



Systemes de vision 3D  
Ranger, ColorRanger E40

Ranger-E40434



**Type produit** Ranger-E40434  
**Numéro de commande** 1050266



#### At a glance

- High-speed 3D with color up to 11kHz
- Up to 3,072 pixels resolution in color and 1,536 pixels in 3D
- Multi-linear: RGB + Monochrome (w / + w/o IR)
- On-chip color channel white balancing
- Spatially corrected color output
- Easy in-machine 3D calibration tool
- High flexibility in configuration, including MultiScan, data triggering, and field-of-view
- Gigabit Ethernet interface

#### Your benefits

- Using 3D and color imaging in part inspection allows for more reliable results and will improve your system's up-time and quality
- ColorRanger with MultiScan technology replaces the need for several different cameras, which reduces the solution cost and complexity
- Getting all the measurements you need from one camera allows for concise solutions to reduce system size and allow for retrofit
- Contrast-independent 3D and high quality color gives you reliable measurements to ensure product quality
- Full flexibility in the field-of-view in combination with an easy in-machine 3D calibration tool gives you dimensions in millimeters wherever you need it
- Gigabit Ethernet for remote sensing over long cable distances allows you to put your PCs in a safe and convenient place



#### Performance

Bit depth:	8 Bit
Spectral response:	approx. 400 nm ... 950 nm
Image sensor:	CMOS
Maximum performance:	35.000 3D profiles/second
Résolution du capteur:	512 x 512 px
Standard color resolution:	3 x 512 px
Pixel size:	9.5 µm x 9.5 µm
Pixel matrix fill factor:	60 %
Maximum 3D height resolution:	13 bits 1/16 pixel

#### Caractéristiques

Example field of view:	Free of choice by lens selection
Data synchronisation:	Encoder triggered External enable Free running
Technologie:	3D Color MultiScan Line scan
Grayscale measurements:	✓
Scatter measurement:	✓
Color measurements:	rouge vert bleu monochrome (with and without IR content)
Description:	ColorRanger E40 - 3D- and RGB-color with MultiScan at up to 11 kHz (3D and color data). Gigabit Ethernet interface, 512 pixels 3D resolution, 3 x 512 pixels RGB-color resolution.

## Interfaces

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Maximum encoder frequency:	2 MHz
Operating system:	Windows XP Pro
Development environment:	C++ (VS .NET 2005/2008) or C
Programming interface:	iCon API
User interface:	Ranger Studio
Communication interface:	Gigabit Ethernet
Encoder interface:	RS-422
Entrées numériques:	4 x HIGH = 10 V...28.8 V
Sorties numériques:	1 x TTL level 2 x B-type, < 100 mA in total
Control of external illumination:	5 V TTL

## Données mécaniques et électriques

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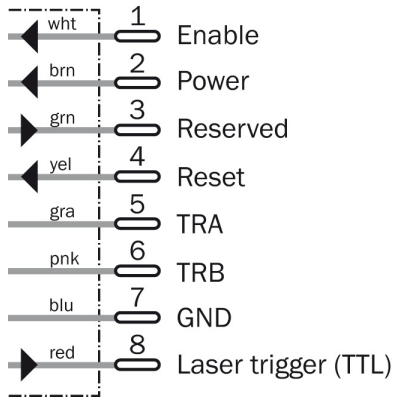
Indice de protection:	IP 20
Poids:	360 g
Dimensions (L x l x H):	125 mm x 52 mm x 52 mm
Tension d'alimentation:	24 V DC ±20 %
Ondulation résiduelle:	< 5 Vss
Puissance:	7 W
Consommation:	0,8 A
Matériau du boîtier:	Aluminium
Couleur du boîtier:	gray varnished
Connectors:	Encoder: M12, 8 pin female Ethernet: RJ45 Power I/O: M12, 8 pin male
Connector material:	M12: nickel-plated brass
Standards (ROHS):	✓

## Caractéristiques ambiantes

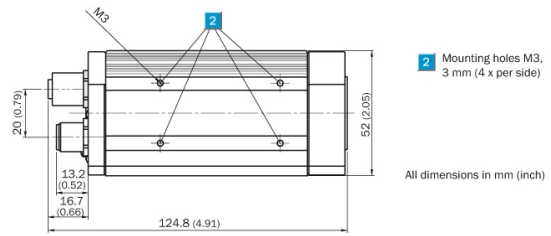
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Résistance aux chocs:	15 g, 3 x 6 directions
Vibration load:	5 g, 58 ... 150 Hz
Température d'utilisation:	0 °C ... 45 °C, sans condensation
Température de stockage:	-20 °C ... 70 °C, sans condensation

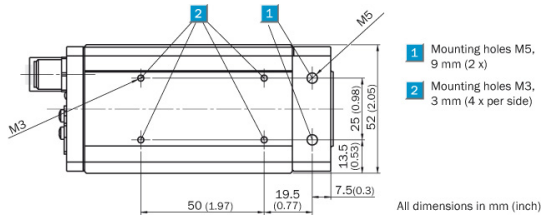
## Connection diagram, Power I/O connection



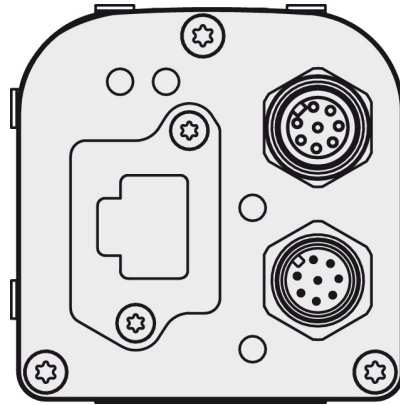
## Dimensional drawing, side view



## Dimensional drawing, bottom view

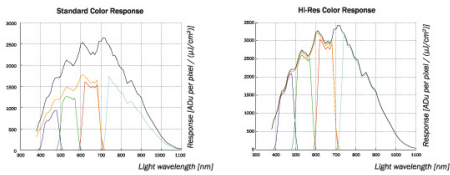


## Raccordement



## Caractéristiques

### Image sensor spectral response



**Australia**

Phone +61 3 9497 4100  
1800 33 48 02 – 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

**Ceská Republika**

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

**China**

Phone +852-2763 6966  
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 +972-4-999-0590  
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

**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

**Republic of Korea**

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

**Republika Slovenija**

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

**România**

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

**Russia**

Phone +7 495 775 05 34  
E-Mail info@sick-automation.ru

**Schweiz**

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

**Singapore**

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

**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 +90 216 587 74 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

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

**USA/Canada/México**

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

More representatives and agencies  
in all major industrial nations at  
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