

# Laser Solutions



**BANNER**<sup>®</sup>

more sensors, more solutions

# QS18 & Q60 Laser – Discrete Outputs

## QS18 Series – Most Versatile Sensor

- Universal mounting options
- Best quality price ratio
- Most common sensing modes available



P/N	Model	Sensing Mode	Range	Outputs	Connection
3075742	<b>QS18VP6LAF250Q5</b>	Adj. Background Suppression	20...250 mm	PNP / NO & NC	4-pin M12 pigtail
3073045	<b>QS18VP6LDQ8</b>	Diffuse Mode	1...300 mm	PNP / NO & NC	4-pin integral M12
3073246	<b>QS18VP6LLPQ8</b>	Polarized Retro (reflector included)	10 m	PNP / NO & NC	4-pin integral M12

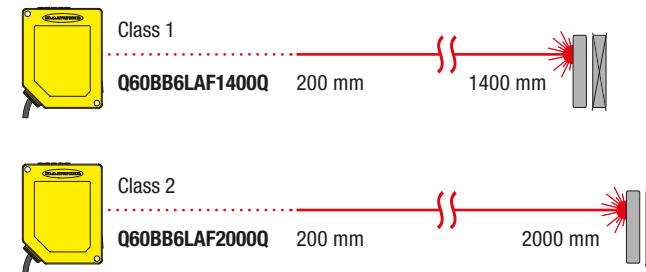


## Q60LAF Series – Adjustable-Field

- Long-range small object sensing
- Manual background suppression adjustment
- Universal voltage with relay output models available



P/N	Model	Sensing Mode	Range	Outputs	Connection
3071742	<b>Q60BB6LAF1400Q</b>	Adj. Background Suppression	200...1400 mm	Bipolar NPN/PNP	90° swivel 5-pin integral M12
3071743	<b>Q60BB6LAF2000Q</b>	Adj. Background Suppression	200...2000 mm	Bipolar NPN/PNP	90° swivel 5-pin integral M12



# Q3X & Q4X Laser – Discrete Outputs

## Q3X Series – Contrast Sensor

- Low contrast detection capability
- Response speed down to 250  $\mu$ s
- Simple to set up and monitor via display



P/N	Model	Sensing Mode	Range	Outputs	Connection
3091629	<b>Q3XTBLD50-Q8</b>	Diffuse Mode	0...50 mm	NPN & PNP / NO or NC	5-pin integral M12
3091638	<b>Q3XTBLD-Q8</b>	Diffuse Mode	0...300 mm	NPN & PNP / NO or NC	5-pin integral M12



## Q4X Series – Distance Sensor

- Insensitive to color changes
- Easy set up between 25 and 300 mm
- Problem solver sensor with selectable teach mode (including for- and background suppression and clear object sensing)



P/N	Model	Sensing Mode	Range	Outputs	Connection
3094118	<b>Q4XTBLAF300-Q8</b>	Adj. Background Suppression	25...300 mm	NPN & PNP / NO or NC	5-pin integral M12
3095301	<b>Q4XTKLAF300-Q8</b>	Adj. Background Suppression	25...300 mm	PNP NO or NC and PNP or IO-Link	4-pin integral M12



Q4XF models are available without M18 threaded nose



# Q4X & LH Laser – Analog Outputs

## Q4X Series – Short Range

- Resolution as low as 0.15 mm (100 mm range) and 0.30 mm (300 mm range)



FDA grade stainless steel housing. Rated to IP67, IP68, IP69K.

P/N	Model	Technology	Range	Outputs	Connection
3094885	<b>Q4XTILAF100-Q8</b>	Laser Triangulation	100 mm	4-20 mA	5-pin integral M12
3094797	<b>Q4XTILAF300-Q8</b>	Laser Triangulation	300 mm	4-20 mA	5-pin integral M12

Voltage output models also available



SMBQ4XFAM10



## LH Series – Short Range High Precision

- Resolution down to 1  $\mu$ m and 10  $\mu$ m linearity
- Special thickness measurement mode capability
- RS-485 communication output



IP67 rated housing

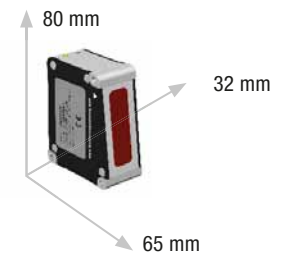
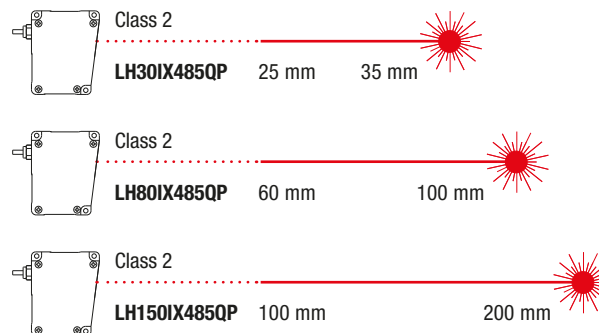
P/N	Model	Technology	Range	Outputs	Connection
3011950	<b>LH30IX485QP</b>	Laser Triangulation	25...35 mm	4-20 mA / RS-485	8-pin M12 pigtail
3011951	<b>LH80IX485QP</b>	Laser Triangulation	60...100 mm	4-20 mA / RS-485	8-pin M12 pigtail
3011952	<b>LH150IX485QP</b>	Laser Triangulation	100 ... 200 mm	4-20 mA / RS-485	8-pin M12 pigtail



SMBLH30

SMBLH80

SMBLH150



# LTF & LE Laser – Analog Outputs

## LTF Series – Long Range

- Range: 12 m on 8% white, 7 m on 6% black target
- Accuracy:  $\pm 10$  mm, resolution from 0.3 to 3 mm
- Robust metal housing with 2-line display



Robust metal housing rated IP67

P/N	Model	Technology	Range	Outputs	Connection
3094849	LTF12IC2LDQ	Time of Flight	50...12000 mm	NPN or PNP NO or NC & 4-20 mA	5-pin integral M12

Models with 0-10 V or IO-Link also available



## LE Series – Medium Range

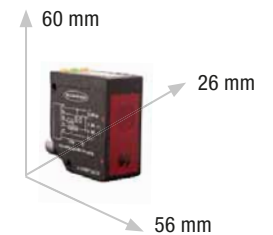
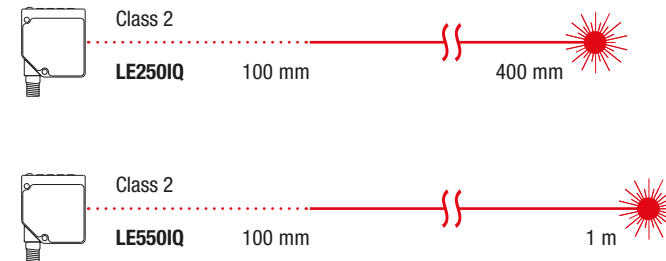
- Simple setting and visualization with 2-line display
- Resolution: less than 0.02 mm (LE250) and 0.5 mm (LE550)
- Robust metal housing



IP67 rated housing

P/N	Model	Technology	Range	Outputs	Connection
3091681	LE250IQ	Laser Triangulation	100...400 mm	NPN or PNP NO or NC & 4-20 mA	5-pin integral M12
3086746	LE550IQ	Laser Triangulation	100...1000 mm	NPN or PNP NO or NC & 4-20 mA	5-pin integral M12

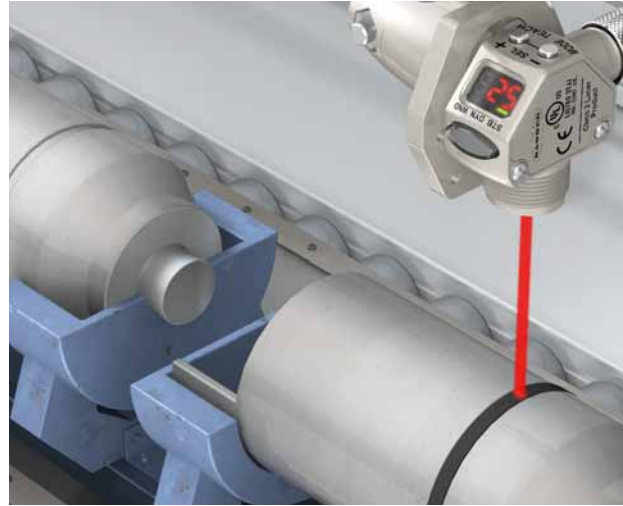
Models with 0-10 V or IO-Link also available



# Typical Applications



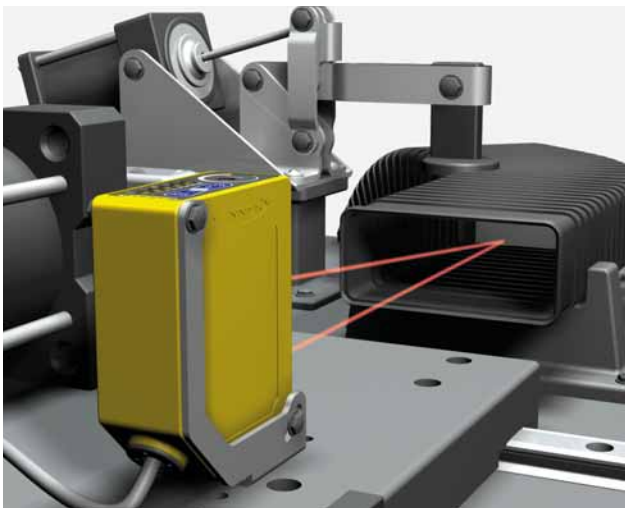
QS18 – Open Flap Detection



Q3X – O-Ring Detection



Q3X – High speed Color Mark Detection



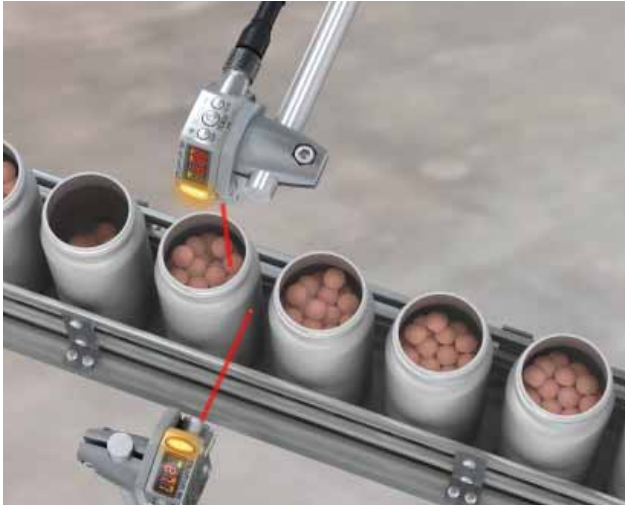
Q60 – HVAC Diverter Detection



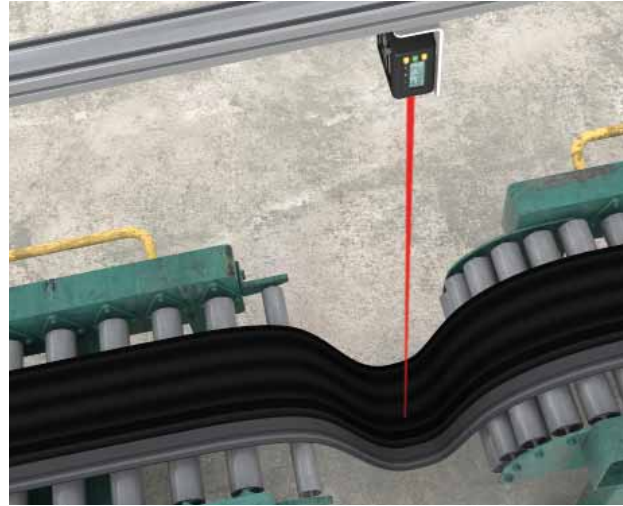
Q4X – Tea Bag Detection



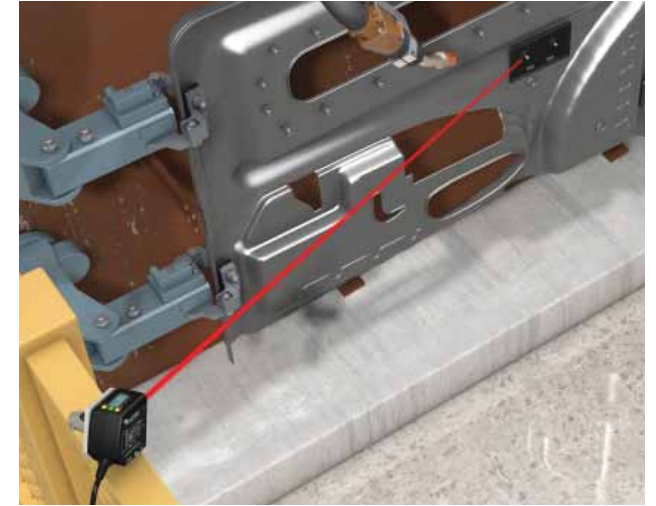
Q4X – Clear Object Plastic Bottle Detection



Q4X Analog – Pill Level Measurement



LTF – Rubber Web Tension Monitoring



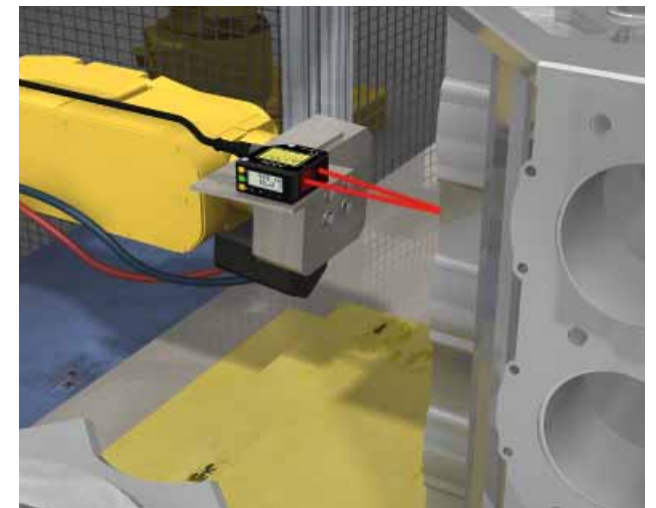
LTF – Part Present or Absent Verification



LH – Tire Run Out Profiling

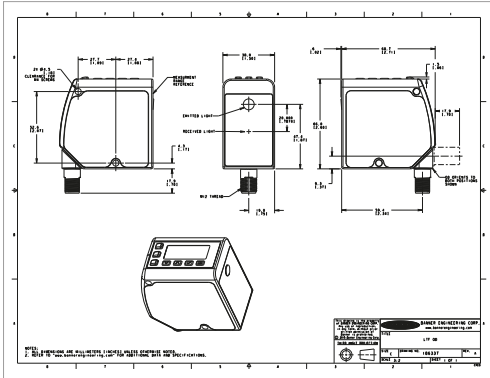


LE250 – Roll Diameter Speed Control

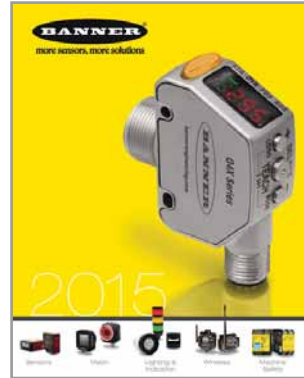


LE550 – Engine Block Positioning

# Additional Resources



CAD, STP, DXF or PDF drawings



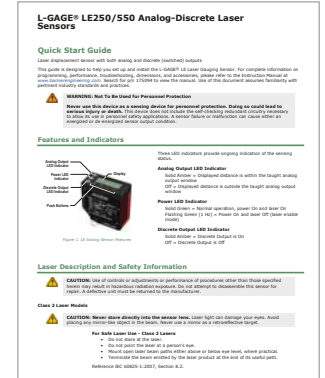
Complete Catalogue



Web Site



Video Channel



Data Sheets

# More Sensors, More Solutions



Machine Safety



Sensors



Vision



Lighting & Indication



Wireless I/O



more sensors, more solutions

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