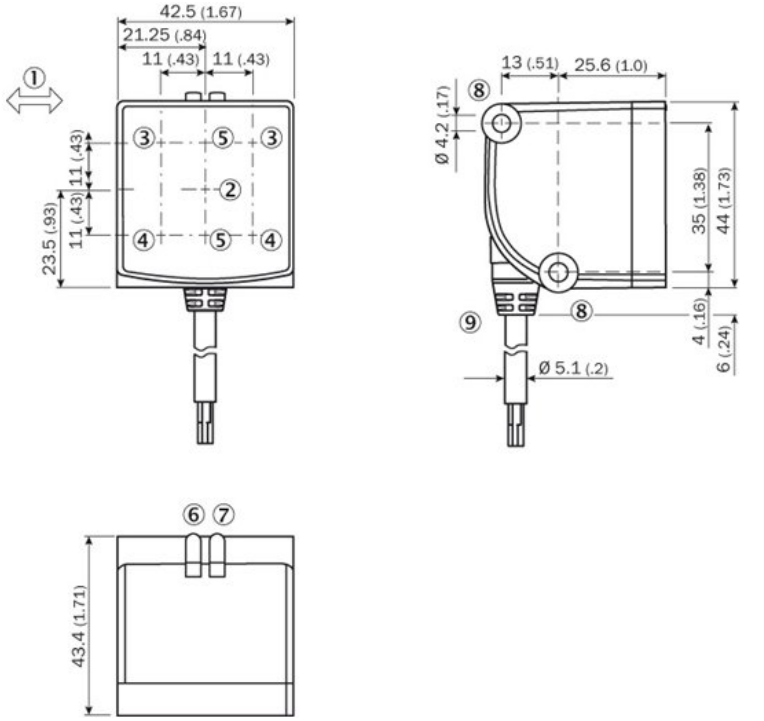
[1] The sensing range max. refers to the object leading edge. The individual object leading edges must be within the operating range [2] Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC [1]
Ripple:	≤ 5 Vpp
Power consumption:	≤ 70 mA [2]
Output type:	NPN
Output current Imax.:	≤ 2 x 100 mA
Connection type:	Cable, 4-wire, 2 m [3]
Cable material:	PVC
Conductor cross-section:	0.14 mm²
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.:	40,000
Object speed max.:	0.6 m/s
Radius of the object contour:	1 mm ... 2 mm
Switching accuracy:	≤ 2 x radius
Repeatability (Ta not constant):	Typ. < 1 mm
Object width min.:	≥ 10 mm
Object height min.:	30 mm

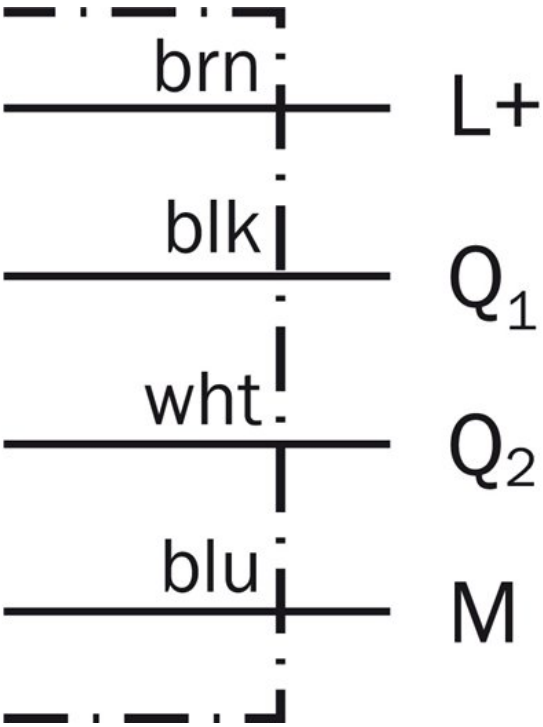
[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A [2] At 24 V [3] Do not bend below 0 °C [4] A = V_S connections reverse-polarity protected [5] B = inputs and output reverse-polarity protected [6] C = interference suppression

Dimensional drawing

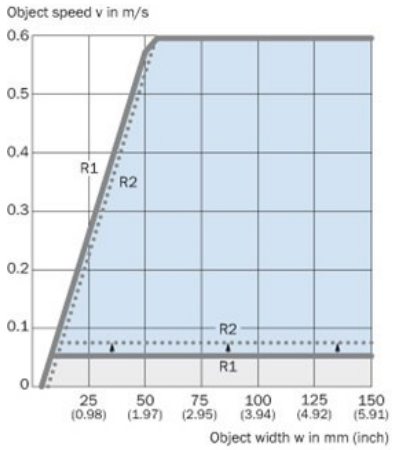


|1| Standard direction
|2| Center of optical axis, sender
|3| Centre of optical axis, receiver (first energy scale)
|4| Centre of optical axis, receiver (second energy scale)
|5| Optical axis, receiver
|6| LED indicator orange: status of received light beam, presence signal Q1
|7| Status indicator LED green: power on
|8| Mounting hole
|9| Connection (rotatable)

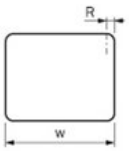
Connection diagram



Characteristic curve, speed



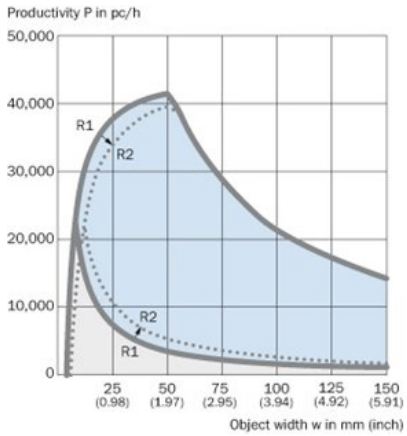
= R1, Radii of 1 mm
= R2, Radii of 2 mm
= Working range
= Maximal working range



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



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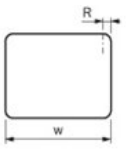

Parameter example, dimensions in mm (inch)

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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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**

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