



Array sensors
Ax20, Ax20E Edge

AT20E-NM331



Model Name > [AT20E-NM331](#)
Part No. > [1046459](#)



At a glance

- Detect position of edge of material
- Reflector mode version also available
- Compact, metal housing
- Reproducibility of 0.03 mm
- Sensing distance 25 mm or 100 mm
- Measurement range up to 30 mm
- Analog output 4 mA ... 20 mA

Your benefits

- Cost-effective solution to reliably determine edge position
- Easy-to-integrate, compact housing can be mounted over the web so less downtime is required for maintenance
- No reflector is required, reducing maintenance and providing greater product reliability. Reduces downtime. Only array sensors available in diffuse mode, making them ideal for environments where dirt and dust can interfere with other types of solutions that require a reflector.
- High reproducibility of 0.03 mm and industry-leading resolution enable greater accuracy and quality control
- Highly visible white LED light spot ensures fast and accurate alignment, reducing time-consuming fine adjustment
- No teach, program or menu activities make setup virtually hassle free



Features

Dimensions (L x W x H):	54.1 mm x 24.3 mm x 59.8 mm
Functional principle:	Edge detection, proximity and reflector
Sensing distance:	100 mm
Operating range:	90 mm 110 mm
Measurement range:	30 mm
MDO ¹⁾ :	1.6 mm
Light source ²⁾ :	LED, white
Light spot size:	50 mm x 10 mm
Repeatability ³⁾ :	0.05 mm
Linearity ⁴⁾ :	± 2 %

¹⁾ Minimum detectable object ²⁾ Wave length: 400 nm ... 700 nm ³⁾ With respect to sensing distance ⁴⁾ Analog current range (16 mA)

Mechanics/electronics

Supply voltage V_S ¹⁾ :	DC 24 V, $\pm 20\%$
Ripple ²⁾ :	≤ 5 V
Power consumption ³⁾ :	< 3.1 W
Output type:	NPN: HIGH = approx. $V_S / LOW \leq 2$ V
Switching mode ⁴⁾ :	Q (NPN)
Analog output QA:	4 mA ... 20 mA
Resolution analog output:	12 bit
Output rate of analog output:	1 ms
Output current $I_{max.}$:	< 100 mA
Initialization time ⁵⁾ :	0.48 s
Connection type:	Connector M12, 5-pin
Protection class:	III
Circuit protection:	VS connections reverse-polarity protected Output Q short-circuit protected Interference suppression
Enclosure rating:	IP 67
Weight:	Ca. 135 g
Housing material:	Metal

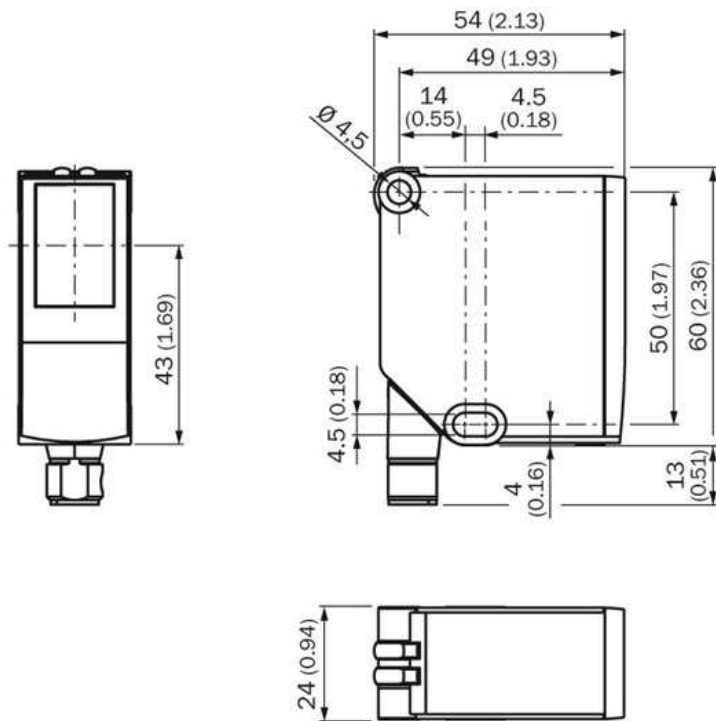
¹⁾ Operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Active when object detected ⁵⁾ Typ. max.

1.6 s

Ambient data

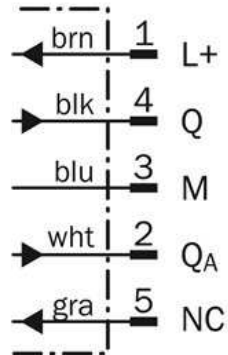
Ambient temperature:	Operation: $-10 \dots +55$ °C, Storage: $-25 \dots +75$ °C
Shock load:	According to IEC 60068
UL File No.:	NRKH.E181493 & NRKH7.E181493

Dimensional drawing

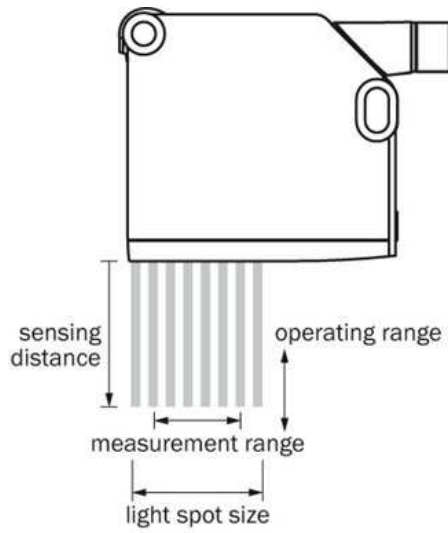


- |1| Center of optical axis
- |2| Mounting hole, \varnothing 4.5 mm
- |3| Connector M12
- |4| Function signal indicator (green)
- |5| Function signal indicator (yellow), switching output
- |6| Head side
- |7| Connector side

Anschlussart und -schema



Explanation of parameters



Sensing distance	Operating range	Measurement range	Light spot size
25 mm	20 mm ... 30 mm	20 mm	30 mm x 5 mm
100 mm	90 mm ... 110 mm	30 mm	50 mm x 10 mm

Australia

Phone +61 3 9457 0600
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 marketing@sick.com.br

Canada

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

Česká 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 info@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 +972-4-6881000
E-Mail info@sick-sensors.com

Italia

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

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

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

Nederland

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

Norge

Phone +47 67 81 50 00
E-Mail sick@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 sales.gsg@sick.com

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 88 65 878
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